



COLLEGE CATALOG

2024 – 2025 ACADEMIC YEAR



Message from the President



Hello from LCC:

As you embark on the journey of deciding what comes next, it's an exciting time filled with possibilities. You may have already determined that the next step in your path involves pursuing a degree or certificate, or perhaps you're aiming to complete what you've started and transfer earned credits to a four-year institution. In either case, you've recognized the value of beginning your journey at a community college, and I wholeheartedly agree.

You seek a college that offers affordable tuition and outstanding programs supported by high-quality, hands-on learning experiences. You desire expert faculty, personalized assistance, and a wealth of resources, as well as courses that seamlessly transfer and opportunities for continuous growth. Lansing Community College consistently ranks among the best in the state and nation for its innovative programs. Our college community thrives on diverse perspectives and backgrounds, and we take pride in our inclusivity and focus on your success. You're seeking a college where you feel you belong, and you've certainly found it here.

Within this Catalog, I'm confident you'll discover a program that aligns with your passions and a pathway to completion that fits your lifestyle. Our exceptional faculty and staff, along with our state-of-the-art facilities, provide the comprehensive support you need from beginning to end.

You're looking for a college that will empower you to achieve your goals and embark on your next chapter – and we are that college.

Ready when you are,

Go Stars!

Steve Robinson

Message from the Provost



Welcome to Lansing Community College, and congratulations on taking the next step in your education! On behalf of every faculty and staff member at the college, we are elated you are here.

At LCC, you will find small class sizes, supportive faculty, affordable tuition, career-focused instruction and beautiful campuses. We are proud to be a community college, one that makes our classes accessible to anyone who wants to learn.

We want to see you succeed in whatever goal you choose. That's why all students at LCC have access to free support services, from mental health counseling to tutoring in any subject to in-depth academic advising. Additionally, we assign every single student to one of our expert Academic Success Coaches, who will serve as your personal guide through your LCC education, from orientation to graduation.

LCC offers classes in six different formats, so you can choose to learn in the way that's best for you – in-person, online, or some mix of the two. You can complete your professional education at LCC and become a dental hygienist, firefighter or robotics technician; or, you can use LCC as a launch pad to your bachelor's, master's or doctoral degree. Whatever you want to do in life, LCC can help you get there.

Take a look through this catalog to get a sense of what degrees or certificates might interest you. If you have any questions, or want help getting started, please contact our [StarZone](mailto:lcc-starzone@star.lcc.edu) (lcc-starzone@star.lcc.edu). I look forward to seeing you as part of our Stars community – you belong here!

Sincerely,
Sally Welch
Provost

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[Quick Help Links](#)

Disclaimers

This document is for informational purposes only and is not to be construed as a binding offer or contract between the College and the student. This document is subject to change without prior notice. The listing of instructors' names in the Banner class schedule is for informational purposes only and does not constitute a contract of employment or offer to employ any named instructor. Instructional assignments are subject to change in accordance with College policies as needs of the College may require. The College reserves the right to cancel classes which do not have sufficient enrollment. Students enrolled in classes which are canceled will have the opportunity to add another class. Classes may be held in a different room at an off-campus location if there is insufficient space on campus. This document is intended to be used alongside the Banner registration system, which provides complete information on courses.


Downtown Campus Map




Downtown Campus

Building Locations

505	505 N. Capitol	HHS	Health and Human Services Building
515	515 N. Capitol	HRC	Herrmann and Rogers-Carrier Houses
601	601 N. Washington Square	MB	Mackinaw Building
A&S	Arts and Sciences Building	TLC	Technology and Learning Center
ADM	Administration Building	UC	University Center
AOF	Academic and Office Facility	WCP	Washington Court Place
DRT	Dart Auditorium		
GB	Gannon Building		
HB	Huron Building		

 **Available Parking**
6, 12, 15, 17, 20, 22, 23, 26, 27
and Gannon Ramp

 **Restricted Parking**
28 and 29

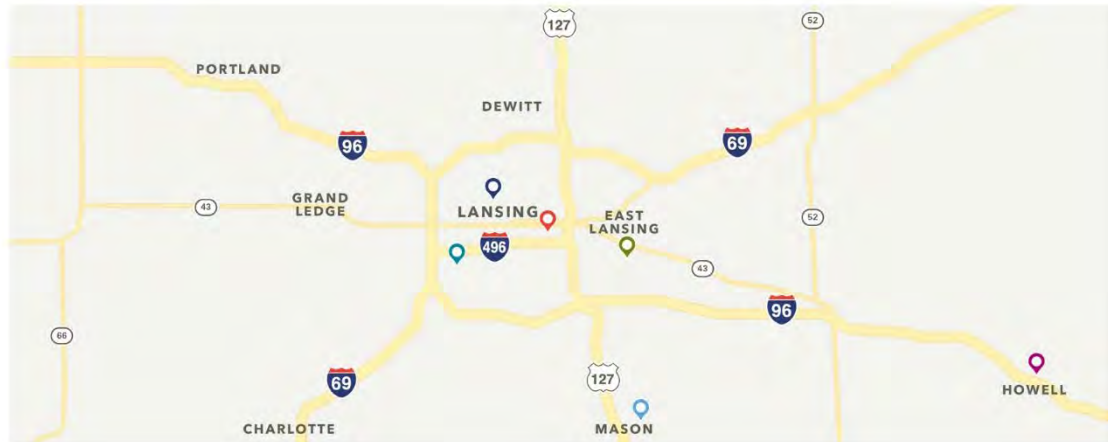


**If having difficulty accessing this map, please
visit [LCC's Downtown Campus webpage](#)**

Other Campus Maps

LCC Locations

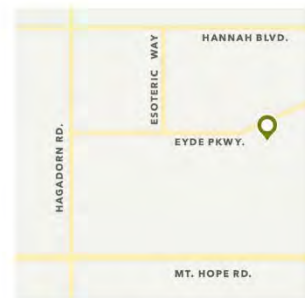
For more information about LCC locations, visit lcc.edu/maps.



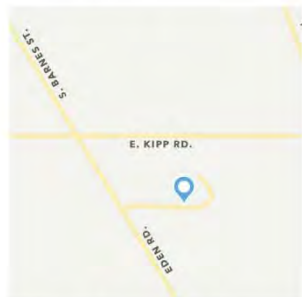
Downtown Campus
411 N. Grand Ave.
Lansing, MI 48933



LCC West Campus
5708 Cornerstone Dr.
Lansing, MI 48917



LCC East
2877 Eyde Parkway
East Lansing, MI 48823



Mason Jewett Field
661 Aviation Dr.
Mason, MI 48854



Livingston Center
402 Wright Rd.
Lansing, MI 48943



AIS Construction
3175 Remy Dr.
Lansing, MI 48906

Visit the [LCC Locations](http://lcc.edu/maps) webpage for more information

Lansing Community College Administration & Board

BOARD OF TRUSTEES

Angela L. Mathews, Chair
Lawrence Hidalgo, Jr., Vice Chair
Robert E. Proctor, Treasurer
LaShunda Thomas, Secretary
Terrence L. Frazier, Trustee
Noel Garcia, Jr., Trustee
Samantha Vaive, Trustee

PRESIDENT

Steve Robinson

PROVOST AND SENIOR VP OF ACADEMIC

AFFAIRS

Sally Welch

SENIOR VP OF BUSINESS OPERATIONS

Seleana Samuel

ASSOCIATE VP, EXTERNAL AFFAIRS & DEVELOPMENT & K-12 OPERATIONS

Toni Glasscoe

CHIEF DIVERSITY OFFICER

Dale Dan

CHIEF FINANCIAL OFFICER

Donald Wilske

CHIEF INFORMATION OFFICER

Bill Garlick

DEAN, ARTS & SCIENCES

Andrea Hoagland

DEAN, COMMUNITY EDUCATION AND WORKFORCE DEVELOPMENT

Baldomero Garcia

DEAN, HEALTH & HUMAN SERVICES

Elizabeth Burger

DEAN, STUDENT AFFAIRS

Ronda Miller

DEAN, TECHNICAL CAREERS

Shon'ta Dwyer

ADMINISTRATIVE SERVICES EXECUTIVE

DIRECTOR

Christopher MacKersie

CENTER FOR DATA SCIENCE EXECUTIVE

DIRECTOR

Matthew Fall

HUMAN RESOURCES EXECUTIVE DIRECTOR

Chelsea Ditz

Academic Calendars

Fall 2024 Academic Calendar

Fall Semester 2024 – Registration begins April 29, 2024

Length of Course	Dates
Full Semester (16 Weeks)	August 22 – December 16, 2024
First 8 Weeks	August 22 – October 16, 2024
First 12 Weeks	August 22 – November 13, 2024
Last 15 Weeks	August 29 – December 16, 2024
Last 14 Weeks	September 5 – December 15, 2024
Last 12 Weeks	September 19 – December 15, 2024
Last 8 Weeks	October 17 – December 16, 2024

Pre-Registration Tasks

- [Establish Placement Levels*](#)
- [Attend orientation if you are a new student**](#)
- [Meet with an Academic Advisor](#)
- [Verify and Update Program of Study](#)
- [Search All Course Descriptions and Required Prerequisites](#)
- [Search for Available Course Offerings for Fall Semester](#)
- [Estimate your Tuition Cost](#)
- [Know your Payment Responsibilities and View Options on How to Fund your Education](#)
- [Review Registration and Refund Deadlines](#)
- [Verify and Update Address and Phone](#)
- [Check for Holds](#)
- [Verify Placement Test Scores and Residency in myLCC](#)

*Additional prerequisite and placement information can be found on the [Waiver Information](#) webpage.

New students are **required to attend orientation prior to registering for courses. Orientation is **not** required for transfer or guest students.

Visit the [Registration](#) page for more information

Number of CREDITS earned at the time of registration	Register during or after	Date
60 or more	8 - 10 a.m.	Monday, April 29, 2024
30 or more	10 - 12 noon	
12 or more	12 - 2 p.m.	
1 or more	2 - 4 p.m.	
Current & Returning Students	After 4 p.m.	Tuesday, April 30, 2024
*New students	After 8 a.m.	

Event	Date
Web registration begins - For more details visit our Registration page.	Monday, April 29, 2024
Orientation available online, required for new students - For more details visit our Orientation page.	Monday, April 15, 2024
Priority Financial Aid FAFSA file date - For more details visit our Financial Aid page.	Monday, July 1, 2024
Priority Financial Aid document submit date - For more details visit our Financial Aid page.	Monday, July 15, 2024
Financial Aid book vouchers begin – For more details visit our Financial Aid Disbursements page.	Thursday, August 8, 2024
Financial Aid supply advances begin – For more details visit our Financial Aid Disbursements page.	Tuesday, August 13, 2024
Semester Begins	Thursday, August 22, 2024
End 100% refund tuition and fees - Full semester and first 8 week & 12 week only – For more details visit our Registration page.	Wednesday, August 28, 2024
Labor Day – College closed	Monday, September 2, 2024
End 50% refund, tuition & student support fee only - Full semester and first 8 week & 12 week only – For more details visit our Registration page.	Wednesday, September 4, 2024
Financial Aid Refunds for Grants , Scholarships	Tuesday, October 1, 2024
Last day to change residency	Thursday, October 3, 2024

Event	Date
Last day to change program of study	Thursday, October 3, 2024
Last day to submit Associate Degree/Certificate applications for Fall semester	Friday, November 15, 2024
Thanksgiving Holiday - College Closed	Thursday, November 28 - Sunday, December 1, 2024
Semester Ends	Monday, December 16, 2024
End of semester grades posted and available for view	Thursday, December 19, 2024

Fall 2024 - Registration and Schedule Adjustment Dates for All Teaching Periods

		Last Date for 100% Refund TUITION and FEES	Last Date for 50% Refund TUITION and SUPPORT FEE ONLY	Last Date to Change to Audit/Credit	Last Date to Drop With No Grade	Last Date to Drop Course with a Record of a W & Last Date to Drop Online
Standard Teaching Periods	[start - end]					
Full Semester	[8/22/24- 12/16/24]	8/28	9/4	9/4	9/4	12/2
First 8 weeks	[8/22/24- 10/16/24]	8/28	9/4	9/4	9/4	10/9
Last 8 weeks	[10/17/24- 12/16/24]	10/23	10/30	10/30	10/30	12/9
First 12 weeks	[8/22/24- 11/13/24]	8/28	9/4	9/4	9/4	11/2
Last 12 weeks	[9/19/24- 12/15/24]	9/25	10/2	10/2	10/2	12/4

		Last Date for 100% Refund TUITION and FEES	Last Date for 50% Refund TUITION and SUPPORT FEE ONLY	Last Date to Change to Audit/Credit	Last Date to Drop With No Grade	Last Date to Drop Course with a Record of a W & Last Date to Drop Online
Standard Teaching Periods	[start - end]					
Last 14 weeks	[9/5/24- 12/15/24]	9/11	9/18	9/18	9/18	12/3
Last 15 weeks	[8/29/24- 12/16/24]	9/4	9/11	9/11	9/11	12/3

	Last Date for 100% Refund TUITION and FEES	Last Date for 50% Refund TUITION and SUPPORT FEE ONLY	Last Date to Change to Audit/Credit	Last Date to Drop With No Grade	Last Date to Drop Course with a Record of a W & Last Date to Drop Online
Variable-Start Courses					
Community and Continuing Education (Non-Credit Courses)	[Section Specific]	Please call (517) 483-1415 for assistance.			
Open Entry Courses or Modules	[Based on learning contract]	Day prior to the learning contract start date	Per learning contract	Day prior to the learning contract start date	Day prior to the learning contract start date
Less than 8 weeks	[Section Specific]	Day prior to the start of class	N/A	Midpoint of class	Day prior to start of class

	Last Date for 100% Refund TUITION and FEES	Last Date for 50% Refund TUITION and SUPPORT FEE ONLY	Last Date to Change to Audit/Credit	Last Date to Drop With No Grade	Last Date to Drop Course with a Record of a W & Last Date to Drop Online
Variable-Start Courses					
8 weeks or more	[Section Specific]	7 days into the class	14 days into the class	14 days into class	14 days into class
					Day prior to the last week

To view on LCC's Website, go to the [Fall 2024 Academic Calendar](#).

Spring 2025 Academic Calendar

Spring Semester 2025 – Registration begins October 14, 2024

Length of Course	Dates
Full Semester (16 Weeks)	January 13 - May 12, 2025
First 8 Weeks	January 13 - March 17, 2025
First 12 Weeks	January 13 - April 14, 2025
Last 15 Weeks	January 21 - May 12, 2025
Last 14 Weeks	January 28 - May 12, 2025
Last 12 Weeks	February 11 - May 12, 2025
Last 8 Weeks	March 18 - May 12, 2025

Pre-Registration Tasks

- [Establish Placement Levels*](#)
- [Attend orientation if you are a new student**](#)
- [Meet with an Academic Advisor](#)
- [Verify and Update Program of Study](#)
- [Search All Course Descriptions and Required Prerequisites](#)
- [Search for Available Course Offerings for Fall Semester](#)
- [Estimate your Tuition Cost](#)
- [Know your Payment Responsibilities and View Options on How to Fund your Education](#)
- [Review Registration and Refund Deadlines](#)
- [Verify and Update Address and Phone](#)
- [Check for Holds](#)
- [Verify Placement Test Scores and Residency in myLCC](#)

*Additional prerequisite and placement information can be found on the [Waiver Information](#) webpage.

New students are **required to attend orientation prior to registering for courses. Transfer and guest students are NOT required to attend orientation.

Visit the [Registration](#) page for more information

Number of CREDITS earned at the time of registration	Register during or after	Date
60 or more	8 - 10 a.m.	Monday, October 14, 2024
30 or more	10 - 12 noon	
12 or more	12 - 2 p.m.	
1 or more	2 - 4 p.m.	
Current & Returning Students	After 4 p.m.	
*New students	After 8 a.m.	Tuesday, October 15, 2024

Event	Date
Orientation available online, required for new students - For more details visit our Orientation page.	Monday, October 7, 2024
Web registration begins - For details visit our Registration page.	Monday, October 14, 2024
First date to submit documentation and a Student Declaration of Residency form Spring semester.	Wednesday, October 1, 2024
Priority Financial Aid FAFSA file date - For more details visit our Financial Aid page.	Friday, November 1, 2024
Priority Financial Aid document submit date - For details visit our Financial Aid page.	Friday, November 15, 2024
Financial Aid supply advances begin - For more details visit our Financial Aid Disbursements page.	Monday, January 6, 2025
Financial Aid book vouchers begin - For more details visit our Financial Aid Disbursements page.	Monday, January 27, 2025
Semester Begins	Monday, January 13, 2025
End 100% refund tuition and fees - Full semester and first 8 week and 12 week only - See below for all teaching periods.	Sunday, January 19, 2025
Martin Luther King Jr Day - College Closed	Monday, January 20, 2025
End 50% refund, tuition & student support fee only - Full semester and first 8 week and 12 week only - See below for all teaching periods.	Sunday, January 26, 2025

Event	Date
Financial Aid Refunds for Grants , Scholarships , and first half of loans begin	Tuesday, February 18, 2025
Last Day to change residency	Monday, February 24, 2025
Last Day to change program of study	Monday, February 24, 2025
Spring Break - No Classes	Monday, March 10 through Sunday, March 16, 2025
Last day to submit Associate Degree/Certificate applications for Spring semester	Saturday, March 15, 2025
Semester Ends	Monday, May 12, 2025
End of semester grades posted and available for view	Thursday, May 15, 2025
Commencement - Breslin Student Events Center, MSU Campus, Time: TBA	TBA

Spring 2025 - Registration and Schedule Adjustment Dates for All Teaching Periods

		Last Date for 100% Refund TUITION and FEES	Last Date for 50% Refund TUITION and SUPPORT FEE ONLY	Last Date to Change to Audit/Credit	Last Date to Drop With No Grade	Last Date to Drop Course with a Record of a W & Last Date to Drop Online
Standard Teaching Periods	[start - end]					
Full Semester	[1/13/25- 5/12/25]	1/19	1/26	1/26	1/26	4/28

		Last Date for 100% Refund TUITION and FEES	Last Date for 50% Refund TUITION and SUPPORT FEE ONLY	Last Date to Change to Audit/Credit	Last Date to Drop With No Grade	Last Date to Drop Course with a Record of a W & Last Date to Drop Online
Standard Teaching Periods	[start - end]					
First 8 weeks	[1/13/25-3/17/25]	1/19	1/26	1/26	1/26	3/10
Last 8 weeks	[3/18/25-5/12/25]	3/24	3/31	3/31	3/31	4/5
First 12 weeks	[1/13/25-4/14/25]	1/19	1/26	1/26	1/26	4/3
Last 12 weeks	[2/11/25-5/12/25]	2/17	2/24	2/24	2/24	5/1
Last 14 weeks	[1/28/25-5/12/25]	2/3	2/10	2/10	2/10	4/30
Last 15 weeks	[1/21/25-5/12/25]	1/27	2/3	2/3	2/3	4/29

	Last Date for 100% Refund TUITION and FEES	Last Date for 50% Refund TUITION and SUPPORT FEE ONLY	Last Date to Change to Audit/Credit	Last Date to Drop With No Grade	Last Date to Drop Course with a Record of a W & Last Date to Drop Online
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Variable-Start Courses

Community and Continuing Education (Non-Credit Courses)	[Section Specific]	Please call (517) 483-1415 for assistance.			
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	Last Date for 100% Refund TUITION and FEES	Last Date for 50% Refund TUITION and SUPPORT FEE ONLY	Last Date to Change to Audit/Credit	Last Date to Drop With No Grade	Last Date to Drop Course with a Record of a W & Last Date to Drop Online	
Variable-Start Courses						
Open Entry Courses or Modules	[Based on learning contract]	Day prior to the learning contract start date	Per learning contract	Day prior to the learning contract start date	Day prior to the learning contract start date	NONE
Less than 8 weeks	[Section Specific]	Day prior to the start of class	N/A	Midpoint of class	Day prior to start of class	NONE
8 weeks or more	[Section Specific]	7 days into the class	14 days prior to the last week of class	14 days into class	14 days into class	Day prior to the last week

To view on LCC's Website, go to the [Spring 2025 Academic Calendar](#).

Summer 2025 Academic Calendar

Summer Semester 2025 – Registration begins March 31, 2025

Length of Course	Dates
Full Semester (12 Weeks)	May 19 - August 11, 2025
First 6 Weeks	May 19 - June 30, 2025
8 Weeks	June 5 - August 3, 2025
Second 6 Weeks	July 1 - August 11, 2025

Pre-Registration Tasks

- [Establish Placement Levels*](#)
- [Attend orientation if you are a new student**](#)
- [Meet with an Academic Advisor](#)
- [Verify and Update Program of Study](#)
- [Search All Course Descriptions and Required Prerequisites](#)
- [Search for Available Course Offerings for Fall Semester](#)
- [Estimate your Tuition Cost](#)
- [Know your Payment Responsibilities and View Options on How to Fund your Education](#)
- [Review Registration and Refund Deadlines](#)
- [Verify and Update Address and Phone](#)
- [Check for Holds](#)
- [Verify Placement Test Scores and Residency in myLCC](#)

*Additional prerequisite and placement information can be found on the [Waiver Information](#) webpage.

New students are **required to attend orientation prior to registering for courses. Transfer and guest students are not required to attend orientation.

Visit the [Registration](#) page for more information

Number of CREDITS earned at the time of registration	Register during or after	Date
60 or more	8 - 10 a.m.	Monday, March 31, 2025
30 or more	10 - 12 noon	
12 or more	12 - 2 p.m.	
1 or more	2 - 4 p.m.	
Current & Returning Students	After 4 p.m.	
*New students	After 8 a.m.	Tuesday, April 1, 2025

Event	Date
Orientation available online, required for new students - For more details visit our Orientation page.	Monday, March 24, 2025
Web registration begins - For details visit our Registration page.	Monday, March 31, 2025
Priority Financial Aid FAFSA file date - For more details visit our Financial Aid page.	Tuesday, April 1, 2025
Priority Financial Aid document submit date - For more details visit our Financial Aid page.	Tuesday, April 15, 2025
Financial Aid supply advances begin - For more details visit our Financial Aid Disbursements page.	Tuesday, May 27, 2025
Semester Begins	Monday, May 19, 2025
End 100% refund tuition and fees - Full semester and first 6 weeks only - See below for all teaching periods.	Sunday, May 25, 2025
Memorial Day - College closed	Saturday, May 24 through Monday, May 26, 2024
End 50% refund, tuition & student support fee only - Full semester and first 6 weeks only - See below for all teaching periods.	Sunday, June 1, 2025
Financial Aid book vouchers begin - For more details visit our Financial Aid Disbursements page.	Tuesday, June 17, 2025
Juneteenth - College closed	Thursday, June 19, 2025

Event	Date
Financial Aid Refunds for Grants , Scholarships , and first half of loans begin	Tuesday, July 1, 2025
Last day to change residency	Monday, June 30, 2025
Last day to change program of study	Thursday, July 17, 2025
Independence Day - College closed	Friday, July 4, 2025
Last day to submit Associate Degree/Certificate applications for Summer semester	Tuesday, July 15, 2025
Semester Ends	Monday, August 11, 2025
End of semester grades posted and available for view	Thursday, August 14, 2025

Summer 2025 - Registration and Schedule Adjustment Dates for All Teaching Periods

		Last Date for 100% Refund TUITION and FEES	Last Date for 50% Refund TUITION and SUPPORT FEE ONLY	Last Date to Change to Audit/Credit	Last Date to Drop With No Grade	Last Date to Drop Course with a Record of a W & Last Date to Drop Online
Standard Teaching Periods	[start - end]					
Full Semester	[5/19/25- 8/11/25]	5/25	6/1	6/1	6/1	7/28
First 6 weeks	[5/19/25- 6/30/25]	5/25	6/1	6/1	6/1	6/24
8 weeks	[6/5/25- 8/3/25]	6/11	6/18	6/18	6/18	7/27

		Last Date for 100% Refund TUITION and FEES	Last Date for 50% Refund TUITION and SUPPORT FEE ONLY	Last Date to Change to Audit/Credit	Last Date to Drop With No Grade	Last Date to Drop Course with a Record of a W & Last Date to Drop Online
Standard Teaching Periods	[start - end]					
Last 6 weeks	[7/1/25- 8/11/25]	7/7	7/14	7/14	7/14	8/5

	Last Date for 100% Refund TUITION and FEES	Last Date for 50% Refund TUITION and SUPPORT FEE ONLY	Last Date to Change to Audit/Credit	Last Date to Drop With No Grade	Last Date to Drop Course with a Record of a W & Last Date to Drop Online
Variable-Start Courses					
Community and Continuing Education (Non-Credit Courses)	[Section Specific]	Please call (517) 483-1415 for assistance.			
Open Entry Courses or Modules	[Based on learning contract]	Day prior to the learning contract start date	Open Entry Courses or Modules	[Based on learning contract]	Day prior to the learning contract start date
Less than 6 weeks	[Section Specific]	Day prior to the start of class	Less than 6 weeks	[Section Specific]	Day prior to the start of class
6 weeks or more	[Section Specific]	7 days into class	6 weeks or more	[Section Specific]	7 days into class

To view on LCC's website, go to the [Summer 2025 Academic Calendar](#).

About LCC

Vision

Serving the learning needs of a changing community.

Mission

Lansing Community College provides high-quality education ensuring that all students successfully complete their educational goals while developing life skills necessary for them to enrich and support themselves, their families, and their community as engaged global citizens.

Motto

Where Success Begins

Guiding Principles

1. LCC will be a “Comprehensive Community College,” focused upon offering learning opportunities in four areas: career and workforce development, general education, developmental education, and personal enrichment.
2. LCC will have a careers emphasis and, in support of this, maintain a technology-rich environment, fostering “user-” vs. classroom-level information technology skills.
3. LCC will maintain and support a well-qualified, committed, and competitively compensated faculty and staff who use both proven traditional and progressive student-centered learning approaches.
4. LCC commits to continuous improvement in its programs and services and will maintain high expectations of its students.
5. LCC will be flexible, affordable, and accountable, continuously improving student learning and support services through the assessment of measurable outcomes.
6. LCC will strive to be “state of the art” in all that it does, while pursuing a select number of cutting-edge initiatives.
7. LCC will have a local emphasis in allocating its resources, while maintaining vital connections to the world, culturally and technologically.
8. LCC, within its broader purpose of serving its entire community in diverse ways, recognizes a special responsibility to young adults, those from lower income brackets, and those requiring developmental academic or entry-level career skills.
9. LCC seeks cooperative relationships with both private and public organizations, pursuing growth not as an end in itself but only when it best serves student and community needs.
10. LCC will prepare those it serves to thrive in a diverse world by reflecting that diversity in its student enrollment, staffing, planning, and allocation of resources.
11. LCC will manage its finances in a responsible manner; allocating resources and achieving efficiencies to best serve the priority needs of its students and the taxpayers who support its operation.
12. LCC is a dedicated community member working for the betterment of all.

A History of LCC

Lansing Community College (LCC) is one of the largest community colleges in Michigan, serving more than 17,700 students each year. It offers more than 200 associate degree and certificate programs in addition to career and workforce development and personal enrichment options. The College was founded in 1957 and has since grown from its flagship campus in downtown Lansing to include locations in Delta Township, East Lansing, Mason, and Livingston County. LCC is consistently named one of Michigan's best community colleges, and students enjoy unsurpassed instruction, beautiful facilities, cutting-edge technology and comprehensive support services to help them succeed.

Accreditation

LCC is accredited by the Higher Learning Commission (HLC), an agency that accredits degree-granting institutions of higher education throughout the United States. Accreditation validates the quality of an institution as a whole and evaluates multiple aspects of an institution, including its academic offerings, governance and administration, mission, finances, and resources. Institutions that the HLC accredits are evaluated against the Commission's [Criteria for Accreditation](#), a set of standards that must be met in order for the institution to receive and/or maintain accredited status. The HLC's Criteria for Accreditation reflect a set of [guiding values](#). Accreditation is largely a peer-based review and evaluation process. HLC decision-making bodies are comprised of institutional representation from colleges and universities accredited by the Commission; public members are also sometimes involved.

Board of Trustees

LCC is directed and governed by a Board of Trustees, consisting of seven members, elected at large in the community college district on a nonpartisan basis. Members are elected to serve 6-year terms.

Board Policies

As with any other professional or workplace responsibility, failure to follow any Board Policy which applies to any College employee may result in disciplinary action up to and including discharge where appropriate. Before any discipline is administered, the College will follow applicable established administrative procedures with respect to non-bargained for employees, and applicable provisions of any collective bargaining agreement. To view Board Policies, go to the [Board of Trustees' Policies](#) webpage.

Program Accreditations

The following occupational programs are accredited, approved, certified, licensed, or regulated by the association, agency, or governmental agency identified. For the most current list, please visit our [Program Accreditation](#) website.

Program Area	Accrediting Agency	Date of Next Review	Status
<u>Automotive Technology</u>	<u>National Automotive Technicians Education Foundation (NATEF)</u> 1503 Edwards Ferry Rd., NE Suite 401 Leesburg, VA 20176	12/01/2028	Accredited
<u>Aviation Technology</u>	<u>Federal Aviation Administration (FAA)</u> Federal Aviation Administration 800 Independence Ave, SW Washington, DC 20591	Quarterly	Certified
<u>Child Development & Early Education</u>	<u>National Association for Education of Young Children (NAEYC)</u> 1401 H St. NW, Suite 600 Washington, D.C. 20005	2024	Accredited
<u>Computer Information Technologies – Computer Networking Technology</u>	<u>National Security Agency</u> 9800 Savage Rd., Suite 6272 Ft. Meade, MD 20755-6000	2024 (in review)	Designated
	<u>National Centers of Academic Excellence in Cyber Defense (CAE-CD)</u> 9800 Savage Road Ft. Meade, MD 20755-6804	2029	Designated
<u>Construction Management</u>	<u>Accreditation Council for Construction Education (ACCE)</u> 300 Decker Drive, Suite 330 Irving, TX 75062	07/2026	Accredited
<u>Criminal Justice - Correctional Officer Certificate</u>	<u>Michigan Department of Corrections (MDC)</u> Grandview Plaza 206 E. Michigan Ave. P.O. Box 30003 Lansing, MI 48909	Annual Report 6/30/2024	Certified

Program Area	Accrediting Agency	Date of Next Review	Status
<u>Criminal Justice - Local Corrections Officer Academy</u>	<u>Michigan Sheriffs Coordinating & Training Council</u> 600 S. Capital Ave. Lansing, MI 48933	Annual Report 7/1/2024	Certified
<u>Dental Hygiene</u>	<u>Commission on Dental Accreditation (CODA)</u> 211 East Chicago Ave. Chicago, IL 60611	2025	Accredited
<u>Diagnostic Medical Sonography</u>	<u>Commission on Accreditation of Allied Health Education Program (JRCODMS-CAAHEP)</u> 9355 - 113th St. N, #7709 Seminole, FL 33775	2027	Accredited
<u>Emergency Medical Services</u>	<u>Michigan Department of Health & Human Services, Bureau of Emergency Preparedness, EMS, and Systems of Care (MDHHS-BEPESoC), Division of EMS and Systems of Care</u> 333 S. Grand Ave P.O. Box 30195 Lansing, Michigan 48909	07/2024	Approved
<u>Fire Academy</u>	<u>Michigan Firefighters Training Council (MFFTC)</u> 3101 Technology Blvd, Suite H Lansing, MI 48910	Annual Report 12/30/2024	Approved Training
<u>Heavy Equipment Repair Technician</u>	<u>Associated Equipment Distribution (AED) Foundation</u> 650 E Algonquin Rd., Ste 305 Schaumburg, IL 60173	2024	Accredited

Program Area	Accrediting Agency	Date of Next Review	Status
<u>Legal Studies</u>	<u>American Bar Association (ABA)</u> Chicago Headquarters American Bar Association 321 North Clark Street Chicago, IL 60654 Washington DC Office American Bar Association 1050 Connecticut Ave. N.W. Suite 400 Washington, D.C. 20036	08/2026	Approved
<u>Massage Therapy</u>	<u>Commission on Massage Therapy Accreditation (COMTA)</u> 900 Commonwealth Place Suite 200-331 Virginia Beach, VA 23464	2024	Accredited
<u>Neurodiagnostic Technology through the EPiC Consortium</u>	<u>Commission on Accreditation of Allied Health Education Programs (CAAHEP)</u> 9355 - 113th St. N, #7709 Seminole, FL 33775	4/22/2024	Accredited
<u>Nursing</u>	<u>Society for Simulation in Healthcare (SSH) Accreditation</u> 2021 L Street, NW Suite 400 Washington, DC 20036 <u>Accreditation Commission for Education in Nursing (ACEN)</u> 3390 Peachtree Road NE, Suite 1400 Atlanta, Georgia 30326	2024 2026	Accredited Accredited

Program Area	Accrediting Agency	Date of Next Review	Status
<u>Paramedic</u>	<p><u>Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon recommendation of the Committee on Accreditation of Educational Programs for Emergency Medical Services Professionals (CoAEMSP)</u> To contact CoAEMSP: 8301 Lakeview Parkway Suite 111-312 Rowlett, TX 75088</p> <p><u>Commission on Accreditation of Allied Health Programs (CAAHEP)</u> 9355 - 113th St. N, #7709 Seminole, FL 33775</p>	2025	Accredited
	<p><u>Michigan Department of Health & Human Services, Bureau of Emergency Preparedness, EMS, and Systems of Care (MDHHS-BEPESoC), Division of EMS and Systems of Care</u> 333 S. Grand Ave P.O. Box 30195 Lansing, Michigan 48909</p>	2025	Approved
<u>Police Academy</u>	<p><u>Michigan Commission on Law Enforcement Standards (MCOLES)</u> 927 Centennial Way Lansing, Michigan 48909</p>	Annual Report 12/31/24	Approved
<u>Radiologic Technology</u>	<p><u>Joint Review Committee on Education in Radiologic Technology (JRCERT)</u> 20 N. Wacker Dr, Ste. 2850 Chicago, IL 60606-3182</p>	2029	Accredited

Program Area	Accrediting Agency	Date of Next Review	Status
Surgical Technology	Commission on Accreditation of Allied Health Education Programs (CAAHEP) 25400 US Highway 19 North Suite 158 Clearwater, FL 33763	2029	Accredited

To review LCC's most up-to-date accreditations, go to the [Program Accreditation](#) webpage. To review LCC's accreditation documents, contact the Academic Affairs Office at 517-483-1618 or via [email](#).

Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA): FERPA is a federal law that sets forth requirements regarding the privacy of student records. FERPA governs the release of these records (known as education records) maintained by an educational institution and access to these records. When a student turns 18 years old, or enters a postsecondary institution at any age, the rights under FERPA transfer from the parents to the student. The FERPA statute is found at 20 U.S.C § 1232g, and the FERPA regulations are found at 34 CFR Part 99 on the [U.S. Department of Education FERPA](#) webpage.

LCC Registrar's office will communicate students' rights under the Family Educational Rights and Privacy Act (FERPA) with all registered students through their LCC student email every semester.

LCC cannot discuss student academic and/or personally identifiable information (PII) with parents, spouse, or guardians, or any other third party without a release (consent) on file. Students may submit a [Release of Information \(FERPA\)](#) request form directly to the Registrar's Office authorizing LCC to discuss selected information with your designee(s). This form can be used to cancel, add, remove, or change the designee(s) on the release. Paper copies are available by visiting the StarZone or by accessing the Registrar's Office public shared drive.

Directory Information: Directory information is information contained in the education records of a student that would not generally be considered harmful or an invasion of privacy if disclosed.

LCC defines directory information as the following:

- Name of student
- Dates of attendance
- Enrollment status

- Awards, degrees, or certificates received
- Participation in officially recognized activities
- Sport, weight, and height of members of an athletic team
- Previous educational agency or institution attended
- LCC Email address

Under the provisions of the FERPA of 1974, as Amended, students have the right to withhold the disclosure of the Directory Information. To request to prevent disclosure, students must submit a [Request to Prevent Disclosure of Directory Information](#). Students may submit this form at any time. The form remains in effect until the student provides a written release to the [Registrar's Office](#) requesting the form to be canceled.

Behavioral Intervention Team (BIT)

LCC is concerned with the safety, health, and well-being of its students, faculty, staff, and community. The Behavioral Intervention Team (BIT) works to promote the sharing of information internally when significant circumstances pertaining to the health and safety of LCC's students arise. Members of the team intake and assess information, take action when necessary, and monitor details about behavioral concerns noted on campus. The team links students of concern to appropriate services either on or off campus while balancing the individual's rights with the rights of all others for safety.

Title IX Resources

LCC policies prohibit sexual harassment, sexual discrimination, and sexual misconduct in its employment and educational programs. The Prohibited Sex or Gender Based Discrimination, Harassment, and Sexual Misconduct Policy can be found on the LCC [Title IX and Sexual Misconduct Resources](#) webpage along with additional resources and forms to file a complaint. Students, employees, and visitors are encouraged to report any allegations of sexual discrimination, sexual harassment, or sexual misconduct to:

TO REPORT A STUDENT

[Student Complaint Form](#)

Christine Thompson
Director of Student
Compliance/Student Title IX
Coordinator
Gannon Building
411 N. Grand Ave.
Lansing, MI 48933
517-483-9632

[Email](#)

Greg Lattig
Athletic Director/
Deputy Student Title IX
Coordinator
Gannon Building
411 N. Grand Ave.
Lansing, MI 48933
517-483-1622

[Email](#)

TO REPORT AN EMPLOYEE

[Employee Complaint Form](#)

JR Beauboeuf
Director of Risk
Management, Equal
Opportunity Officer, &
Employee Title IX
Coordinator
309 N. Washington Square
Lansing, MI 48933
517-483-1730

[Email](#)

TO FILE AN EEO COMPLAINT

(Harassment based on race,
religion, disability, or other
non-gender-based issues)

JR Beauboeuf
Director of Risk Management,
Equal Opportunity Officer, &
Employee Title IX Coordinator

309 N. Washington Square
Lansing, MI 48933
517-483-1730

[Email](#)

Equal Opportunity & Nondiscrimination, Harassment & Retaliation

LCC provides equal opportunity for all persons and prohibits discriminatory practices based on race, color, sex, age, religion, national origin, creed, ancestry, height, weight, sexual orientation, gender identity, gender expression, disability, familial status, marital status, military status, veteran's status, or other status as protected by law, or genetic information that is unrelated to the person's ability to perform the duties of a particular job or position or participate in educational programs, courses, services or activities offered by the College. For more information, please visit the [Title IX and Sexual Misconduct Resources](#) webpage.

The College prohibits retaliation or reprisals against any individual because they have filed a complaint or report, participated in an investigation, or otherwise opposed unlawful discrimination.

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

Equal Opportunity Officer
Washington Court Place
309 N. Washington Square
Lansing, MI 48933
517-483-1730

Employee Coordinator 504/ADA
Administration Building
610 N. Capitol Ave.
Lansing, MI 48933
517-483-1875

Christine Thompson
Director of Student
Compliance/Student Title IX
Coordinator
Gannon Building
411 N. Grand Ave.
Lansing, MI 48933
517-483-9632
[Email](#)

JR Beauboeuf
Director of Risk Management, Equal
Opportunity Officer, & Employee Title IX
Coordinator
309 N. Washington Square
Lansing, MI 48933
517-483-1730
[Email](#)

Greg Lattig
Athletic Director/
Deputy Student Title IX Coordinator
Gannon Building
411 N. Grand Ave.
Lansing, MI 48933
517-483-1622
[Email](#)

Student Coordinator 504/ADA
Gannon Building
411 N. Grand Ave.
Lansing, MI 48933
517-483-1885

Consumer Information Notices and Disclosures

The Higher Education Act of 1965 (HEA), as amended, requires that postsecondary institutions participating in federal student aid programs make certain disclosures. The [Consumer Information](#) page discloses the following information to enrolled and prospective students, employees, parents, and the public.

- Institutional and Student Information
- Financial Information
- Student Outcomes
- Health and Safety Information

For any questions or a paper copy of a disclosure, please contact the Office of Compliance at 517-483-5298 or via [email](#).

Annual Security Report

The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (also referred to as the “Clery Act”) requires colleges and universities that receive federal funding to disseminate a public [Annual Security Report \(ASR\)](#) to all current students and employees and make its availability known to prospective students and employees. The purpose of this report is to provide an overview of the College’s security resources, policies and procedures.

The ASR is published annually on or before October 1st and contains statistics for the previous three years concerning crimes that occurred on campus, on non-campus buildings, on properties owned or controlled by the College, and on public property within or adjacent to campuses of the College. The report also includes College policy statements concerning campus security, crime prevention, reporting of crimes; timely warnings; emergency response and evacuation; and alcohol, drug use, and sexual offenses.

The Annual Security report is available on the [Police Department webpage](#). A paper copy of the ASR is available upon request by contacting LCC Police Department office at 517-483-1800 or in person at 411 N. Grand Avenue, Gannon Building, Room 2110, Lansing, MI 48933.

Drug and Alcohol Abuse Prevention Program (DAAPP)

In compliance with the Drug-Free Schools and Communities Act the College maintains a [DAAPP](#) that is distributed annually and on an ongoing basis to all employees and students. The DAAPP contains descriptions of the health risks of drug and alcohol abuse; drug and alcohol counseling, treatment, and rehabilitation programs; and the legal and College sanctions for violations of College policies, local, state or federal laws relating to illicit drugs and alcohol. A biennial review of the DAAPP is also conducted. A printed copy of the DAAPP is available upon request by contacting the LCC Police Department at 517-483-1800 or in person at 411 N. Grand Avenue, Gannon Building, Room 2110, Lansing, MI 48933.

State Authorization

LCC offers distance education learning opportunity for students and is an institutional participant in the National Council for State Authorization Reciprocity Agreements (NC-SARA), a voluntary and regional method to oversee distance education. The [State Authorization](#) webpage discloses the following information to enrolled and prospective students, employees, parents, and the public.

- Accreditation Information
- Student Compliant Information
- Professional Licensure and Certification
- Refund Policy
- Adverse Actions
- Approved States & Territories
- Location & Residency Status
- International Students

Student General Rules and Guidelines and Code of Conduct

The College recognizes the value and importance of a safe and orderly learning environment that encourages honesty, integrity, and ethical conduct conducive to academic success, personal growth, and responsible social behavior. The Student General Rules and Guidelines and Student Code of Conduct ensure the protection of student rights and the health and safety of the College community, as well as to aid in efficiently operating College programs. It is the responsibility of each student to know and abide by the Student General Rules and Guidelines and Student Code of Conduct.

The College has established procedures for reporting and addressing alleged violations of the [Student General Rules and Guidelines](#) and Student Code of Conduct in accordance with the College's [Ethics and Standards of Conduct for Students Policy](#). These procedures are designed to provide a fair, consistent, and reliable process for all parties.

The Student General Rules and Guidelines and Student Code of Conduct apply from the time of admission to the College and continue as long as the student remains enrolled at the college. They are also applicable to a student's conduct even if the student withdraws from school while a disciplinary matter is pending.

The Office of Student Compliance is an integral part of the positive educational environment at the College, and is responsible for upholding the Student General Rules and Guidelines and Student Code of Conduct. The office supports the mission of the College by responding to and resolving situations in which the behavioral choices of students are negatively impacting the College community, or other students, including themselves.

Access to College Buildings

StarCards are currently required to enter all LCC buildings on Downtown Campus, West Campus, LCC East and Aviation Maintenance Technology Center. Livingston County Center shares a building with Howell Public Schools and has instituted a separate security protocol.

Access to College buildings after normal hours of operation is restricted. Contact LCC Police Department at 517-483-1800 for access outside of normal hours of operation.

Animals

For the protection, health, and safety of the members of the College community, animals are not permitted on campus. This provision excludes service animals. For additional information please refer to the [Service Animal Webpage](#).

Cell Phones

The use of cell phones for conversations during class is at the discretion of the instructor.

Drugs and Alcohol

LCC complies with the Drug-Free Workplace Act and the Drug-Free Schools and Community Act. The College is committed to providing a campus environment free of prohibited drug and alcohol use and intoxication, consistent with federal, state, and local law, and College policy.

See the [Drug and Alcohol Policy](#), Section 4.040, for details.

Examinations

Students are required to take examinations at scheduled appointed time and place at the discretion of instructors. Generally, examinations are given during the regularly scheduled class period with a final exam during the last week of the semester. Please see course syllabi for details.

Field Trips and College Sponsored Events and Activities

Students participating in field trips and other College-sponsored events and activities must abide by all College policies.

LCC Email Account

Students are responsible for checking their LCC-assigned student email accounts on a regular basis. Official notifications and information are routinely sent to student email accounts. Students who use other email accounts should make sure they are monitoring their LCC email accounts as well.

Student Organizations

Certain student clubs and organizations are registered at the College. For information about certain clubs and organizations or how to start a student club or organization please contact the Student Life Office. For more information, go to the LCC [Clubs & Organizations](#) webpage.

Smoking

LCC is a smoke-free campus. See the [Smoking Policy](#), Section 6.110, for details.

Technology Resources - Acceptable Use

The LCC Acceptable Use Policy describes guidelines for the use of the College's technology resources and use of College-wide data. Use of College-owned technology resources is a privilege extended by the College to students as a tool to promote the College's mission and to enhance technological/computer literacy. College computer labs and devices/equipment for checkout from the Library and Information Technology Services are available on campus for students to complete their course work. Students are expected to follow the rules for any lab or the department which houses the computer they use.

This policy applies to all users of College technology resources and data, including those using the College's network via a personally owned device. Violations of this policy may result in

loss of computer privileges and/or disciplinary action under the Student Code of Conduct. In addition, the user may be subject to civil and criminal liabilities. See the [Acceptable Use Policy, LCC Board Policy 6.010](#), for details.

Student Code of Conduct

In addition to being familiar with the Student General Rules and Guidelines, all students are responsible for knowledge of and adherence to the [Student Code of Conduct](#).

Campus Departments, Locations, and Contact & General Information

Academic Success Coaches

Academic Success Coaches are responsible for ensuring that students receive persistent, proactive, individualized mentoring, and academic coaching and support throughout their enrollment at LCC. For more information please visit the [Academic Success Coach webpage](#) or contact them via [email](#). The Academic Success Coach program is located in the Gannon building in the Success Coach Lounge – room 2202. Academic Success Coaches have offices at all campus locations and are available to meet virtually, over the phone, and in-person.

What We Do:

Academic Success Coaches meet with students! Students are encouraged to reach out to an Academic Success Coach; they may also be referred to us by instructors or other members of the LCC community. During the meetings Academic Success Coaches will learn about the students' experiences at LCC, identify obstacles that may be barriers to their academic success, and help strategize solutions and next steps. Some of the topics discussed may include:

- Study strategies - how to effectively study, take notes, and keep organized
- Time Management - how to balance work, school, and other responsibilities
- Self-Awareness - helping students identify their strengths, purpose, and goals
- Campus Engagement and Resources - identifying opportunities and resources on campus and helping students make those connections

Academic Advising

The Academic Advising team supports and guides students during their academic journey here at LCC whether it's to achieve a degree or certificate at LCC or transfer to a four-year University. A few of the many topics that the Advising team can also assist with include but are not limited to:

- Identifying a program of study that aligns with students' long term career goals
- Guidance and clarity on program of study prerequisites and sequencing
- Support with navigating transfer to four-year school options/goals
- Advising that will help students navigate their pathway efficiently
- Assistance with creating a course map that will help students achieve their transfer goals and/or certificate / associate degree completion goals
- Degree Works graduation audits and "what-if I change my program of study" and MTA audits

Academic Advisors are available virtually, in-person, and by phone to meet your advising needs. For more information, please visit the [LCC Academic Advising](#) webpage. Schedule an appointment [here](#), or call 517-483-1904, and select option 4.

Admission to the College

LCC is an open-admissions college. Prospective students must complete an admissions application before registering for classes. Please visit the [Pre-Orientation Checklist](#) for more information. For a paper application, call the Registrar's Office. All accepted applicants will receive a letter confirming their admission to LCC. Applicants who do not receive a letter within two weeks of applying should call the Registrar's office or [email](#). For further information, call 517-483-1200, option 2. Certain programs, however, require students to complete a selective admissions application. Please see the [Selective Admissions webpage](#) for additional information.

Admissions Team

The Admissions department participates in college fairs, classroom presentations, application and scholarship workshops, and more. They meet with future students and families to answer questions and assist with the admissions process. The team also regularly hosts groups on campus for tours and informational sessions.

To schedule an appointment, or to view available orientation sessions, please go to the [Admissions Team](#) webpage, contact us via [email](#), or call 517-483-1200.

Arts & Sciences Division

The Arts & Sciences (A&S) Division offers Math, Science, English, Humanities, Social Sciences, Business, Communication, and the Arts courses as well as programs that prepare students to successfully complete junior and senior university level courses upon transfer.

The Arts & Sciences Division courses build a foundation for both transfer students and applied certificate and degree students that allows them to fulfill their educational goals. For further information, go to the [Arts and Sciences Division](#) webpage.

Athletics

LCC Athletic Department offers student-athletes the opportunity to further their educational plans and enhance their athletic experience by continuing to recruit and provide equal opportunities for all student-athletes while promoting pride, respect, and integrity throughout our athletic programs. LCC Athletics competes as a Division II member of the National Junior College Athletic Association comprised of over 500 institutions across the United States competing at the two-year institution level. LCC offers nine varsity sports Men's and Women's Cross Country, Volleyball, Men's and Women's Basketball, Softball, Baseball, Women's and Men's Outdoor Track and Field. LCC offers athletic scholarships for all nine sports helping cover the costs of student athletes' tuition and course-related fees. For more information regarding Athletics, go to the [LCC Stars](#) webpage or call the Athletics Office at 517-483-1610.

Business & Community Institute – Specialized Workforce Training

The Business and Community Institute offers customized training, coaching, and consulting to area businesses, non-profit organizations, and public entities across our six-county region. The solutions we provide help organizations increase productivity, improve employee retention, build effective communication, create operational efficiencies, develop stronger leadership, and strengthen their workforce. For more information, please visit the [Business & Community Institute](#) website, call the Business and Community Institute at 517-483-1857, or [email](#).

Campus Locations

LCC community has six locations and several partner sites in the mid-Michigan area. Each provides learning spaces and staff dedicated to your academic success and positive college experience.

Within our more than 1.5 million square feet of learning facilities are student support spaces dedicated to celebrating cultural diversity, fostering equitable learning opportunities, catering to the needs of our student-veterans, engaging first-generation and returning students, and welcoming international students.

Our diverse student body is our biggest asset; different views and ideologies challenge and open the minds of our LCC community.

Downtown Campus

411 N. Grand Avenue, Lansing, MI 48933

LCC's downtown campus is the main campus.

([webpage](#))

West Campus

5708 Cornerstone Drive, Lansing, MI 48917

Located in Delta Township, West Campus is home to the Technical Careers and Community Education and Workforce Development divisions of LCC.

([webpage](#))

The 290,536-square-foot facility features the [Center for Manufacturing Excellence](#), [Mid-Michigan Police Academy](#), Fire Academy, Regional Fire Training Center, Corrections Academy, Computer Information Technology, Geospatial Science, Unmanned Aerial Systems (Drones), Cybersecurity, Automotive Technology, Building Construction, Electrical Technology, Lineworker, Legal Studies, HVAC, in-demand skilled trades, and much more.

LCC East

2827 Eyde Parkway, East Lansing, MI 48823

Located in East Lansing, LCC East offers convenience for those who live in Haslett, Okemos, East Lansing and Williamston areas with 12 classrooms, excellent instructors, free parking and a variety of academic and student support services. The location provides extensive

support to guest students from other educational institutions looking to supplement their course schedule. For more information, please visit the [LCC East](#) webpage, [email](#) or contact us at 517-483-1860 for assistance.

Livingston County Center

402 Wright Road, Howell, MI 48843

Located at the Parker Campus in Howell, the Livingston County Center conveniently serves students in Howell and surrounding areas. A wide variety of courses are offered in fall, spring, and summer semesters and students benefit from small class sizes and qualified faculty. Students can easily access tutoring services, test proctoring, and academic advising. For more information, please visit the [LIVCEN](#) webpage, [email](#) or contact us at 517-545-3522 for assistance.

Aviation Maintenance Technology Center

Mason Jewett Field, 661 Aviation Drive, Mason, MI 48854

Situated at Jewett Airfield in Mason, the Aviation Maintenance Technology Center stands as a pinnacle of excellence. Esteemed by industry professionals, educators, and the local community alike, this facility is hailed as the premier destination for aviation maintenance training in the Midwest.

At LCC, students benefit from access to cutting-edge equipment and technology. Through hands-on experience with a variety of aircraft, including large and small planes, turbine and jet engines, and advanced composite materials, students receive comprehensive training that meets industry standards.

Equipped with modern amenities such as classrooms, a computer lab, and individual bay workstations, the facility facilitates both personalized one-on-one instruction and group learning. This robust infrastructure ensures that students receive a well-rounded education tailored to their individual needs and prepares them for success in the aviation maintenance field.

Job Training Center (JTC) at West Campus, Community Education & Workforce Development Offices, Rm. M105

The Job Training Center strives to prepare community members for in-demand, entry-level employment by offering short-term training and career-focused programs necessary for future career success and improved quality of life. Specifically, the Job Training Center helps unemployed, underemployed, and at-risk populations in our region to obtain marketable skills and credentials as they head out into the workforce or continue their academic education.

Course offerings run eight to ten weeks. These shortened and condensed programs are ideal for those who cannot accommodate a traditional college schedule. For more information, visit the [JTC](#) website, [email](#) or call 517-483-1857 for more information.

AIS Training Center

3600 North Grand River, Lansing, MI 48906

LCC trains its [Heavy Equipment Repair](#) students at the best heavy machinery training facility in Lansing, the AIS Training Center. Here LCC faculty offer “real world” hands-on training in machine operation, heavy equipment maintenance and technology, and safety. The AIS Training Center is located in North Lansing off Grand River Avenue and boasts the latest machinery and technology, as the AIS Company has been serving Michigan for more than 55 years in the heavy equipment industry.

Michigan State University

426 Auditorium Road, East Lansing, MI 48824

Veterinary Nursing is offered through a joint agreement between LCC and Michigan State University (MSU), with major courses taught by MSU and General Education courses taught by LCC.

Agricultural Technology is offered through a joint agreement between LCC and the Michigan State University Institute of Agricultural Technology (IAT), with Major courses taught by MSU and General Education courses taught by LCC.

Mid Michigan College

1375 S. Clare Avenue, Harrison, MI 48625

The Magnetic Resonance Imaging (MRI) program is offered through a partnership with other Community Colleges as part of the Michigan Educational Programs in Collaboration (EPiC) consortium. For additional information, go to the [Michigan Workforce Training and Education Collaborative MRI website](#).

Capital Area Michigan Works

Capital Area Michigan Works! (CAMW!) is a network of resources available to LCC students. CAMW! partners with businesses to develop recruiting and retention strategies and partners with job seekers to enhance education and career opportunities. For more information, visit the [CAMW!](#) website or call 517-492-5580 for assistance.

Career and Employment Services

Career and Employment Services (CES) assists students and alumni with exploring career options, developing employability skills, learning job search strategies, and connecting with employers. Through one-on-one appointments, class presentations, job fairs, and other events, CES helps individuals make informed career choices, develop résumés and cover letters, prepare for interviews, pursue internships, and navigate the job search. Visit us at the Career Center, Gannon Building 2nd floor room 2219, to get started.

For more information, please visit the [Career & Employment Services](#) webpage, call 517-483-1172, or [email](#).

Childcare Grants

The Childcare Grant is designed to provide eligible custodial parents with childcare funding assistance while the parent is attending LCC. The grants are based on specific criteria and provide partial payment of licensed childcare services for the recipient. For more information, please contact us at 517-483-1199 or by [email](mailto:adultrc@star.lcc.edu) (adultrc@star.lcc.edu).

Computer Labs

Aviation Technology Center

25 PCs and one printer are available for student use. Students also have access to 50 laptops that can be signed out each day.

Downtown Campus

67 student-use computers are available on the 2nd and 3rd floor of TLC's open computer lab. The open computer lab is located within the TLC building's Library and Learning Commons. In addition to PCs and Macs, this space includes laptops that students can check out for the semester and a technology lab. The Technology Lab includes 3D printers, poster printer, virtual reality machines, and audio recording.

LCC East

Eleven PC's are available for student use with one printer.

Livingston County Center

Students have access to two computer labs with 24 PCs and a printer in each room.

West Campus

Up to 14 student-use computers are available in M123 along with three printers.

Community Education and Workforce Development (CEWD) Division

CEWD is made up of diverse individuals, units, and departments who craft unique solutions for our students, businesses, customers, stakeholders and educational partners. CEWD is collaborative and supports the institutional mission at its highest level.

Community Education and Workforce Development acts as a gateway to success for traditional and non-traditional students. Enhancing the College's academic mission, CEWD ensures that all learners are offered an opportunity to thrive through access to education. For more information, please contact 517-483-1857.

Continuing Education

The Continuing Education program at LCC offers high quality, non-credit career and workforce development training, to improve professional and occupational skills. Through LCC's certificate programs and other non-credit classes, students can receive the accelerated or self-paced training needed to keep up on licensure requirements, increase skill sets for

career advancement, obtain skills for new career opportunities, and become exceedingly stronger in current career. LCC's non-credit programs are developed in close collaboration with industry partners and LCC's subject matter experts. For more information, please visit the [Continuing Education](#) webpage, [email](#) or call 517-483-1857.

Lifelong Learning (Adult Enrichment and Youth Program)

LCC provides access to educational opportunities that connect LCC's strengths with our community's needs. Courses include non-credit offerings in a wide spectrum of disciplines. Adult Enrichment is here to provide interesting and fun learning experiences that help discover the "Best You." The [Youth Program](#) offers youth summer camps, after-school classes, sports camps and online classes for children in elementary, middle, and high school. These summer camps and classes provide fun ways for kids to study topics in Science, Technology, Engineering, Arts and Mathematics (STEAM), leadership and team dynamics. Please find additional information at [Adult Enrichment](#) and/or the [Youth Program](#) webpage(s) or contact the Lifelong Learning Office by [email](#) or call 517-483-1415.

Center for Student Support

LCC's Center for Student Support facilitates student success by providing comprehensive support services that engage students in achieving their personal and academic goals. The center encompasses the Adult Resource Center, Counseling Services, Fostering Stars, the Center for Student Access, and the Office of Student Compliance.

Adult Resource Center (ARC)

The [Adult Resource Center](#) (ARC) provides assistance to adult students returning to college and those who have children and need childcare services to attend classes at LCC. You can visit the ARC webpage to learn more about the scholarships available for childcare and tuition for occupational students. To schedule an appointment, please call 517-483-1199. Click here to [request an appointment online](#).

Counseling Services

Counseling services are available to all students needing professional guidance to help overcome personal issues and achieve academic success. Counseling is provided by licensed, professional counselors and sessions are confidential and free of charge. You can visit the [Counseling Services webpage](#) for more information. To schedule an appointment, please call 517-483-1924 or schedule an [appointment online](#).

Fostering S.T.A.R.S.

The Fostering S.T.A.R.S. Program provides an opportunity and a supportive network for students currently engaged in or aging out of the foster care system. Some of the services provided in this program include advising, academic support, community outreach, transportation assistance, specific emergency assistance, care-packages, one-on-one mentoring, and group membership and networking opportunities. Additionally, students involved in this program will be able to connect with an independent life skills coach who is

trained in providing guidance, empowerment and improvement in all areas of life. A life skills coach seeks to empower others by helping them make, meet and exceed goals. For more information, go to the [Fostering S.T.A.R.S.](#) webpage, visit the StarZone in the Gannon Building, or call 517-483-1924.

Center for Student Access

The Center for Student Access (CSA) consults with students, faculty, and staff to support an accessible college. LCC encourages and welcomes all students with disabilities to meet with an Access Consultant. A meeting with an Access Consultant is a required step in receiving approved accommodations.

LCC also recognizes that CSA is part of a larger system of support that includes parents, families, community advocates, and organizations, and the many high schools that feed into LCC. CSA regularly speaks with families, works with various community partners, and visits high schools to discuss the transition to college. To request an appointment please call 517-483-5323 or [email](#). View the [Center for Student Access](#) webpage.

The Office of Student Compliance

The Office of Student Compliance (OSC) is an integral part of the positive educational environment at LCC; and is responsible for upholding the Student Code of Conduct and General Rules and Guidelines, Student Title IX and Sexual Misconduct Complaints, and the LCC Behavioral Intervention Team (BIT). OSC supports the Mission of the College by responding to and resolving situations in which the behavioral choices of students are negatively impacting the college community, or other students, including themselves.

Please refer to the following pages for further information:

- [Student Code of Conduct](#)
- [Title IX and Sexual Misconduct](#)
- [Behavioral Intervention Team \(BIT\)](#)

Students can visit the Office of Student Compliance in the Gannon Building, Room 1204, or contact the office by calling 517-483-1261 or via [email](#).

Degree Works

Degree Works is a computerized guide to help you and your advisor monitor and plan your pathway toward completion of your certificate(s) and degree(s). Degree Works compares your coursework against the requirements for your declared major/program to produce an easy-to-read audit divided into blocks (Degree/Certificate, Major/Program, General Education, etc.). Check-boxes within each block show whether requirements are completed, in-progress (enrolled courses), or are still needed. With Degree Works you also can run What-If scenarios to try different majors, and your advisor and you can set up plans for future semesters, too.

How to access Degree Works

Students access Degree Works through myLCC

- Login to [myLCC](#)
- Click on the School tab
- Click on Degree Works in the Student eToolbox
- Degree Works Audit page displays

Note: Students who have enrolled and have been admitted to LCC in the last several years are in Degree Works. Students who have not taken classes in several years will be added to Degree Works the next time they enroll for classes.

For additional information, visit the [Degree Works](#) webpage, contact the Registrar's Office at 517-483-1200 option 2, or by [email](#) (registrar@star.lcc.edu).

Office of Diversity and Inclusion

LCC's Office of Diversity and Inclusion (ODI) provides resources that foster awareness as well as empower students with knowledge, tools and experiences that promote global citizenship and a more inclusive campus. ODI thus embraces an inclusive community that brings together students, faculty, and staff of different racial and multi-racial, ethnic and multi-ethnic, gender and sexually diverse, economic, religious, and national identities and ages. ODI envisions a college that is supportive of all perspectives, cultures, and differences. Our core values are evident through services, programs, and initiatives that ensure the creation and maintenance of a diverse and inclusive community that affirms diverse perspectives, attitudes, beliefs, and experiences. For additional information, view the [ODI](#) webpage.

Centre for Engaged Inclusion

The Centre for Engaged Inclusion (CEI) engages the campus and Lansing area in building an equitable and inclusive community through intellectual exploration and collaboration. The Centre is the premier space for training, learning, engagement, and exploration of topics in the Advocacy, Belonging, Diversity, Engagement, and Inclusion for all identities.

The Centre envisions a community where everyone has a sense of belonging and possibility and is empowered to cultivate an equitable world.

For more information, please come to the CEI in the Gannon Building (GB 2204), call 517-483-1616, visit the [CEI](#) webpage, or [email](#).

The Caesar Chavez Multicultural Center

The Caesar Chavez Learning Center (CCLC) provides a comfortable atmosphere where students of diverse backgrounds can get academic, social, and personal support. The Center's staff assist students and provide guidance on how to navigate campus resources and other educational opportunities. Visit the [CCLC](#) webpage for more information or in person at the Arts and Sciences Building, Room 1313.

Programs at CCLC: Committed to the values of meeting the needs of our times, social justice, radical hospitality, student leadership and cultivating brave spaces, ODI created programs focused on instilling these values and meeting the needs of our students. We believe that all students, regardless of age, family background, learning style, or diverse-ability, should have equal opportunity to reach their full personal, academic, and career potential.

ACCESS Scholars

The ACCESS Program provides wraparound student support services and intervention efforts and is designed to support LCC students' personal, social, cultural, and academic adjustment, particularly BIPOC, LGBTQ+, First-Generation, Low Income, adult students; varying ability; and other marginalized and underrepresented students' groups. For more information, view the [ACCESS](#) webpage or via [email](#).

LUCERO

Latinos Unidos con Energia Respeto y Orgullo (LUCERO) is a support services program designed to assist in the recruitment, retention, graduation and transfer of LCC students of color, particularly Latinx students. The focus of the LUCERO program is to create a positive connection for Latinx students with each other and with LCC to develop exceptional academic, leadership and professional skills while learning about and celebrating their culture and diversity. For more information, visit the [LUCERO webpage](#) or via [email](#),

Men About Progress

Men About Progress (MAP), is an initiative established by the Office of Diversity and Inclusion at LCC to increase, encourage, and support the inclusion and educational success of male students of color, particularly African- American males (AAM). Housed within the Caesar Chavez Learning Center, MAP serves as an intentional intervention to assist program participants in both, their academic and their career endeavors while promoting and advocating for an improved educational experience at LCC and enhanced quality of life. For more information, visit the [MAP](#) webpage or via [email](#).

WISE

Women Inspiring Scholarships through Empowerment (WISE) Program WISE is an initiative that seeks to inspire, support and empower individuals who self-identify as women by offering educational opportunities to develop knowledge and leadership skills, build professional and personal connections, promote the presence of professional women, and foster mentoring relationships. Housed within the Cesar Chavez Learning Center. For more information, visit the [WISE](#) webpage or via [email](#).

Summer Impact Pre-College Experience

This program is intended for local high school students and recent high school graduates, particularly students from under-served communities - African-American, Latino, Indigenous, students in the foster system, immigrant, and refugee, LGBTQIA+,

first-generation college students. The Summer Impact Program aims to help students increase their knowledge and skills in diversity, equity, and inclusion while building a bridge between what they are learning in high school to their future college and employment success. These will be highly interactive sessions. For more information and registration, visit the [Summer Impact](#) webpage.

Department Directory

For the most up to date information, go to the [Office & Department Directory](#) webpage.

eLearning Department

The eLearning Department is responsible for the administration of D2L, LCC's Course Management System (CMS). D2L support is provided, both in-person and online, to all students and instructors using D2L and online tools integrated into D2L.

D2L is used for the delivery of courses and course content for all course delivery methods. Courses utilize D2L to provide access to:

- Course content and materials
- Communication tools, including discussions and D2L email
- Assessment tools, including quizzes and assignment submission folders
- Course grades, including assignment grades and instructor feedback

The eLearning Department provides a variety of D2L resources to support students with the use of D2L, and tools integrated into D2L. View the resources below to see how the eLearning Department can assist with using D2L:

- **Online D2L Support Resources**
 - - The [student resource site](#) provides access to step-by-step instructional guides, 1 minute or less D2L Help videos, eLearning contact information, online chat, and more!
- **D2L Trainings**
 - The eLearning Department offers a variety of D2L training opportunities, including:
 - A variety of [self-paced trainings](#) are available in D2L to support the use of D2L and other online resources. Students are encouraged to complete the *D2L for Students-Training* to learn about accessing and navigating courses in D2L. Students are able to [self-enroll](#) in the training through D2L at any time.
 - **Live D2L Training Sessions:** Live D2L training [sessions](#) are offered each semester, via Webex, on a variety of D2L topics.

- **In-person Support Resources**

- eLearning staff is available for in-person assistance in the Technology Learning Center, Suite 1101 by appointment or walk-ins.
 - Call (517) 483-1839 to make an appointment or visit the [Contact eLearning](#) webpage for additional information.

Emergency Management and Preparedness

The [Emergency Management Department](#), under Administrative Services Division, develops and administers an emergency management and preparedness program. Important aspects include:

- A college [Emergency Response Guide](#) with color and symbol-coded posters, a webpage, and video
- [Emergency notification/communication information](#), in coordination with the Public Relations Department, including preparedness messages communicated via newsletters and email updates, including social media, and outreach presentations on a regular basis, at least monthly
- **Emergency Planning Teams**
 - The Emergency Management Policy Team
 - The Emergency Preparedness Planning Team (EPPT)
 - The Continuity of Operations (COOP) Planning Team
- **Emergency Response Teams**
 - The Incident Management Team
 - The Building Emergency Response Team (BERT)
- **Emergency Plans and Procedures**
 - A Training and Exercise Plan that specifies needed training and exercises, including drills, which take-place regularly
 - Emergency Operations Plan with response procedures
 - Continuity Plans

LCC Alerts, driven by RAVE and RAVE Guardian

LCC Emergency Alerts are used to warn people of an emergency that poses an imminent threat to life safety, such as violence or severe weather, ongoing criminal activity, or an urgent situation like a power outage.

There are three types of alerts, and three distinct email banners:

1. An **EMERGENCY NOTIFICATION** is an immediate threat to persons or property.
2. A **TIMELY WARNING** is based on a [Clery crime\(s\)](#) that pose(s) a serious or ongoing threat to the campus community.

3. **PUBLIC SAFETY NOTICES** are non-Clery incidents or situations that may impact campus safety or operations.

You can review or make changes to your RAVE profile by going to [RAVE Mobile Safety webpage](#) and specifying Lansing Community College.

Anyone in the community can also **register** for LCC Emergency Alerts by registering at the same site and specifying Lansing Community College.

To learn more LCC emergency communications, go to the [Emergency Communications webpage](#).

RAVE GUARDIAN Safety app

Find in the ITUNES STORE and GOOGLE PLAY.

Download it for all these cool features:

- Panic Button
- Tip Texting
- Personal Guardians & Safety Timer
- Safety Profile
- Personal safety timer
- LCC Police Department direct chat
- LCC Police Department direct call
- LCC Alert Notification direct to app
- Local 911 direct call
- Help/tip lines
- LCC web resource link

English for Speakers of Other Languages

The English for Speakers of Other Languages (ESOL) program focuses on developing academic English skills to achieve college readiness in reading and writing for students learning English as another language. The ESOL program serves students at a low intermediate level of proficiency or higher. This program builds upon the beginning ESOL literacy classes already offered in the community and serves as a bridge into LCC. ESOL High Intermediate and Advanced (levels 4 and 5) classes are offered for credit and are part of the English Department; ESOL Low Intermediate (level 3) classes are non-credit and are part of the Community Education and Workforce Development (CEWD) Division. For information regarding credit or non-credit courses, email the [Global Student Services Specialists](#) in Student Affairs. Additional information can be viewed on the [ESOL](#) webpage.

This program also serves as a connection to short-term, accelerated, or certificate-based Career Technical Education learning opportunities offered at LCC for both non-credit and credit programs. For more information, please contact the Job Training Center at 517-483-1857.

Faculty Information

To contact faculty member or other instructional personnel, please call the appropriate division office. Visit our website to view the [Program Contact Directory](#).

Financial Aid

The Financial Aid Office assists students with finding resources to finance their postsecondary education. Financial Aid resources are available through the federal government, state government, private organizations, and LCC. Students can contact the Financial Aid Office by calling 517-483-1200, Option 1, visit the [Financial Aid](#) webpage, or via [email](#).

Financial Responsibility

Students are expected to remain current on their financial obligations to the College. Students owing money to the College may be subjected to a hold and may not be permitted to register for classes until their account is paid in full or until a payment plan is approved by the College.

In addition, students must review, update, and accept the Financial Responsibility Agreement each semester of enrollment by logging into [MyLCC](#) and selecting Banner, then Student, and "Financial Responsibility Agreement." Doing so will automatically release the financial responsibility agreement hold allowing for registration in courses.

LCC Foundation

The LCC Foundation believes that a lack of financial resources should not be an obstacle to education for anyone. Over 500 scholarships are offered to students every year.

Some quick facts about scholarships at LCC:

- Scholarship applications open: November 1
- Scholarship applications close: January 31
- Website: [Scholarships](#)
- Online [Scholarship Workshops](#) and other scheduled workshops
- Approximately 500 scholarships are available

For more information, view the [Foundation Scholarships](#) webpage, contact at 517-483-1985, or via [email](#).

Global Student Services (GSS)

Global Student Services staff is here to help International Students navigate the admission and registration process, including issuance of Form I-20 documents and following visa regulations. GSS staff also provides support services to English Learner students. For more information, go to the [Global Student Services](#) webpage, call 517-483-5323, or [email](#).

Guest Speakers

In situations involving guest speakers, the College requires orderly conduct, noninterference with College functions or activities, and identification of the sponsoring groups or individuals.

Health Concerns

Some selective admission programs may require students to undergo medical testing and vaccinations. Students with medical conditions or disabilities are encouraged to contact the Center of Student Access (CSA) to determine whether they qualify for accommodations or exemptions. Discussions with CSA about medical conditions of students are confidential.

Health & Human Services Division

The [Health and Human Services](#) (HHS) Division offers essential health and wellness services through our public dental hygiene clinic, massage clinic, and human services practicums while providing students with clinical and workforce experience. The state-of-the-art Health and Human Services Building is a 141,992 square foot facility that houses HHS programs which prepare highly skilled healthcare, human services, and fitness professionals. In response to the local and national shortage of healthcare, human service and fitness workers, LCC leads in education, innovation, and simulation. Credentialed faculty provide instruction using cutting-edge equipment in programs that are nationally accredited or meet industry standards. LCC works with our community partners to provide healthcare apprenticeships and stackable certificates to heighten the credentials of our local workforce. For more information call the Health and Human Services Division office at 517-483-1410 or [email](mailto:lcc-hhs@star.lcc.edu) (lcc-hhs@star.lcc.edu).

High School-Based Programs

LCC offers high school-based programs, which include [High School Credit by Exam](#), [High School Advantage](#), Career and Technical Education Direct Credit (ERESA and CCRESA), as well as HOPE and Promise Scholarships. For more information call us at 517-483-1413 or send an [email](mailto:k12operations@star.lcc.edu) (k12operations@star.lcc.edu).

High School Dual Enrollment

Dual Enrollment provides an opportunity for qualified high school students to earn college credit while working toward their high school diploma. High school credit may or may not be granted according to the discretion of the participating student's high school. Dual enrollment affords students educational advancement in specific areas where unusual abilities and interest are displayed, especially in courses and academic areas not available in the student's high school. For further information, visit the [High School Dual Enrollment](#) webpage, call the K-12 Operations Office at 517-483-1413 or send an [email](mailto:k12operations@star.lcc.edu).

Honors Program

The Honors Program at LCC offers enriched courses, special advising services, community service options, and other enhanced learning opportunities for students.

Each year, the program offers up to 36 Honors Program Awards to new students who have demonstrated outstanding academic achievement and plan to complete a [two-year transfer curriculum](#) at LCC to pursue a bachelor's degree at a four-year institution. For more information, view the [LCC Honors Program](#) webpage or please contact us at 517-483-1061 or via [email](#).

Learning Commons

The Learning Commons is an academic support and learning assistance service for all students at LCC. Professional Tutors provide FREE Tutoring for LCC Students. Students are encouraged and welcome to walk-in to study and get tutorial assistance with our staff of Professional Tutors - no appointment needed. Students may schedule an individual tutoring appointment - both on-campus and online options are available.

Academic Workshops, Study Sessions, & Exam Prep Parties

Professional Tutors lead a variety of sessions throughout the semester to help students with specific topics, application of course content and skills, study tips, and learning strategies. Locations vary and may be scheduled on-campus, online, or hybrid – a combination of on-campus and online.

Student Peer Tutors

An opportunity for students to build a network of support. Peer Tutors work with teaching faculty in class and facilitate group peer-tutoring sessions for assistance outside of class on course specific content and skills.

Academic Resources at the Learning Commons

- **Study Spaces & Learning Studios** – Open, comfortable spaces welcome students to work individually or in small groups – independent study and tutoring is available.
- **Textbooks** – course-specific textbooks, reference material, and research assistance.
- **Models, Tools, and Equipment** – for Biology, Chemistry, Math, and other subjects.
- **Technology** – Laptops, iPads, and calculators for use on-site, along with computers that have specialized software applications for LCC course work.
- **Quick-Print Station** – Students can print and assemble papers and course material.

Learning Commons Locations:

- DOWNTOWN CAMPUS - Abel B. Sykes, Jr. Technology and Learning Center (TLC) building TLC 1st & 2nd Floors
- WEST CAMPUS – Room M123
- East Campus and Livingston Campus services vary by semester

More info -- Go to [The Learning Commons](#) Webpage

Phone: 517-483-1206

Email (learning-commons@star.lcc.edu)

[Tutoring Appointment Request form](#)

Library

At the Library, students can get research help from a librarian, study, relax, and check out books, journals, magazines, laptops, and calculators. Many textbooks are available for short lending periods. Study rooms, quiet study space and group collaboration areas are available, too. The Library offers e-books, e-journals, and a broad range of electronic resources that students and employees can access from the library's website.

For more information, visit us, go the [Library's](#) website, call 517-483-1038, or [email](#).

Media Services

Information Technology Services (ITS) offers a wide array of services to support student learning and promote academic goals.

Media Services, a part of ITS, offers the following services accessible to students: AV Services, Classroom Video, DMAC Equipment Checkout Audio Services, and Photography and Media Creation & Design.

For more information on media services please visit the [Media Services](#) webpage or contact Information Technology Services at 517-483-1755.

Occupational and Environmental Safety

LCC's Occupational and Environmental Safety (OES) Board Policy and The Occupational and Environmental Safety Framework guide divisions, departments, and programs in meeting local, state, and federal regulations related to the health and safety of our community. Working together, we can establish and maintain a comprehensive culture of safety at LCC. For more information, view the [OES](#) webpage, contact by telephone 517-483-1812, or by [email](#).

Office Directory

For the most up to date information, go to the [Office & Department Directory](#) webpage.

Orientation

Orientation is required for all students attending LCC prior to registering for classes. For guest students, transfer students or students who are dual enrolling while in high school, completion of orientation is not required. Please find the next steps on the [Getting Started](#) webpage. For additional information, please contact us at 517-483-1200 or by [email](#).

Payments

Student tuition payments can be made online, 24/7, by logging into myLCC and then selecting TouchNet. TouchNet is LCC's secure online payment vendor, where you can review account balances and payment history, make and schedule payments, or enroll in a payment plan. You may also authorize your parents or others to view account information and make payments

on your behalf. LCC offers payment plans through TouchNet to help students budget their education expenses. Students are encouraged to enroll early for best payment plan selections. For more information, go to the [Student Finance](#) webpage, call 517-483-1200, option 3 or via [email](#).

Parking Services

All students have access to free parking in designated areas on campus. For most up to date parking information, please go to the [Parking at LCC](#) webpage.

Parking permits are issued to LCC students for the semester in which they are enrolled. For more information, please call us at 517-483-1798 or by [email](#).

REPLACEMENT

For a replacement permit, students and employees can visit LCC's Downtown Campus, AOF building, room 108, located at 315 North Grand Ave from 7:30 a.m. to 4 p.m., Monday through Friday.

PARKING ENFORCEMENT

The LCC Police Department (LCCPD) enforces parking on campus by patrolling the college's parking lots to ensure the safety of students, employees, guests, and their vehicles. As necessary, the LCCPD will also issue parking citations to maintain the integrity of the college's parking program.

LCC permit parking is for school-related business only. LCC parking lots cannot be used when attending to unrelated LCC business, such as off-campus employment. Permits are non-transferable and issued to a specific person for use. Use of a parking permit by someone other than the person to whom it was issued may result in a written violation or revocation of the parking permit.

ELECTRIC VEHICLE (EV) CHARGING STATIONS

LCC is proud to provide 32 ChargePoint charging ports at the Downtown Campus. All employees and students can charge their electric vehicles for free for up to four hours every day. Visit the [EV Charging](#) webpage to learn more.

LCC Police Department

Lansing Community College Police Department (LCCPD) consists of Police, Dispatch, and other services. LCC Police Department is charged with providing a safe environment at all LCC campuses, and maintains physical offices at the Downtown and West campuses. LCC Police provide services in areas of crime prevention and control, criminal investigations, traffic and parking violations, facilities security, and emergency first-aid treatment. LCC Police operates 24 hours, 7 days a week via police presence and Dispatch. They can be reached anytime at 517-483-1800 or via [email](#). In an emergency call 911 for Police, Fire, and Emergency Medical Services. Also visit the [LCC Police Department](#) webpage for more information.

Services

Below is a list of services provided by LCC Police Department. Visit us by stopping the LCC Police Department office in the Gannon Building downtown or call 517-483-1800:

- Battery jump starts
 - Directional assistance
 - Lost & Found at Downtown and West campus.
 - Disposal of unclaimed items takes place at the end of every semester.
 - Open locked vehicles
 - Safety escort
 - After hours building access, if necessary
 - Emergency CPR, First Aid, or AED use during a medical emergency
 - Regular check and servicing of fire extinguishers, AED batteries, and first aid kits
 - Emergency notifications and timely warnings when warranted
- The development and delivery of safety and law enforcement talks, when requested.

Please report suspicious behavior, unusual circumstances and any possible law enforcement crimes or offenses immediately by calling 517-483-1800. Anonymous reporting is acceptable.

Request a Police Escort

Police escorts are for LCC students, faculty or staff and not the general public. Citizens may request a police escort by:

- Calling 517-483-1800
- Approaching an officer directly around campus grounds
- Coming to the Police Department Office located in the Gannon Building at 411 N Grand Ave.

To facilitate the College's commitment in maintaining a secure and positive learning environment, students, staff, and visitors are encouraged to accurately and promptly report to LCC Police or other law enforcement agencies all crimes, suspicious activities, emergencies, and public safety incidents, including when the victim of a crime elects to, or is unable to make such report. To report a crime or incident to LCC Police call 517-483-1800. To report an emergency please dial 911 and emergency services will be dispatched. Dispatchers at LCCPD Office are available 24 hours/day, seven days/week to answer calls.

Any location:

- [LCC Police Department](#) (non-emergency) (517) 483-1800
- Main Campus: Lansing Police Department (non-emergency) (517) 483-4600

- East Campus: Meridian Township Police (non-emergency) (517) 332-6526
- West Campus: Eaton County Sheriff (non-emergency) (517) 543-3512
- Mason Jewett Airport: Ingham County Sheriff (non-emergency) (517) 676-2431
- Livingston County Center: Livingston County Sheriff (non-emergency) (517) 546-2440

Emergencies Call 911

The Registrar's Office

The Registrar's Office maintains students' academic records and transcripts. It also issues certificates, diplomas, degrees, degree certifications, enrollment registration and verification, grade collection and recording, fee classification, and transfer credit processing. For more information, visit the [Registrar's Office](#) webpage, contact us at 517-483-1200, Option 2 or via [email](#).

StarCard Student IDs

The LCC StarCard is a student identification card that also provides students access to campus buildings and services. A StarCard is required at all building doors on LCC's Downtown Campus, West Campus, LCC East Campus, and Aviation Maintenance Technology Center. The Livingston County Center shares a building with Howell Public Schools and has instituted a separate security protocol.

The StarCard must be presented when requested by a College official. For more information, go to the [StarCard](#) webpage or contact the Help Desk at 517-483-5221.

StarZone

The StarZone is LCC's student services hub. Located in the Gannon Building at the Downtown Campus, the Enrollment Support Specialists can assist with registration, financial aid, student finance, and general questions. For more information, go to the [StarZone](#) webpage, contact by telephone at 517-483-1200, or [email](#).

Student Affairs Division

The Student Affairs Division offers student and academic support services. Our services are designed to help students reach their academic goals. For assistance, view the [Student Affairs Division](#) webpage, by [email](#), or please call 517-483-1162.

Student Finance

The functions of the [Student Finance](#) department include processing tuition payments, administering payment plans, working with third-party sponsorships, processing refunds for excess account balances, and issuing 1098T student tax statements. For more information, please contact us at 517-483-1200, option 3 or via [email](#).

Student Life

The Student Life Office exists to enhance the overall educational experiences and success of students through the development of, exposure to, and engagement in social, academic, intellectual, cultural, recreational, campus and community service, and leadership development. For more information, go to the [Student Life](#) webpage or contact via [email](#).

Student Resources Webpage

LCC recognizes that basic needs can impact the success of our students. The [Student Resources](#) webpage can help you connect to information about these resources, such as:

- Academic Resources
- Student Support Services
- Food Resources & Assistance
- Laptops, Calculators & Technology
- Mental Health Resources
- Need Assistance Now?/Schedule an Appointment
- Relation and Intimate Partner Violence & Sexual Violence Resources
- Scholarship & Grants

If you cannot find what you need on this page, contact a Success Coach to get help at 517-483-1422 or [email](#) (lcc-successteam@star.lcc.edu).

Technical Careers Division

The dynamic nature of the economy means that today's and tomorrow's jobs differ significantly from those of previous generations. Technological advancements are reshaping workplaces, making it crucial for workers to acquire new skills to support our evolving economy. Many of these skill sets weren't even on the radar just a few years ago. In fields like skilled trades, new equipment and software have transformed traditional manufacturing practices. The importance of Electrical Technology has surged with the rise of electric and autonomous vehicles, changing priorities in energy generation and consumption. Even firefighting and policing have adapted, integrating cutting-edge technologies into their operations. Advanced Manufacturing, driven by robotics and automation, now fully embraces Industry 4.0 principles. Careers in Aviation Maintenance and Heavy Equipment Repair are experiencing high demand, expected to persist for years to come. With cybersecurity and the fight against cyberterrorism taking center stage across all industries, expertise in this area is essential. LCC's Technical Careers Division is strategically positioned to meet the demands of emerging industries. By providing students with both foundational knowledge and practical skills, it prepares them for meaningful, well-paying careers. For further details, visit the [Technical Careers Division webpage](#) or call 517-483-1319.

Testing Services

Testing Services provides exam administration and related services to prospective and current students, faculty, and community members. The Testing Center is located in the Gannon Building, Room 2228. For more information, please contact us at 517-267-5500 or via [email](#), or visit the [Testing Services](#) webpage.

- [Course Testing](#)
 - Testing Services proctors LCC course exams for online and hybrid courses, lecture makeup exams and for students with accommodations for testing.
 - Some online/hybrid courses, even if the class is completely online, may require students to come in person to take an exam in a proctored environment. [View courses with required in-person testing](#). You can also check your syllabus or contact your instructor to determine if you will be required to do so.
 - Exams for online courses can be taken at Downtown Campus, West Campus, East Campus and Livingston County Center or an approved non-LCC testing site.
- [Placement Levels](#)
 - Most courses at LCC have minimum skill level requirements in reading, writing, and/or math that must be met before a student can enroll in the class. Ways to establish placement levels
- [Other Testing Services](#)
 - Proctoring Services (Non-LCC), CLEP, WorkKeys, and Certification Testing
- [Waiver Information](#)
 - All LCC students are required to meet individual course prerequisites before they can register. The waiver form can be used to obtain placement levels in Reading, Writing, and Math or to receive a prerequisite override based on previous college-level coursework.

Textbooks

Barnes & Noble College is LCC's official online bookstore. The bookstore presents all options available to students to purchase their textbooks including new with a guaranteed buyback price and, if available, used, e-book/digital, First Day Inclusive Access (FDIA), rental, and marketplace options.

Textbooks, both required and recommended, can be viewed on the [Barnes & Noble College online bookstore](#).

Other options available are:

- [First Day Inclusive Access](#)

First Day Inclusive Access (FDIA) is an alternative to traditional textbooks. FDIA provides students access to digital course textbooks and materials on the first day of class, at a lower cost than a physical copy of the textbook. To view courses using First Day Inclusive Access, go to the [Textbooks and Bookstores](#) webpage.

Need help using First Day Inclusive Access? Contact the [LCC Help Desk](#), 517-483-5221 or [online chat](#).

- [Open Educational Resource \(OER\)](#)

OERs are ebooks or other learning materials that are openly available to download and use at no cost. To view courses using an OER, go to the [Textbooks and Bookstores webpage](#).

- [Library](#)

Textbooks for many courses are available for check-out in the Library. Please direct any questions via [email](#) or phone at 517-483-1626.

Some textbooks may be available as an [e-book](#) through the Library or as an [Open Educational Resource \(OER\)](#). [Ask a Librarian](#) if you need help.

- [Local Bookstore](#)

Student Book Store
421 E. Grand River Ave.
East Lansing, MI 48823
517-351-4210

For more information, view the [Textbooks and Bookstores](#) webpage, or contact the appropriate [department/program](#).

TouchNet

TouchNet is LCC's secure online payment vendor. Students can review account balances and payment history, make payments with credit/debit cards, schedule payments, enroll in an installment payment plan, select refund preference, review refund history, access 1098T student tax statements, authorize parents and others to view account information and make payments on student's behalf.

Transfer Center

The Transfer Center at LCC provides resources, guidance, and services necessary for LCC students to successfully transfer to another institution in an engaging and inclusive environment.

If you are interested in transferring your LCC credits to a 4-year College or University, we can help. Your journey begins with completing the [Transfer Success Form](#). Once submitted, a Transfer Center staff member will review your request to become familiar with your specific needs and then reach out to schedule an appointment with you.

Current, former, and prospective LCC students may take advantage of the Transfer Center's services located in the Gannon Building, room 2204 on LCC's Downtown Campus.

For more information, please call 517-483-9700, complete the [Transfer Success Form](#) or visit the [Transfer Center webpage](#).

Transfer Guides & Articulation Agreements

To review current information, please visit the [Transfer Guides & Articulation Agreements](#) webpage.

Requesting Official Transcripts:

LCC has partnered with the National Student Clearinghouse to offer electronic transcripts through an online ordering system. To request a transcript, please visit the [Requesting Official Transcript](#) webpage and carefully review the fees and requirements.

Transfer Events:

Please visit our [LCC Web Calendar](#) for a list of all campus events.

Center for Veteran and Family Support (CVFS)

The Center for Veteran and Family Support (CVFS) goal is to become the top military-connected campus in Michigan. The primary mission of the office is to provide a one-stop shop for our veteran and dependent students, along with other family members as well. The CVFS assists students in selecting the proper VA GI Bill® benefit and helps them enroll in their chosen GI Bill® benefit. The CVFS serves as a liaison between students, the VA, and other LCC departments and can make contacts on behalf of students when needed. The CVFS also offers a dedicated team to provide personal assistance to military-connected students. The team consists of CVFS staff, an Admissions Counselor, an Academic Advisor, a Student Success Coach, an LCC Licensed Counselor, and a Financial Aid Advisor. A large student lounge area for students to meet and relax is available for use every day, along with study rooms and a computer lab to work on schoolwork. For more information, please call 517-483-5246 or visit the [Center for Veteran and Family Support website](#).

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site for [U.S. Department of Veterans Affairs](#).

Office of Veteran and Military Affairs

[See Center for Veteran and Military Support](#)

Writing Center

Writing is a skill, a practice, and a process that improves over time. Students develop a better awareness of processes and strategies that produce better writing with support from our Writing Assistants. Our goal is to help students become better writers by developing confidence, proficiency, and self-awareness as they encounter future writing tasks.

In-Person and Online Real-Time Appointments

Students choose between in-person or online real-time appointment options when scheduling. We offer 45-minute appointments that can be scheduled up to two weeks in advance. Online real-time appointments are conducted using WebEx.

Asynchronous Email Feedback

Students submit the assignment sheet/description/rubric, their writing, and a prioritized list of concerns through the form on the Writing Center website. It's assigned to a Writing Assistant who will email a response to the paper and students' concerns within 3 business days.

Hours of operation

Fall and Spring semester:	Monday-Thursday: 9 a.m. – 8 p.m. Friday-Saturday: 11 a.m. – 4 p.m.
Summer semester:	Monday-Thursday: 10 a.m. – 4 p.m. Friday: 10 a.m. – 2 p.m.

Find us at A&S 2214, contact us at 517-483-1907, or by [email](mailto:writingctr@star.lcc.edu) (writingctr@star.lcc.edu). Also, on our [LCC Writing Center webpage](#).

Registration

Course Offering Formats

[Course offerings](#) fit into six types:

- **In-Person/Face-to-Face:** Courses with all instruction delivered in-person in the classroom, clinical, or worksite. Look for sections with the Format “In-person/Face-to-Face.”
- **HYF - Hyflex:** Students have the flexibility to choose how they will participate for each class session: in-person, online during the class meeting time, or online asynchronously. Look for sections with the Format “HYF:Flex In-person or Online.” *
- **ON - Online:** Asynchronous online courses with no class meeting dates/times. Look for sections with the Format “ON: Online.” *
- **ORT - Partial Schedule Lecture:** Online real time (ORT)/live online courses with some regularly scheduled online meeting day(s) and times. Look for sections with the Format “ORT: Online Part Scheduled Time.”
- **ORT - Full Scheduled Lecture:** Online real time (ORT)/live online courses where all instruction is delivered online during designated meeting day(s) and times. Look for sections with the Format “ORT: Online at Scheduled Times.”
- **OH - Online Hybrid:** Required in-person instruction with online coursework and activities. Look for sections with the Format “OH: In-person and Online.”

* Courses offered in an online format may require students to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) for proctored exams. For more information, including the courses that require onsite proctored exams, please visit the [Online Course Testing](#) webpage.

Estimate Tuition Cost

Planning for the cost of higher education is extremely important. Use the [Tuition Cost Estimator](#) tool to estimate the cost of tuition for this semester.

Course fees support costs unique to specific courses, beyond the standard cost of instruction and basic materials. Fees include a variety of consumable costs, specialized equipment, and technology dedicated to the associated course. Further, small group instruction is sometimes required by state or federal regulations, national accreditation mandates, or quality and safety standards, which all impact faculty-to-student ratios and overall program costs. These costs have not changed because of distance learning.

LCC’s longstanding practice is that students are charged for the cost to deliver their education in their chosen program. As such, the courses and programs that have these additional costs are charged to the students enrolled in the courses rather than spreading those costs out evenly among all students by way of higher tuition. This practice promotes fairness for all.

Register for Class(es)

To register, Log into [myLCC](#), and click on the [Banner](#) link to drop or add course(s). For assistance on how to register online, please check out LCC's "How to Register Online" instruction guide.

Note: Prerequisite overrides are managed within each [division/department](#).

Students can add classes based on the teaching periods. For important deadline details, see the charts:

- Registration begins Monday, April 29, 2024
- Registration begins Monday, October 14, 2024
- Registration begins Monday, March 31, 2025

Register early for best class selection! For additional information, call LCC at 517-483-1957 or toll-free at 1-800-644-4522. Refer to variable-date options list for classes beginning throughout the semester.

Many LCC courses are offered in a shorter timeframe than the traditional full-semester teaching period and provide the same amount of credit. See the list above for the various start and end dates of the teaching periods.

Students must be admitted to the College and complete the required steps prior to registering.

Students should determine that all the required course prerequisites have been met and seats are available.

Late Registration and Scheduling Adjustments

Late registration at LCC is allowed within the first calendar week or three (3) days of registration, depending on the parts of term.

- Late registration for Fall and Spring, parts of term: 16 week, 15 week, and 14 week; will be allowed within the first week (7 calendar days) of registration.
- Late registration for Fall and Spring, parts of term: 12 week, 12B week, 8A week, and 8B week; will be allowed within the first three days (3 calendar days) of registration.
- Late registration for Summer, for all parts of term, will be allowed within the first three days (3 calendar days) of registration.

Late registration is defined as adding a course for the current semester after the semester has begun. A schedule adjustment is defined as adding a course by a student with registration activity for the current semester. Adding an additional course, switching sections, and being reinstated into a section in which the student was previously registered, are all examples of

schedule adjustments. Once the late registration period has ended, special circumstance may be considered after consultation with the instructor and the Academic Dean.

WHAT IS REGISTRATION ACTIVITY?

Examples of registration activity include:

- A student is registered in a section for the current semester
- A student dropped a section during the current semester
- A student was on a waitlist for a section during the current semester

Online Courses Requiring On-campus Testing

Some courses offered in an online format require in-person proctored testing. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s). These courses include:

- ACCG 210
- BIOL 201, 202, 203, and 270
- CHEM 151 and 152
- CITP 180, 190, and 280
- IRXT 144, 222, and 224
- MATH 119, 120, 126, 141, 151, 152, 253, 254, and 260
- PHYS 120
- SOCL 120 and 260
- STAT 170 and 215

Requests for a non-LCC testing location should be made to LCC's Testing Services at least 5 business days prior to the exam opening date. For more information, please visit the [Testing Services webpage](#).

Online Degrees and Certificates

Associate of Applied Science Degree

- Cybersecurity (1832)
- Digital Media and Design (1846)

Associate of Arts Degrees

- | | |
|------------------------------------|-------------------------|
| • African-American History (0137) | • History (0197) |
| • American Studies (0142) | • Humanities (0119) |
| • Anthropology (1621) | • Journalism (1628) |
| • Art History (0746) | • Philosophy (0159) |
| • Business Transfer Studies (1622) | • Psychology (0215) |
| • Criminal Justice (0146) | • Sociology (0753) |
| • Economics (0230) | • World Language (0132) |
| • Education (1624) | |

Associate of Business Degrees

- Accounting (0162)
- Accounting CPA Exam Prep (0255)
- Business Administration (0243)
- Computer Programmer/Analyst (0113)
- E-Business (0839)
- Financial Institutions (0103)
- Human Resource Management (0712)
- International Business (0240)
- Legal Studies (0101)
- Management and Leadership (0245)

Associate of Fine Arts:

- Theatre (1849)

Certificates

- Accounting, Certificate of Achievement (0714)
- Advanced Management, Certificate of Achievement (0280)
- Computer Programmer/Analyst, Certificate of Completion (0969)
- Computer Software Tester, Certificate of Achievement (1633)
- Computer Technology Basics, Certificate of Completion (0844)
- Correctional Officer, Certificate of Completion (0840)
- Cybersecurity Advanced, Certificate of Completion (1845)
- Cybersecurity Foundations, Certificate of Completion (1833)
- E-Business, Certificate of Achievement (0845)
- eDiscovery Proficiency Certificate, Certificate of Achievement (1847)
- Financial Institutions, Certificate of Completion (0151)
- Information Technology Foundations, Certificate of Completion (0766)
- Japanese Studies, Certificate of Completion (1787)
- Legal Studies Post-Bachelor, Certificate of Achievement (0744)
- Management, Certificate of Achievement (0249)
- Microsoft Office Specialist, Certificate of Completion (0841)
- Sales Specialist, Certificate of Achievement (0242)
- Spanish Studies, Certificate of Completion (1788)
- Web Site Developer, Certificate of Completion (0843)

General Associate Degrees

- Business (1821)
- Communication, Journalism, and Language (1823)
- Public Services Career Community (1848)

Transfer Programs

For students following the [Michigan Transfer Agreement](#), the requirements can be completed online.

Maximum Enrollment per Semester

Individual students will enroll in no more than 28 credits per semester. Students who wish to enroll in more than 28 credits per semester may request permission from the Dean or designee overseeing the academic program the student is following. The Dean or designee will make a decision which is based on the student's academic and personal circumstances and which supports reasonable expectations for successful learning and course completion. In the case of any appeal, the final decision rests with the Academic Affairs Office.

Placement Levels

Most courses require basic skills proficiency levels which must be met prior to enrolling in courses that require specific placement levels. Students are strongly encouraged to establish their placement levels, complete orientation, and meet with an advisor prior to registration. Placement levels may be established through high school transcripts documenting required GPA or through ACT, SAT, CLEP, ASVAB, or GED test scores, or through placement testing. Levels may also be established through previously completed college coursework.

Tuition and Fee Information

Below are policies related to the calculation of tuition based on residency and veteran status, the payment of those fees, and the refund policy.

Eligibility for In-District, In-State, Out-of-State, or International Tuition

In order to abide by state law and ensure the fairness for taxpayers in the district, the College's Board of Trustees periodically approves tuition and fees for resident, non-resident, out-of-state, and international students.

2024-2025 TUITION RATES (PER BILLING HOUR)

The cost for attending a course is determined by the course's billing hours, instead of credit hours. A billing hour represents an amount of time that a student spends in direct contact with an instructor, in lab, or with laboratory equipment.

*COLLEGE DISTRICT RESIDENT STUDENTS - \$120**

Resident students have lived for four months or more within one of the 15 school districts listed below and pay property taxes to support LCC's budget. School districts include:

School Districts included in LCC District		
Bath	Haslett	Okemos
Dansville	Holt/Dimondale	Stockbridge
Dewitt	Lansing	Waverly
East Lansing	Leslie	Webberville
Grand Ledge	Mason	Williamston

*IN-STATE STUDENTS - \$240**

If student resides in Michigan, but not in one of the above 15 school districts, the student is an in-state student.

*OUT-OF-STATE STUDENTS - \$360**

If student lives outside of Michigan, the student is an out-of-state student.

*INTERNATIONAL STUDENTS - \$420**

If the student has been admitted to the United States on a temporary, non-resident status, the student is classified as an international student.

*SENIOR CITIZENS**

If the student is age 62 or older on the first day of the semester and a resident of the LCC district four months prior to the beginning of the semester in which registering, the student qualifies for a reduced tuition rate of \$60 per billing hour on classes at LCC. (Note: Michigan residents living outside the LCC district qualify for a reduced rate of \$120 per billing hour.) These rates apply to LCC classes taken for audit or credit. Classes with zero billable hours are not covered by the tuition rate reduction. For details, stop by the [StarZone](#) or call 517-483-1957.

Mandatory Fees

- **Registration Fee - \$25***
The registration fee is applied to each semester the student is enrolled and pays for some of the cost of registration. This fee is charged to all students.
- **Student Support Fee - \$15***
Fee includes student support services such as tutoring, advising, counseling, library, computer lab and parking. (This fee is charged per billable hour and to all students).
- **Course Fee ***
Course fees vary and apply to courses requiring specialized supplies, equipment, facilities, and other instructional resources unique to the individual course. See class offerings to determine if a course has an applicable course fee.

*Tuition and Mandatory Fees are subject to change by action of the LCC Board of Trustees.

About Billing Hours

What is a billing hour?

The cost for attending a course is determined by the course's billing hours, instead of credit hours. A billing hour represents an amount of time that a student spends in direct contact with an instructor, in lab, or with laboratory equipment.

How are billing hours for a course determined?

Several factors are considered in determining the billing hours of a course. The main factor is the number of hours the student is expected to either be in a class or in another "instructional" setting (such as a lab) in a typical week for a full-semester course. LCC courses range from one billing hour to 21 billing hours per course. The billing system caps the number of billing hours that can be added to a course. For the majority of courses at LCC, the credit hours and the billing hours are the same.

Tuition Estimate Resources

[Tuition Cost Estimator](#)

The Course Tuition Cost Estimator will give you a rough estimate of the tuition and fee charges for one or more courses you plan to enroll in. This is a tool to help you plan prior to registering for courses.

[Net Price Calculator](#)

This tool can be used to receive an estimate of how much students similar to you paid to attend LCC during the current Academic Year.

Military-Connected Student In-State Tuition

Any individual using Veterans Affairs (VA) Educational Benefits under Chapter 30, Chapter 31, Chapter 33, Chapter 35, or the Fry Scholarship and who lives in the State of Michigan while attending LCC, regardless of their former state of residence, and regardless of when they or the military member was discharged from military service, will pay in-state tuition rates for all VA approved programs.

To remain compliant and approved to receive VA GI Bill® funding, schools must charge in-state tuition and fee amounts to “covered individuals.” A “covered individual” is defined in Section 1005 of Public Law 116-315 as:

- A veteran who lives in the state in which the institution of higher learning is located, regardless of their former state of residence, and enrolls in the school, regardless of when they discharged from military service.
- A spouse or child using transferred benefits who lives in the state in which the institution of higher learning is located, regardless of their former state of residence, and enrolls in the school, regardless of when the military member discharged from military service.
- A spouse or child using benefits under the Survivors’ and Dependents Educational Assistance Program (DEA) who lives in the state in which the institution of higher learning is located, regardless of their former state of residence, and enrolls in the school, regardless of when the military member died in the line of duty or when the individual became eligible to receive the benefit.
- A spouse or child using benefits under the Marine Gunnery Sergeant John David Fry Scholarship who lives in the state in which the institution of higher learning is located, regardless of their former state of residence, and enrolls in the school, regardless of when the military member died in the line of duty.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government web site for [U.S. Department of Veterans Affairs](https://www.va.gov).

Payment of Tuition and Fees

According to the Michigan Community College Act, “the Board of Trustees may establish and collect tuition and fees for resident and nonresident students.” The Board of Trustees shall review student tuition and fees on an annual basis, based on the financial requirements of the College, to provide optimal services to students at an affordable price.

Tuition and Fees Refund Policy

It shall be the College policy to refund tuition and fees accordingly, except where superseded by law, to a student who properly withdraws from a class. Specific dates can be found in the Teaching Period Schedule for [Fall 2024](#), [Spring 2025](#), and [Summer 2024](#).

Additional information can be viewed on the [Tuition and Fees Refund Policy](#) webpage, per the [Board Policy 5.070: Student Tuition and Fees](#).

Financial Aid

What is Financial Aid?

It is resources to assist students with paying for their post-secondary education.

Ways to Cover the Cost of Post-Secondary Education

Scholarships

Scholarship eligibility varies based on financial need, academic merit, field of study, talent, athletic participation, etc. For the most part, these funds do not need to be repaid. Students can apply for scholarships at LCC, the State of Michigan, community organizations, and their employer. Selection criteria and requirements vary according to the individual scholarship and it is important to pay attention to application deadline dates. Please take a look at the following scholarship opportunities offered through a variety [online scholarship search engines](#).

Grants

Grants are funds to help cover educational costs and do not need to be repaid. These funds are offered by the federal government, State of Michigan, and LCC. Additional information can be found on the [Grants](#) webpage.

Student Employment & Work-Study

On- and off-campus employment opportunities allows the student to earn the funds to help cover the costs of educational expenses. As work is completed, the student can earn wages that may be used toward school-related costs. More information can be found on the [LCC Student Employment & Work-Study](#) webpage.

Loans

Loans are available through the government and students also have the option of taking out loans from a private lender. These funds must be repaid. See the [Loans](#) webpage for more information.

Applying for Financial Aid

Free Application for Federal Student Aid (FAFSA) Process

To qualify for Financial Aid, students must complete and submit the Free Application for Student Aid ([FAFSA](#)) using LCC's school code: 002278.

If planning on attending Fall 2024, Spring 2025, and/or Summer 2025, the student must complete the 2024-2025 FAFSA, which requires 2022 income information.

Types of Financial Aid

Need-Based v. Non-Need-Based Financial Aid

Need-based aid is financial aid a student can receive if the student has financial need and meets other eligibility criteria. Financial need is determined by subtracting the Student Aid Index (SAI) derived from the FAFSA from the student's Cost of Attendance (COA). Students cannot receive more need-based aid than the amount of financial need.

Example: COA of \$11,000 and SAI of \$7000 = financial need of \$4,000. Student is eligible for \$4,000 in need-based aid.

The following are need-based financial aid programs:

- [Children of Fallen Heroes Scholarship](#)
The Children of Fallen Heroes Scholarship is provided to students whose parent or guardian was a public safety officer who died in the line of duty. This scholarship is available to those who are Federal Pell Grant eligible and are under 24 years of age or enrolled at an institution of higher education at the time of parent's or guardian's death.
- [Federal Pell Grant](#)
The Federal Pell Grant is a need-based federal grant to promote access to postsecondary education, and is awarded to low- and middle-income undergraduate students who have not yet earned a bachelor's or professional degree. Students must meet [basic eligibility requirements](#). Grant amounts are based on the student's SAI (see [Determining Financial Aid Eligibility](#)), and [enrollment level](#) at the [Federal Pell Grant Census Date](#). The maximum annual award is \$7,395 for 2024-2025 award year. Students are limited to receiving the equivalent of 12 full-time semesters of Federal Pell Grant.
- [Federal Supplemental Educational Opportunity Grant \(FSEOG\)](#)
The FSEOG is a federal grant awarded to students who demonstrate financial need, meet the [basic eligibility requirements](#), and qualify for a Federal Pell Grant. FSEOG funding is limited; therefore, priority is given to students who have the lowest SAI.
- [Federal Direct Subsidized Loan](#)
Federal Direct Subsidized are loans made to eligible undergraduate students who need help with covering educational expenses. These funds must be repaid according to the terms of the Master Promissory Note and interest does not accrue while the student is in school.
- [Federal Work-Study](#)
Federal Work-Study is a need-based federal program that provides students with employment opportunities, both on- and off-campus, to assist with educational expenses. Students must meet the [basic eligibility requirements](#) to receive these funds.

- [Fostering Futures Scholarship](#)

The Fostering Futures Scholarship is awarded on a first-come, first-served basis to students who have been placed by the Department of Human Services in the Michigan foster care system on or after the 13th birthday. To apply for these funds, students can create an MISSG portal and submit a Fostering Futures Scholarship application or contact the Customer Care Center at 1-888-447-2687. Eligible applicants are required to maintain half-time enrollment (minimum 6 credit hours) and meet Satisfactory Academic Progress.

- [Iraq & Afghanistan Service Grant](#)

The Iraq and Afghanistan Service Grant is a need-based federal grant awarded to students whose parent or guardian was a member of the U.S. armed forces who died as a result of military service performed in Iraq or Afghanistan after the events of 9/11 when the student was under 24 years old or enrolled in college at least part-time at the time of the student's parent's or guardian's death. The student must be enrolled at least half-time (6 credit hours) and the award amount is prorated based on enrollment level: 100% for full-time (12 or more credits), 75% for three-quarter-time (9-11.99 credits), and 50% for half-time (6-8.99 credits).

- [LCC Grant](#)

The LCC Grant is an institutional grant awarded to students who demonstrate financial need. Grant funds are limited; therefore, priority is given to students with the lowest SAI.

- [Michigan Competitive Scholarship](#)

The Michigan Competitive Scholarship is awarded to students who are pursuing their first degree and demonstrate financial need along with having a qualifying ACT or SAT score. Eligible applicants are required to file a FAFSA each year, maintain half-time enrollment (minimum 6 credit hours), maintain a GPA of 2.0 and meet Satisfactory Academic Progress. This award can only pay for tuition and fee charges and may be adjusted due to other awards. The award amount is pro-rated based on enrollment levels: 100% for full-time (12 or more credits), 75% for three-quarter-time (9-11.99 credits), and 50% for half-time (6-8.99 credits).

<https://www.michigan.gov/mistudentaid/programs> **Non-need-based aid** is financial aid that is not based on SAI. The student's eligibility is determined by COA and the amount of other financial aid awarded.

Example: COA of \$11,000 and need-based awards of \$4,000 = no more than \$7,000 in non-need-based aid.

The following are non-need-based student aid programs:

- [Children of Veterans Tuition Grant \(CVTG\)](#) The CVTG is awarded for up to four academic years to students older than 16 and less than 26 years of age who are the natural or adopted child of a Michigan veteran. The veteran must have died or

become totally and permanently disabled as a result of military service. Students must enroll at least half-time (minimum 6 credit hours) and meet Satisfactory Academic Progress (SAP) standards, which includes maintaining a minimum GPA of at least a 2.25, to continue to receive the award. This award covers tuition and mandatory fees (Registration and Student Support Fees), prorates based on enrollment level and may be adjusted due to other awards. CVTG will not cover any billing hours in excess of credit hours.

- [Federal Direct Unsubsidized Loan](#)

The Federal Direct Unsubsidized are loans made to eligible undergraduate, graduate, and professional students to help cover educational expenses. These funds must be repaid according to the terms of the Master Promissory Note and interest does accrue while the student is in school.

- [Federal Direct PLUS Loan](#)

The Federal Direct PLUS are loans made to parents of a dependent student to help cover educational expenses of the dependent student. Eligibility is not based on financial need, but a credit check is required. Parent borrowers who have an adverse credit history must meet additional requirements to qualify.

- [Futures for Frontliners \(F4F\)](#)

The F4F provides tuition assistance to Michigan residents who have not obtained a college degree and worked as a frontline worker in an essential industry between April 1 and June 30, 2020. The program is intended to give thanks to those who put themselves at risk during the pandemic. Students must have applied by December 31, 2020. The scholarship covers any remaining in-district tuition and mandatory fees (Registration and Student Support Fee) that are not covered by the Federal Pell Grant or other tuition-restricted scholarships. Students must maintain enrollment in a financial aid eligible program, earn 12 credits per academic year, and maintain a 2.0 GPA or meet Satisfactory Academic Progress to maintain renewal in the program.

- [Gaining Early Awareness and Readiness for Undergraduate Programs \(GEAR-UP\)](#)

The Michigan GEAR UP (MI GEAR UP) is a federally funded program designed to provide early intervention services and programs to students in middle school and high school. MI GEAR UP targets low-income students by providing them with support services to increase their opportunity to succeed in postsecondary education. Students must maintain Satisfactory Academic Progress and be enrolled at least half-time (6 credit hours).

- [Michigan Indian Tuition Waiver \(MITW\)](#)

The MITW is awarded to students approved by the Michigan Department of Civil Rights. Students must be $\frac{1}{4}$ or more Native American blood quantum as certified by their Tribal Enrollment Department, be an enrolled citizen of a U.S. Federally Recognized Tribe as certified by the Tribal Enrollment Department, and be a legal resident of the state of Michigan for no less than 12 consecutive months. The MITW award can only pay for tuition charges and may be adjusted due to other awards.

- [Michigan Reconnect](#)
Michigan Reconnect provides tuition assistance to Michigan residents who are 21 years of age or older and have not obtained a college degree. The scholarship covers any remaining in-district tuition and mandatory fees that are not covered by the Federal Pell Grant or any state tuition-restricted scholarships. In addition to completing the FAFSA, students must complete and submit the [Reconnect Application](#). Students must begin classes within 12 months from the date the application was approved by the State of Michigan. For renewal of the scholarship, students must earn 12 credits each academic year, maintain a 2.0 GPA while in the program or meet Satisfactory Academic Progress.
- [Police Officer's and Firefighter's Survivor Tuition Act](#)
The Police Officer's and Firefighter's Survivor Tuition Act provides a waiver of tuition for the surviving spouse and children of Michigan police officers and firefighters who died in the line of duty. The program is intended to provide an educational benefit to the spouse and children of police officers and firefighters who made the ultimate sacrifice for their communities and the citizens of Michigan. Tuition is waived for eligible survivors enrolled at least half-time (6 credits) in classes leading to a certificate or undergraduate degree. Students must maintain Satisfactory Academic Progress.
- [Private \(Alternative\) Loans](#)
Private (Alternative) Loans are credit-based student loans offered by private lenders. They are available to students who need funds in addition to their federal aid to meet educational expenses or for those students not eligible for federal aid.
- [Tuition Incentive Program \(TIP\)](#)
The TIP is awarded for up to 80 credits to students enrolled in an Associate Degree or Certificate program that requires at least 30 credits. Students must enroll at least half-time (minimum 6 credit hours) in courses that are required for the declared program of study and meet Satisfactory Academic Progress standards. This award covers in-district tuition and mandatory fees and may be adjusted due to other awards. TIP will not cover any billing hours in excess of credit hours.
- [Michigan Achievement Scholarship / Community College guarantee](#)
The Michigan Achievement Scholarship/Community College Guarantee scholarship provides renewable scholarships to undergraduate students who graduate from a Michigan high school with a diploma, certificate of completion, or achieved a high school equivalency certificate in 2023 or after. Students must have a complete Free Application for Federal Student Aid ([FAFSA](#)) on file and be enrolled full-time (12 or more credits). The scholarship includes a tuition/fee portion covering the in-district tuition and mandatory fees per semester according to the State of Michigan packaging guidelines to cover remaining in-district portion of tuition and mandatory fees that are not covered by other gift aid. Students who are eligible for the PELL

Grant are awarded a Michigan Achievement bonus of \$1000. Depending on individual student eligibility, the award may cover other educational expenses

- [Michigan Achievement Skills Scholarship](#)

With the Michigan Achievement Skills Scholarship, students can receive up to \$2,000 per year for up to two years to attend an eligible career training program in Michigan. Students must be a Michigan resident for at least the immediately preceding year, have graduated from high school in Michigan with a diploma or a certificate of completion or achieved a high school equivalency certificate in 2023 or after, have not yet earned an associate or bachelor's degree, and have not yet earned a degree, certificate, or other credential with this scholarship.

Eligible LCC short term training programs:

- Vascular Technology (1604)
- Juvenile Justice (0916)
- Phlebotomy Technician (1010)
- Bookkeeping Professional (JTC)
- Pharmacy Technician (1024)
- Human Services (1201)
- Medical Assistant (1811)
- EKG Technician CC (1442)
- Magnetic Resonance Imaging Technology (1602)
- Paramedic (0272)

- [Michigan Reconnect Short-Term Training Program](#)

Students can choose to attend a career training program in Michigan through the Reconnect Short-Term Training Program and receive a one-time scholarship up to \$1,500 towards tuition costs. Students must be 21 years or older prior to submitting the application, be a Michigan resident for at least the immediately preceding year, have graduated from high school with a diploma or a certificate of completion or achieved a high school equivalency (e.g., GED) certificate, and have not yet earned an associate or bachelor's degree. Student must [Submit an application](#) by December 15, 2024, enroll in an [eligible career training program](#), and begin career training program prior to December 31, 2024.

Eligible LCC short term training programs:

- Vascular Technology (1604)
- Juvenile Justice (0916)
- Phlebotomy Technician (1010)
- Bookkeeping Professional (JTC)
- Pharmacy Technician (1024)
- Human Services (1201)
- Medical Assistant (1811)
- EKG Technician CC (1442)

- Magnetic Resonance Imaging Technology (1602)
- Paramedic (0272)

Financial Aid Policies

Basic Eligibility Requirements

While each aid program has special requirements, the following are basic requirements that apply to federal financial aid. In order to be eligible to receive federal financial aid, the student must:

- Complete the Free Application for Federal Student Aid (FAFSA).
- Have earned a High School Diploma (High School Certificate of Completion is not the same as a High School Diploma) or GED/State Certification, or have completed Homeschool graduation requirements.
- Be enrolled or accepted for enrollment in an eligible degree or certificate program and only be taking courses that lead to that degree or certificate.
- Be a U.S. citizen or national, permanent resident, or other eligible noncitizen.
- Have a valid Social Security Number, except for residents of the Federated States of Micronesia, Republic of the Marshall Islands, or the Republic of Palau.
- Be making Satisfactory Academic Progress.
- Not owe an overpayment on a Title IV grant or be in default on a Title IV loan.
- Have returned fraudulently obtained Title IV funds, if convicted of or pled guilty or no contest to charges.
- Not have fraudulently received Title IV loans in excess of annual or aggregate limits.
- Have repaid Title IV loan amounts in excess of annual or aggregate limits, if obtained inadvertently.

Determining Eligibility

After completing the [Free Application for Federal Student Aid \(FAFSA\)](#), the student will receive a Student Aid Report. The Financial Aid Office will use the information from this report to determine the types and amounts of financial aid the student may qualify for by using the following formula:

$$\text{COST OF ATTENDANCE} - \text{STUDENT AID INDEX} = \text{FINANCIAL NEED}$$

Cost of Attendance

Cost of attendance (COA) is based on the average educational and living expenses for a student attending LCC. It does not represent an individual student's actual costs. The COA includes:

- Tuition and Fees
- Books and Supplies
- Housing and Food
- Transportation
- Personal and Miscellaneous
- Loan Fees
- Professional Licensure (if required for program)

Students may determine or estimate their COA using the following methods:

1. Current financial aid students, login to [myLCC](#), click Banner, select Financial Aid and Financial Aid Record to access the Award Overview tab
2. Prospective students, access the [Net Price Calculator](#) or view the below chart for fall and spring semester costs for a full-time student

Full Time Cost of Attendance Chart

Standard Academic Year (Fall & Spring)	Resident	In State	Out of State
Books and Supplies	\$400	\$400	\$400
Tuition and Fees	\$4,000	\$7,400	\$11,600
Loan Fees	\$80	\$80	\$80
Personal and Miscellaneous	\$1,600	\$1,600	\$1,600
Food	\$4,000	\$4,000	\$4,000
Housing*	\$12,800	\$12,800	\$12,800
Transportation	\$1,600	\$1,600	\$1,600
TOTAL	\$24,480	\$27,880	\$32,080

*Housing: For students enrolled in more than six credits in fall or spring or three credits in summer and who receive Veteran Benefits that include a Basic Allowance for Housing (BAH), Room cost will be 0.

Student Aid Index

The Student Aid Index (SAI) is an eligibility index number that the financial aid office uses to determine how much federal student aid you would receive. This number results from the information that you provide on your FAFSA® form. This number is not a dollar amount of aid eligibility or what your family is expected to provide. A negative SAI indicates the student has a higher financial need.

The SAI is not the amount of money the family will have to pay for college, nor is it the amount of federal student aid a student will receive. It is a number used by schools to calculate how much financial aid students are eligible to receive.

Professional Judgment

Professional Judgment refers to the discretion that federal regulations give to financial aid administrators to make adjustments, on a case-by-case basis, to certain elements of a student's FAFSA information or adjust a student's dependency status. These adjustments are intended to provide a more accurate assessment of the amount of federal aid a student is eligible to receive. There are two types of Professional Judgment:

SPECIAL CIRCUMSTANCES:

Refers to financial situations that justify an aid administrator adjusting the student's data elements in the Cost of Attendance and/or Expected Family Contribution calculation(s) such as:

- Loss of Income: Loss of employment; household size changes due to separation, divorce, birth or additional dependents, etc.; high medical expenses; Rollovers of IRA's; etc.
- Cost of Attendance: Study abroad expenses; cooperative education costs; dependent care; disability-related expenses; etc.

UNUSUAL CIRCUMSTANCES

Refers to the conditions that justify an aid administrator making an adjustment to dependency status (more commonly referred to as a dependency override), based on a student's unique situation such as:

- Human trafficking; refugee or asylee status; parental abandonment; homelessness; incarceration; etc.

Students, with an approved dependency override in a prior academic year, will remain independent for each subsequent award year unless LCC has conflicting information about the student's independence status or the student's circumstances have changed. If the student's circumstances have changed, the Financial Aid Office must be notified.

Students will need to complete the [Professional Judgment Request](#) form and will be required to provide supporting documentation. If additional clarification is needed after reviewing the supporting documentation, the student will be notified via their LCC email to access their Banner Self Service account to determine the clarifying documentation that is needed. In some cases, an advising appointment and/or phone conversation may be needed.

Consortium

In some cases, students choose to attend two colleges simultaneously. In most cases, a student cannot receive Federal or State financial aid at both institutions simultaneously and consequently, financial aid would be processed by only one of the colleges where the student is enrolled.

In the case where a pre-articulated Consortium Agreement exists between two institutions, the student's combined enrollment will be used to determine aid eligibility. To learn more, please contact the Financial Aid Office at LCC for program specific information.

Courses in Program of Study

The U.S. Department of Education requires students to be enrolled in an eligible program of study to receive financial aid and only courses that apply toward that program of study will be used to determine the amount of financial aid the student will receive. The purpose of this federal requirement is to ensure students are able to obtain their degree or certificate in a timely manner with minimal debt for student loan borrowers and to ensure that federal funds are used only to obtain a degree or certificate. Therefore, if a student registers for a course that does not count toward the declared degree or certificate, the course will not be used to determine the student's financial aid eligibility. To learn more, please refer to the [Courses in Program of Study Q&A](#).

Enrollment Level

Financial aid is offered to students based on enrollment as a full-time student. If a student enrolls less than full-time, certain awards may be prorated. Enrollment level changes could impact the amount of financial aid a student will receive. Adding, dropping, withdrawing, or changing a course to audit status, after the semester begins, are types of enrollment level change that could impact the amount of aid a student receives. Before making an enrollment level change, students should contact their instructor, Success Coach, and the Financial Aid Office to understand all possible consequences of the change.

The chart below defines enrollment level based on the number of credits a student enrolls for:

Enrollment Level	Credits Required for Fall, Spring, and Summer Semesters
Full-Time	12 or more credits
Three-Quarter-Time	9 - 11.99 credits
Half-Time	6 - 8.99 credits
Less Than Half-Time	Less than 6 credits

- **Add** - adding a course to the student schedule.
- **Audited** courses are taken for no grade. Therefore, courses being audited cannot be considered part of a student's enrollment level for financial aid purposes.
- **Drop** - removing a course from the student schedule where instructor approval is not required. A drop also removes the course from the student's academic record. Generally, this means that the student will no longer be charged for all or part of the course. A course canceled by LCC is also considered a dropped course.
- **Non-credit courses** are courses that are not given credit or grade for the hours earned. Therefore, non-credit courses cannot be considered part of a student enrollment level for financial aid purposes.

- **Withdrawal** - removing a course from the student schedule by issuing a grade of W (withdrawal) for the course. The course will be part of the student's academic record.

Enrollment Intensity for Federal Pell Grant

Enrollment intensity is the percentage of full-time enrollment at which a student is enrolled, rounded to the nearest whole percent. For example, full-time enrollment is 12 credit hours and the student is enrolled in 7 hours, the enrollment intensity would be $7 \div 12 \times 100\% = 58\%$.

Enrolled Credit Hours	Formula	Enrollment Intensity
12	12 hours \div 12 hours	100%
11	11 hours \div 12 hours	92%
10	10 hours \div 12 hours	83%
9	9 hours \div 12 hours	75%
8	8 hours \div 12 hours	67%
7	7 hours \div 12 hours	58%
6	6 hours \div 12 hours	50%
5	5 hours \div 12 hours	42%
4	4 hours \div 12 hours	33%
3	3 hours \div 12 hours	25%
2	2 hours \div 12 hours	17%
1	1 hours \div 12 hours	8%

Falsification of Information

Falsification of information submitted by the student or parents for the purpose of receiving financial assistance may result in cancellation of assistance, require the student to pay back assistance received, and referral to the appropriate federal authorities. If students purposely give false or misleading information, they may be fined \$10,000, sent to prison, or both by the federal government.

The Financial Aid Office may be required to verify information provided on the FAFSA by requesting documentation of income or other types of financial assistance. In addition, if the Financial Aid Office has conflicting information or has reason to believe that student information may not be valid, further investigation will occur prior to financial aid being awarded and/or refunded.

Remedial / Developmental Courses

Remedial/Developmental Courses are defined as courses that are below college level but at least at the secondary (high school) education level. Once students attempt more than 30 remedial/developmental credits, the Financial Aid Office must begin limiting federal financial aid eligibility. Even if financial aid funds were not used for the prior coursework, the Financial Aid Office must limit federal financial aid eligibility. For example, if a student attempted 30

remedial/developmental credits and the following semester register for a total of 12 credits with 4 out of the 12 credits are considered remedial/developmental, the student's financial aid eligibility will be based on 8 credits (half-time).

Below are courses that LCC considers remedial/developmental:

Courses LCC Considers Remedial/Developmental			
AASD 104	AASD 105	AASD 110	ENGL 098
ENGL 099	ENGL 117	ENRI 105	ENRI 152
ENRI 162	MATH 097	MATH 098	MATH 105
MATH 106	MATH 107	MATH 109	MATH 112
MATH 114	READ 108	READ 114	READ 116
READ 150	READ 160	READ 165	READ 170
READ 175	SPEL 150	VCBL 150	WRIT 108
WRIT 110	WRIT 117		

To view current information, go to the [Financial Aid Policies](#) webpage.

Repeated Courses

Federal regulations limit the number of times a student may repeat a course while receiving financial aid for that course. This limit applies even if the student did not receive financial aid for earlier enrollments in the course. Note: Students must also adhere to the [College's Repeat Policy](#).

- A student may receive financial aid to repeat a previously passed course (1.0 or higher) one additional time.
- A student may receive financial aid when repeating a previously failed course (0.0F, 0.0U, ZF, or ZU) for as long as it takes the student to pass (1.0 or higher) the course.
- **A student who is taking a course that requires the student to enroll in the course multiple times to meet degree requirements may receive financial aid for these courses.**

COURSE	TITLE
AEET 280	Alternative Energy Practicum
ANTH 300	Applied Field Survey Methods
ARCH 295	Arch Independent Study
ARTS 132	Figure Drawing
BLDT 285	Residential Bldg Internship
CHDV 297	Child Dev Directed/Indep Study
CHSE 119	Community Health Career Topics
CHSE 139	Community Health Career Topics
CHSE 150	CHSE Directed/Indep Study

COURSE	TITLE
CITD 229	Special Topics in Database
CITS 285	IT Professional Internship
CIVL 225	Civil Tech Independent Study
DANC 102	Beginning Modern
DANC 103	Beginning Jazz
DENT 290	Directed Study
DMAC 246	Workshop: Video
ELTE 291	Electrical Project Lab
ENGL 295	Independent Study in English
ENGL 278	Writing the Novel
FIRE 280	Fire Directed Indep Study
GERO 191	Special Topics in Gerontology
HIST 295	Independent Study in History
HONR 295	Honors Independent Study
IDMS 150	Sonographic Directed Study
IDMS 295	DMS Special Topics
IRXT 123	Radiographic Independent Study
IRXT 295	Radiologic Tech Special Topics
LEGL 251	Legal Studies Independent Study
METD 170	Special Topics/Eng & Design
METD 295	Engineering/Design Project Lab
METM 170	Special Topics/Precision Mach
METM 171	Special Topics/Machining P/Z
METM 295	Precision Machine Project Lab
METS 170	Special Topics/Mechanical Sys
METS 290	Manufacturing Internship
METS 295	Mechanical Systems Project Lab
MSGE 150	Masg Special Topic
MSGE 170	Massage Directed/Indep Study
MUSC 101	Vocal Jazz & Pop Ensemble
MUSC 106	Private Music Lesson
MUSC 108	Concert Choir
MUSC 109	Studio Class
MUSC 122	Guitar Ensemble
MUSC 123	Jazz Ensemble
MUSC 124	Multi-Instrumental Music Ensem
MUSC 143	Beginning Piano I - Summer
MUSC 144	Beginning Piano I
MUSC 145	Beginning Piano II
MUSC 280	Private Composition

COURSE	TITLE
NURS 101	Nursing Directed Study
NURS 102	Nursing Directed Study
NURS 118	Special Topics in Nursing
NURS 119	Special Topics in Nursing
PARA 200	Paramedic Directed Study
PHIL 295	Ind Study in Philosophy
POLS 295	Ind Study in Political Science
THEA 224	Special Subjects in Theatre
WELD 170	Special Topics in Welding
WELD 191	Welding Project Lab
WELD 250	Welding Internship

Return of Title IV Funds (R2T4)

LCC is a non-attendance taking institution with the exception of programs that have licensure/accreditation requirements for attendance. Federal regulations require schools to perform a Return of Title IV Funds (R2T4) calculation for Title IV grant and/or loan recipients if one of the events in the table below occurs within the student's payment period. Note: The R2T4 calculation is independent of the institution's Refund Policy.

Event	Determination of Withdrawal	Type of Withdrawal	What is Used as Withdrawal Date
Student completely withdraws/is withdrawn from all courses	Date student withdrew from final course	Official Withdrawal	Last Date of Participation in an Academic Engagement*
Student withdraws/is withdrawn or drops from a course and the student's remaining courses have not yet begun	Date student withdrew or dropped from last active course	Official Withdrawal	Last Date of Participation in an Academic Engagement*
Student does not earn credit in at least one course and all failed courses were graded as unfinished	Date grade(s) post showing student did not earn credit in at least one course and all failed courses were graded as unfinished. The instructor provides the last date of participation when the grade for the course is submitted.	Unofficial Withdrawal	Last Date of Participation in an Academic Engagement*
Student is withdrawn for non-participation from a course that is part of a program that has licensure/accreditation requirements for attendance	Date student is withdrawn from last active course	Official Withdrawal	Last Date of Participation in an Academic Engagement*

Within 30 days of the determination of withdrawal, the R2T4 calculation must be completed to determine the amount of earned and unearned aid based on the student's withdrawal date*. The institution and/or the student owes the unearned aid to the federal government. LCC will return the institution's and the student's unearned aid to the federal government within 45 days of the date of determination of withdrawal, LCC will bill the student for the

unearned aid, and the student is responsible for repaying LCC. If the student was disbursed less than the revised award, the student may be due a post-withdrawal disbursement. LCC must notify the student in writing of eligibility for a post-withdrawal loan disbursement within thirty days of the determination of withdrawal. LCC must obtain the student's permission to disburse additional loan funds. The student may choose to decline some or all of the loan funds to avoid incurring additional debt. For grant funds, LCC will use post-withdrawal funds to pay any allowable institutional charges prior to refunding the remaining funds to the student.

Unearned aid will be returned within 45 days of the date of determination of withdrawal in the following order:

- Federal Direct Unsubsidized Loans
- Federal Direct Subsidized Loans
- Federal Direct PLUS Loans
- Federal Pell Grants
- Federal Iraq and Afghanistan Service Grant
- Federal SEOG

**Withdrawal Date*

- Official Withdrawal
 - When a student withdraws from all courses or withdraws/drops from a course and the student's remaining courses have not yet begun.
 - When an instructor in a program with licensure/accreditation requirements for taking attendance withdraws/drops a student from a course. This action must occur within 14 days of the student's last date of participation in an Academic Engagement*. The official withdrawal date used in the R2T4 calculation is the student's last date of participation in an Academic Engagement*.
- Unofficial Withdrawal
 - When a student does not earn credit in at least one course and all failed courses were graded as unfinished. The instructor reports the last date of participation in an Academic Engagement* with the grade, which is the unofficial withdrawal date.
 - The unofficial withdrawal date used in the R2T4 calculation is the student's last date of participation in an Academic Engagement*.

Calculating Earned Title IV Aid

To determine the total aid earned, LCC must divide the number of days the student attended during the semester by the total number of days the student was scheduled to attend for courses that were used to determine the student's financial aid. This percentage is multiplied by the total Title IV financial aid the student is awarded for the semester (disbursed and to be disbursed).

For example:

- Student attended 64 days.
- Student's schedule is 118 days in length.
- Student was awarded (disbursed and to be disbursed) Title IV aid of \$5000 for the semester.

- The percentage of total aid earned = 54.2% (64 days attended / 118 days)
- The earned Title IV financial aid = \$2710 (54.2% of total aid earned x \$5000 awarded)

**Definition of Academic Engagement*

Academic engagement is defined as active participation by a student in an instructional activity related to the student's course of study that includes, but is not limited to:

- Attending a synchronous class, lecture, recitation, or field or laboratory activity, physically or online, where there is an opportunity for interaction between the faculty and students;
- Submitting an academic assignment;
- Taking an assessment or an exam;
- Participating in an interactive tutorial, webinar, or other interactive computer-assisted instruction;
- Participating in a study group, group project, or an online discussion that is assigned by the school; or
- Interacting with faculty about academic matters.

Academic engagement does not include:

- Logging into an online class or tutorial without any further participation; or
- Participating in academic counseling or advisement.
- Comply with the provisions of any promissory note and all other agreements the student signs.
- Register for the number of credits required and maintain Satisfactory Academic Progress.
- Go to the [StarZone](#) on the second floor of the Gannon Building for personal assistance if the student has questions or does not understand the information provided.
- Budget and manage financial aid funds. Learn more at [Money Basics](#).

Student Academic Progress (SAP)

Federal regulations require the Financial Aid Office at LCC to monitor the progress (both qualitatively and quantitatively) of all students toward the completion of a degree through Satisfactory Academic Progress (SAP). SAP is separate from [LCC's Academic Standing](#). In order to receive federal funds, a student must meet SAP. If required, SAP also applies to state, institutional, and private funding.

To determine eligibility each semester, the Financial Aid Office will monitor and evaluate students' academic progress, regardless of whether aid was received. SAP is evaluated at the end of fall, spring, and summer semesters for all students who had academic history updates during the semester being evaluated. The evaluation will include all attempted credits, including earned credits (4.0-1.0 and Pass), failed credits (0.0F, 0.0U, ZF, and ZU), transfer credits, withdrawals, incompletes, audits, remedial, and repeated courses. Remedial coursework will be included in the determination of the GPA, completion ratio, and maximum timeframe. Repeated coursework will only include the highest grade earned in the GPA, but all attempts will be counted in the completion ratio with only one successful attempt counted as earned. All attempts will be used in the determination of maximum timeframe. Incomplete coursework will have no effect on the GPA; however, incompletes are counted as unearned in the determination of the completion ratio and maximum timeframe. Students who change majors or are pursuing a second degree will have SAP evaluated on all attempted credits, not just those applicable to their new major or second degree. Students will be notified of their SAP status via email and Banner Self Service after each evaluation period.

Note: SAP may be re-evaluated for students who have a Reinstated SAP status at any point of the semester if one of the following has occurred:

- Grade Change, except for Incompletes
- Change of Program occurs

SAP Standards

Student must meet all the following SAP standards to remain eligible for financial aid:

- Maintain a minimum cumulative GPA of a 2.0 in all credits attempted at LCC.
- Maintain a minimum cumulative completion ratio of 70% of all credits attempted.
- The total number of credits a student attempts cannot exceed 150% of the maximum credits required for the student's program of study.

Note: The table below represents a student pursuing a general associate degree requiring 63 credits. In order for the student to successfully complete their program within 150% of the credit hours required and maintain a cumulative completion ratio of 70%, the student must earn the following minimum credits.

Semester	Credits Earned	Credits Attempted	Completion Ratio	Maximum Timeframe
1	11	15	73%	25%
2	21	30	70%	50%
3	32	45	71%	75%
4	42	60	70%	100%
5	53	75	70%	125%
6	63	90	70%	150%

SAP Statuses

Good:

- Students who meet SAP are in Good status.

Warning:

- **New Students:** Students who have completed at least one course with a minimum 1.0 grade and do not meet SAP after the first semester of attendance.
- **Continuing Students:** Students in Good status who fail to meet SAP but completed at least one course with a minimum of 1.0 grade in the most recent semester of attendance and have not attempted more than 150% of the credit hours required for the program.

To receive financial aid, students in Financial Aid Warning status must electronically submit a Warning Contract. Warning status will only be effective for one semester. If the student does not meet SAP by the end of the warning semester, the student will be Suspended and ineligible for financial aid.

Suspended:

- Students in Good status who fail to meet SAP and did not earn a minimum 1.0 grade in the most recent semester of attendance or have attempted more than 150% of the credit hours required for the program.
- Students who do not meet SAP by the end of the warning period.
- Students who did not meet the terms of an approved appeal.

Students in Financial Aid Suspended status are denied financial aid until SAP is met or the Financial Aid Office approves an appeal.

Reinstated:

- Students who calculate to Suspended but have an approved appeal and taking courses that count towards their program of study.

Students in Financial Aid Reinstated status are approved for financial aid as long as the student completes each semester with a minimum semester GPA of 2.0, completes 100% of all credits attempted and is taking courses that count toward the program of study on record.

To view LCC's Academic Standing process, [click here](#).

Regaining Eligibility

- Students may regain financial aid eligibility by taking courses at their own expense or by using other funding sources until they meet the minimum GPA and Completion Ratio requirements; however, students who exceed 150% of the credit hours required for the program may only regain eligibility through an SAP Appeal.
- Students who are suspended and have extenuating circumstances may submit a SAP Appeal. Submission of an appeal does not guarantee reinstatement of financial aid eligibility. Examples of extenuating circumstances are:
 - Death of an immediate family member
 - Documented hospitalization or illness
 - Major accident or illness of student or family member
 - Being victim of a crime or unexpected disaster
 - Change of major
 - Pursuit of second degree
- The SAP Appeal is available online at the [Financial Aid Forms & Other Requirements Forms](#) webpage. Students may submit an appeal throughout the semester using their secure sign-in. Students will be notified of the appeal decision within three weeks of submission. Students may request a paper version of this form by contacting the Financial Aid Office
- Students with a denied appeal may continue to attend but must pay all tuition and fees.

Student Rules, Requirements, and Procedures

Academic Alert

At times you may hear from your Academic Success Coach (ASC) in response to an alert (formerly known as an Early Alert) received from one of your instructors. This does not mean you are in trouble! It just means that your instructor recognizes that you may benefit from some additional support and we want to provide that. Sometimes instructors send alerts when students are not passing a class, not turning in work, or if they have shared that they are struggling.

ASCs partner with faculty because they want you to have a great experience and get all the resources you need to be successful. If your ASC or instructor reaches out about a specific class or concern, please respond! They want to work with you to identify anything that could help you succeed. Likewise, at times your instructor may recognize you may need some additional help with the content of a particular class or that you may need a resource from the Learning Commons. That may prompt a communication from tutoring and again, this simply means there are resources and support at the college to help you along the way. For more information, view the [Academic Alerts](#) webpage.

Academic Standing

Only coursework completed at LCC is considered for determination of Academic Standing. The Academic Standing is determined at the end of each semester (Fall, Spring, Summer).

At LCC, students must maintain at least a 2.00 cumulative Grade Point Average (GPA) to remain in good academic standing.

- Students in Good Standing may enroll in up to 28 credits per semester.

Students with a cumulative GPA of a 3.5 or higher will be recognized by the College via the Dean's List and the President's List.

- Dean's List: GPA of 3.50 to 3.80 and completion of at least 6 credits for the calculated term.
 - Students with "I" (Incomplete) or "W" (Withdrawal) grades for the calculated term are not eligible for this list.
 - Calculations are based on LCC courses only (no transfer credits).
- President's List: GPA of 3.81 or above and completion of at least 6 credits for the calculated term.
 - Students with "I" (Incomplete) or "W" (Withdrawal) grades for the calculated term are not eligible for this list.
 - Calculations are based on LCC courses only (no transfer credits).

Students whose cumulative GPA falls below 2.0 will be placed on Probation 1, Probation 2, or Probation 3 standing, which indicate unsatisfactory academic progress. While on a Probationary standing, the student may have limits on registration for courses. In addition, students on a Probationary standing may be required to meet with an Academic Success Coach and sign a Success Contract prior to registering. Students can return to Good Standing by earning a cumulative GPA of 2.0 or higher.

- Probation 1: Generally, the first semester with a Cumulative GPA below 2.0
 - Registration is limited to enrolling in no more than 12 credits per semester.
 - If the student has already registered for more than 12 credits prior to the processing of Academic Standing, the Registrar's Office will drop the last registered course(s) that brought the students over the credit limit.
 - Students are encouraged to meet with an Academic Advisor and Academic Success Coach.
- Probation 2: Generally, the second continuous semester with a Cumulative GPA below 2.0
 - Registration is limited to enrolling in no more than 8 credits per semester.
 - If the student has already registered for more than 8 credits prior to the processing of Academic Standing, the Registrar's Office will drop the last registered course(s) that brought the student over the credit limit.
 - Students are encouraged to meet with an Academic Success Coach, complete an Academic Success Self-Assessment, and share the Academic Success Self-Assessment with the Success Coach.
- Probation 3: Generally, the third continuous semester with a Cumulative GPA below a 2.0
 - Registration is limited to enrolling no more than 4 credits per semester.
 - If the student has already registered for more than 4 credits prior to the processing of Academic Standing, the Registrar's Office will drop the last registered course(s) that brought the student over the credit limit.
 - Students are required to meet with an Academic Success Coach, complete an Academic Success Self-Assessment and share the Academic Success Self-Assessment with their Success Coach.
 - Students also are encouraged to meet with an Academic Advisor.

ACADEMIC STANDING RULES

Starting Status: 00 (Good Standing [start])

Cumulative GPA	Cumulative GPA Hours (Credits)	Next Status
0.0 – 4.0	0.0 – 5.999	Good Standing
2.0 – 4.0	6.0 – 999	Good Standing
0.0 – 1.99	6.0 – 999	Probation 1

Starting Status: GS (Good Standing [continue])

Cumulative GPA	Cumulative GPA Hours (Credits)	Next Status
0.0 – 4.0	0.0 – 5.999	Good Standing
2.0 – 4.0	6.0 – 999	Good Standing
0.0 – 1.99	6.0 – 999	Probation 1

Starting Status: Probation 1

Cumulative GPA	Cumulative GPA Hours (Credits)	Next Status
2.0 – 4.0	0.0 – 999	Good Standing
1.5 – 1.99	0.0 – 17.999	Probation 1
0.0 – 1.49	6 – 17.999	Probation 2
0.0 – 1.49	0.0 – 5.999	Probation 1
1.75 – 1.99	18 – 999	Probation 1
0.0 – 1.74	18 – 999	Probation 2

Starting Status: Probation 2

Cumulative GPA	Cumulative GPA Hours (Credits)	Next Status
2.0 – 4.0	6 – 29.999	Good Standing
1.75 – 1.99	6 – 29.999	Probation 1
0.0 – 1.24	6 – 29.999	Probation 3
1.25 – 1.74	6 – 29.999	Probation 2
2.0 – 4.0	30 – 999	Good Standing
1.75 – 1.99	30 – 59.999	Probation 1
1.0 – 1.74	30 – 59.999	Probation 2
0.0 – 0.99	30 – 59.999	Probation 3
1.75- 1.99	60 – 999	Probation 2
0.0 – 1.74	60 – 999	Probation 3

Starting Status: Probation 3

Cumulative GPA	Cumulative GPA Hours (Credits)	Next Status
2.0 – 4.0	0.0 – 29.999	Good Standing
0.0 – 1.49	0.0 – 29.999	Probation 3
1.50 – 1.99	0.0 – 29.999	Probation 2
2.0 – 4.0	30 – 59.999	Good Standing
1.50 – 1.99	30 – 59.999	Probation 2
0.0 – 1.49	30 – 59.999	Probation 3
2.0 – 4.0	60 – 999	Good Standing
1.75 – 1.99	60 – 999	Probation 2
0.0 – 1.74	60 – 999	Probation 3

Academic Standing is based on “Cumulative GPA Hours” which include all CR (Credit Level) grades except the following:

00A	S	WP	I*	X*
FA	TR	A*	N*	Z
I	TRL	B*	P*	Z*
N	TRP	C*	R*	
P	W	D*	S*	
R	WF	F*	X	

*Only GPA Hours are used, so “P” credits do not count in Academic Standing.

This information is associated with the LCC Board Policy 3.040 (Academic Standing and the [Standard Operating Procedure RO.021 – Academic Standing](#)).

Accommodations for Students with Documented Disabilities

In compliance with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, LCC does not discriminate against qualified students with disabilities.

Students with disabilities may contact the Center for Student Access to determine reasonable accommodations that can be granted.

Students should contact the ADA/504 Coordinator at the Center for Student Access:

[Center for Student Access](#)

Gannon Building - StarZone

(517) 483-1924

[Email](mailto:lcc-accessibility@lcc.edu) (lcc-accessibility@lcc.edu)

Admission to the College

LCC is an open-admission community college. Certain programs, however, require a separate selective admissions application. The selective admissions application is in addition to the regular admissions application for the College.

Selective Admissions

Admission to selective admission programs is on a competitive basis, and these programs have program admission requirements beyond those required for admission to the College. Admission to LCC does not guarantee admission to a selective admission program.

Students wishing to apply for admission to a selective admission program should visit the [Selective Admissions Programs webpage](#) or contact the Selective Admissions office at 517-483-1182 or [email](#).

There is a \$20 non-refundable application fee to a selective admission program with exception for Neurodiagnostic Technology and Radiologic Technology/MRI (no application fee).

International Admissions

F, J, M Visa Holders

International students are students admitted to the United States on an F, J, or M visa to study at LCC as well as international students interested in transferring to LCC from another US institution and international students applying to the [English for Speakers of Other Languages Program at LCC](#).

- **F Student Visa:** for study at an accredited U.S. college or university or to study English at an English language institute
- **J Exchange Visa:** for participation in an exchange program, including high school and university study
- **M Student Visa:** for non-academic or vocational study or training in the United States

Additional information can be found on the [M1 and F1 Admissions](#) webpage.

Other Visa not F-1/M-1

For individuals who wish to study at LCC while holding a non-resident status other than M-1 or F-1, additional information can be found on the [Other Visa not F-1/M-1](#) webpage.

International Guest Student

For individuals with an F-1 or M-1 visa who currently attend another US college/university and intend to take a small number of classes at LCC (less than full-time enrollment), additional information can be found on the [International Guest Students](#) webpage.

For questions regarding any International Admissions, please view the [International Admissions Forms and FAQ](#) webpage, contact the [StarZone](#) at 517-483-1200 option 2 (toll-free 800-644-4522).

Computing Grade Point Average

A student's grade point average (GPA) is determined on the following basis:

Numerical Grade	GPA Points
4.0	4.0
3.5	3.5
3.0	3.0
2.5	2.5
2.0	2.0
1.5	1.5
1.0	1.0
0.0F	0.0
0.0U	0.0

“00A,” “0.0FA,” “0.0UA,” “FA,” “I,” “NR,” “NS,” “P,” “TR,” “TRL,” “TRP,” “W,” “X,” “ZF,” and “ZU” grades are not included in calculating grade point averages.

For example, a student who receives five credit hours of 4.0, five credit hours of 3.0 and five credit hours of 2.0 would have a total of 45 GPA points. To compute the grade point average (GPA), the number of GPA points is divided by GPA hours (credits) taken during the semester. The student in this example would have a 3.0 GPA (45 GPA points/15 credits).

Enrollment Verification and Student Attendance

LCC is not an attendance-taking institution with the exception of Eaton Regional Educational Service Agency (ERESA), Clinton County Regional Education Service Agency (CCRESA), and programs that have licensure and/or accreditation requirements for attendance.

During the first 2 weeks of each part of term, or by the 8th day of variable terms less than 8 weeks, faculty are required to determine if the student has actively engaged in an instructional activity related to the student's course. Faculty must notify the Registrar's Office of any student who has not actively engaged in an instructional activity as noted above.

Academic engagement is defined as active participation by a student in an instructional activity related to the student's course that includes, but is not limited to:

- Attending a synchronous class, lecture, recitation, or field or laboratory activity, physically or online, where there is an opportunity for interaction between the faculty and students;
- Submitting an academic assignment;
- Taking an assessment or an exam;
- Participating in an interactive tutorial, webinar, or other interactive computer-assisted instruction;
- Participating in a study group, group project, or an online discussion that is assigned by the school; or
- Interacting with faculty about academic matters.

Academic engagement does not include:

- Logging into an online class or tutorial without any further engagement; or
- Participating in academic counseling or advising.

For licensure/accreditation requirements:

- For programs which require attendance due to 3rd-party accreditation, faculty responsible for those courses will take attendance in accordance with the accreditor's requirements.

If a student is dropped from a course through Enrollment Verification, they will receive a 100% refund of tuition and refundable fees. However, the Financial Aid Office will recalculate the student's financial aid eligibility and adjust awards as necessary for any change in enrollment status for the semester. For more information, students should contact the [Financial Aid Office](#); Students who receive veteran benefits should contact the [Veteran Services Office](#).

After the first 2 weeks of the part of term, or by the 8th day of variable terms less than 8 weeks, if the faculty identifies a student as having not engaged in the course, the faculty must complete Enrollment Verification in the student information system (Banner) indicating that the student never engaged in an instructional activity.

Initial attendance and participation records are retained in the instructor's grade book and/or in the D2L system and Banner system according to the [Academic Records Policy \(Board Policy 3.030\)](#). Additional information can be obtained by viewing the Standard Operating Procedure, [Enrollment Verification and Student Attendance, RO.026](#).

Extra Credit

Extra credit is defined as any opportunity for a student to raise a course grade that is not included in the percentages stated in the Methods of Evaluating Student Achievement/Progress in the section syllabus. Each department will determine for each of their courses and state in the course's syllabus whether or not extra credit may be offered.

In courses where extra credit may be offered:

- Individual instructors will determine whether or not there will be extra credit opportunities in their sections.
- Instructors' extra credit guidelines will be stated in their section syllabi.

In sections where there are extra credit opportunities:

- They must involve student work that is directly related to the Student Learning Outcomes of the course.
- They may be used to raise a student's final grade a maximum of 0.5 on LCC's 4.0 scale.
- All students in a section must have the possibility of earning extra credit; however, instructors may set eligibility criteria such as completion of all homework assignments or tests. These eligibility criteria may not be connected to a student's cumulative course grade and must be provided to students far enough in advance for all students to have the opportunity to satisfy the criteria.
- Detailed information, including any eligibility criteria, must be distributed in advance of each opportunity.

General Education Requirements

LCC is committed to helping its graduates gain four valuable [Essential Learning Outcomes](#): knowledge of human cultures and the physical and natural world, intellectual and practical skills, personal and social responsibility, and integrated and applied learning. With these strengths, our graduates will be better able to develop the life skills necessary for them to enrich and support themselves, their families, and their communities as engaged global citizens.

All associate degrees therefore incorporate LCC General Education requirements fostering the capabilities and the flexibility that employers look for, and that citizens of the twenty-first century need. Depending on their chosen degrees, students will successfully complete the options in the appropriate Transfer Degrees (MTA) tab or Applied Degrees tab of LCC [General Education](#).

Appropriate transfer credit from other colleges and universities, along with credit from Advanced Placement (AP), College-Level Examination Program (CLEP), DANTES Subject Standardized Test (DSST), International Baccalaureate (IB), credit by examination, and credit for experiential learning is applicable toward LCC General Education requirements for all degrees, including degrees that otherwise would require completion of the full MTA. However, due to statewide rules, areas of prior learning such as CLEP, DSST, IB, credit by examination, and credit for experiential learning are not applicable to the MTA endorsement at this time.

General Rules and Guidelines

LCC is an institution of educational excellence. Members of the LCC community strive to create an environment that contributes to academic success and personal growth. All members of LCC's community are responsible for creating and respecting conditions both in the classroom and on campus that encourage teaching and learning in a positive atmosphere.

Grades

Grades are available on the web to students approximately 5 business days after the close of each semester. Students who have an overdue balance to the College will not have access to their grades until July 1, 2024.

Grade Changes

Students may petition an instructor for a grade change of a final grade in a course. A student's final grade in a course may be changed by the course instructor. Grade changes by instructors are initiated by submitting a signed Grade Change Form to the departmental office for review and approval by the departmental chair or lead faculty member. The completed

Grade Change Form is then forwarded by the appropriate academic area to the Registrar's Office for updating the student's academic record.

If a grade change is unresolved, the student should review the [final grade appeal](#) process.

Granting Additional Associate Degrees

Any student who has earned an associate degree from LCC or any other accredited community college may be awarded additional degrees providing that they meet the following institutional graduation requirements:

- Complete a program of study approved by the College and consisting of a minimum of 60 semester credits with no more than 10 percent of these credits acquired on the pass/fail (P/Z) grading system. (See [Degree and Certificate Program Pathways](#) webpage for more information.)
- Maintain a cumulative grade point average of 2.0 or above.
- Earn toward the program of study at least 15 semester credits directly from LCC (except for approved consortial programs taught primary by partner schools).
- Satisfy all general and specific requirements of LCC.
- LCC'S General Education – Applied Degrees requirements are satisfied by virtue of the student earning the first associate degree.
- LCC's General Education requirements are waived by the acceptance of the completed Michigan Transfer Agreement from an accredited community college or university, regardless of whether an associate degree or higher has been completed.
- No additional degree will be granted in the same program of study in which a previous degree was earned.
- The following CANNOT be used for degree requirements:
 - Courses numbered below 100.
 - Courses in Mathematics or Statistics that are not listed on the [LCC General Education Requirements](#) webpage.
 - Courses in English or Writing numbered below 118.
 - Courses in English as a Second Language.
 - Courses in Reading.
 - Courses in non-technical Vocabulary.
 - Courses in Academic Experience numbered other than 100 or 101.
 - Courses in Student Development numbered other than 101.
- Submit an application for graduation to the Registrar's Office the semester the program requirements are completed, on or before the deadline.

Note: Students may not follow program pathways which are expired or whose catalog year predates their first semester of enrollment as shown on their LCC transcript.

Granting an Associate Degree When the Student has an Earned Bachelor's Degree or Higher Degree

A student who has earned a bachelor's degree or higher degree from an accredited college or university may be awarded an associate degree at LCC subject to the following requirements:

1. All requirements for the associate degree must be met.
2. The LCC cumulative grade point average must be a 2.0 or above.
3. A minimum of 15 semester credits toward the program of study must be completed directly from LCC (except for approved consortial programs taught primarily by partner schools).
4. The College's General Education requirements are satisfied by virtue of the student earning the bachelor's degree or higher degree.
5. The following CANNOT be used for degree requirements:
 - a) courses numbered below 100
 - b) courses in Mathematics or Statistics that are not listed on the Transfer Degrees (MTA) tab or Applied Degrees tab of LCC [General Education](#).
 - c) courses in English or Writing numbered below 118
 - d) courses in English as a Second Language
 - e) courses in Reading
 - f) courses in non-technical Vocabulary
 - g) courses in Academic Experience numbered other than 100 or 101
 - h) courses in Student Development numbered other than 101
6. Exceptions to the above should be appealed to the Academic Affairs Office.

Note: Students may not follow program pathways which are expired or whose catalog year predates their first semester of enrollment as shown on their LCC transcript.

Granting Exceptions to the Institutional General Education Requirements for Associate Degrees

General Education exceptions may be granted when courses outside the approved list satisfy the specific General Education requirement(s), for example, appropriate LCC term/quarter courses without an exact LCC course equivalent, etc. A student who wishes to formally appeal a determination that the General Education requirement for an Associate degree has not been met should appeal to Academic Affairs. Academic Affairs will apply the following parameters in making a determination on whether an exception to current policy is warranted:

1. A College error does not automatically warrant a waiver of a published graduation requirement.
2. The College does not waive a General Education requirement, though a substitution might be appropriate.

The Academic Affairs Office will inform the student and the Registrar's Office in writing of either the approval or denial of the exception.

The final decision for granting exceptions to the institutional General Education requirements rests with the Academic Affairs Office.

Graduation

Graduation Requirements, Certificates & Degrees

Information for the requirements needed to be awarded a certificate or degree, including General Education requirements, and the application process can be found on the [Graduation Requirements, Certificates and Degrees](#) webpage. In addition, information is provided on the process to request an accommodation for students with disabilities. For more information, go to the [Graduation](#) webpage.

Applying for Graduation:

When all requirements have been met, the student will:

1. Complete the [Application for Degree and Certificates](#) form.
 - Only pathway/curricular guides with current effective dates can be used.
 - You may not use a pathway/curricular guide that predates your first semester of enrollment.
 - For questions, contact the department indicated on the pathway/curricular guide.
 - Attach a signed Course Substitution and Waiver Authorization form, if you have course substitutions and/or waivers that are not indicated in Degree Works.

2. The outcome of the student's request will be sent to the student's LCC email.
 - The application will be denied if:
 - Transfer courses that are required for your program are not posted to your academic record.
 - There are incomplete grades on courses required for your program.

Commencement

Students who have earned an associate degree or a certificate from the previous Summer or Fall, as well as students who are approved for an associate degree or certificate for Spring may participate in the Commencement Ceremony. Eligible students will be notified in mid-April.

The Commencement Ceremony is held at the Jack Breslin Student Events Center, Michigan State University in early May. The Breslin Center has a clear bag policy and has prohibited items. For a full list of items that are permitted, along with the list of items that are prohibited, please visit [The Breslin Center Bag Policy](#).

If you have any questions regarding the Commencement Ceremony, please contact the Registrar's Office at (517) 483-1200.

Cap & Gown

All eligible students will be notified via their LCC student email mid-April with details on how to participate in the upcoming annual spring commencement ceremony and pick up their cap and gown.

Graduation Honors

Graduation honors are granted to students who are awarded an associate degree and have completed 40 semester credit hours of work at LCC. Students who maintain a grade point average stated below will be awarded the following honors at graduation:

Grade Point Average (GPA)	Honors Awarded at Graduation
3.75 – 4.00	Summa Cum Laude (with highest honors)
3.50 – 3.74	Magna Cum Laude (with high honors)
3.25 – 3.49	Cum Laude (with honors)

Graduation Replacements

To order a replacement diploma or certificate, or to order a tassel or honor cord, go to the Student Graduation store in [Marketplace](#). If you prefer to print and mail the [Graduation Replacement Request](#), the form is available on the Registrar Forms webpage. There is a fee for each item.

Guest Students

A guest student studies primarily at another college or university (referred to as the home institution) and wishes to take a limited number of courses at LCC to complete their program from their home institution.

Applicants who have taken courses or earned degrees from other colleges or universities should apply online, submit transcripts to LCC, and meet with an advisor to discuss credit equivalencies.

High School Dual Enrollment & Home School Program Criteria

Dual Enrollment provides an opportunity for qualified high school students to earn college credit while working toward their high school diploma. High school credit may or may not be granted according to the discretion of the participating student's high school. Dual enrollment affords students educational advancement in specific areas where unusual ability and interest are displayed, especially in courses and academic areas not available in the student's high school.

Note: Some colleges/universities will not accept college credit for college courses used to meet high school graduation requirements.

High School Programming

LCC offers high school-based programs, which include [High School Credit by Exam](#), [High School Advantage](#), Career and Technical Education (ERESA and CCRESA), as well as [HOPE and Promise Scholarships](#). For more information, call 517-483-9707.

How Students Can Satisfy LCC General Education Requirements

For more information, see the Transfer Degrees (MTA) tab or Applied Degrees tab of LCC [General Education](#).

All students must fulfill LCC General Education requirements in order to be awarded an associate degree. The ways in which students can satisfy these requirements are presented below. Because these requirements may be revised each academic year, students should consult an Academic Advisor to stay informed of current options for satisfying General Education requirements. Students should also be aware that not all courses that satisfy General Education – Applied Degrees requirements transfer to all colleges. Students planning to transfer should see an Academic Advisor before enrolling in any course.

For degrees requiring General Education – Applied Degrees, students can satisfy the requirements in any of the following ways:

1. Achieve grades of 2.0 or higher in approved General Education – Applied Degrees courses. ([See the General Education webpage for the full list of options.](#))

2. Achieve a grade of 2.0 or higher on a Comprehensive Examination, where appropriate and available, for an approved course in a General Education area. Upon successfully completing the exam, the student receives transfer credit for the course. (A comprehensive exam is an exam for which the student completes an application, pays the \$150 processing fee, and may receive transfer credit on their LCC transcript. See [Credit by Examination](#) procedure under the Incoming Transfer Credits header.)
3. Achieve a grade of 2.0 level or higher on a Core Area Proficiency Examination, where appropriate and available. Each exam is specific to a single General Education area or, for Mathematics, to a particular course, and is administered for a \$50 fee in the [Course Testing Center](#) (GB 2228). Core Area Proficiency Examinations may only be taken once to satisfy a specific General Education area. ([See General Education Requirements webpage for more information.](#))
4. Present evidence of completed Michigan Transfer Agreement from an accredited Michigan college or university.
5. Present evidence of an earned associate degree or higher degree from an accredited college or university.
6. If no degree has been earned, transfer in comparable course credit for an approved course from an accredited institution. General credit does not apply unless the learning outcomes are aligned to the appropriate General Education outcomes and use of the general credit is approved by the Provost or designee.
7. Establish appropriate course credit through the Advanced Placement Examination (AP), College Level Examination Program (CLEP), DANTES Subject Standardized Tests (DSST), International Baccalaureate (IB), and/or others as recognized by LCC.
8. Establish credit for an approved course through the Experiential Learning Process. (See [Credit for Experiential Learning.](#))

For degrees requiring the Michigan Transfer Agreement (MTA), students can satisfy the requirements in any of the following ways:

1. Achieve grades of 2.0 or higher in approved MTA courses. ([See the General Education webpage, specifically the MTA tab, for a full list of courses.](#))
2. Achieve a grade of 2.0 or higher on a Comprehensive Examination, where appropriate and available, for an approved course in an MTA area. Upon successfully completing the exam, the student receives transfer credit for the course. (A comprehensive exam is an exam for which the student completes an application, pays the \$150 processing fee, and may receive transfer credit on their LCC transcript. ([See Credit by Examination procedure.](#))
3. Present evidence of completed Michigan Transfer Agreement from an accredited Michigan college or university.
4. Present evidence of an earned bachelor's degree or higher degree from an accredited college or university.
5. If no degree has been earned, transfer in comparable course credit for an approved course from an accredited institution. General credit does not apply unless approved by the Provost or designee.

6. Establish appropriate course credit through the Advanced Placement Examination (AP), College Level Examination Program (CLEP), DANTES Subject Standardized Tests (DSST), International Baccalaureate (IB), credit by examination, or credit for experiential learning.
 - a. Non-AP areas of prior learning – for example, College Level Examination Program (CLEP), DANTES Subject Standardized Tests (DSST), International Baccalaureate (IB), credit by examination, and credit for experiential learning – may satisfy LCC General Education requirements but are not applicable to the MTA at this time.

The following do NOT satisfy General Education requirements:

- LCC placement test scores
- A waiver of any course that is also a General Education course
- Completion of higher-level courses that are not approved General Education courses.

How to Apply for an Associate Degree, Certificate of Achievement, or Certificate of Completion

Prior to submitting an application for an Associate Degree, Certificate of Achievement, or Certificate of Completion, students should consult with an advisor to review progress toward completing requirements. Any substitutions or waivers for program requirements must be approved on an authorized form signed by the department offering the program. Substitutions and waivers are not allowed for institutional degree and certificate requirements. (See [Institutional Requirements for Associate Degrees procedure](#) and [Institutional Requirements for Certificates of Achievement and Certificates of Completion procedure](#) under the Graduation Requirements, Certificates & Degrees header.) Students apply by the deadline the semester they complete the program requirements. Information and the applications are located online at the [Graduation webpage](#).

Procedures are as follows:

1. Complete and submit an Application for Associate Degree, Certificate of Achievement, or Certificate of Completion to the Registrar's Office. These applications are available on the [Graduation webpage](#). If substitutions and/or waivers have been approved and are not indicated in Degree Works, a Course Substitution and Waiver Authorization form must be attached to the application when submitted or the application will be denied.
 - a. Note: Students may not follow program pathways which are expired or whose catalog year predates their first semester of enrollment as shown on their LCC transcript. The requirements must be met by the semester the program pathway expires.

2. Once the audit for the associate degree or certificate has been completed, the Registrar's Office will send a notification via LCC email indicating whether the associate degree or certificate has been approved or denied.
3. Once awarded, the LCC transcript will show the degree or certificate earned.
4. Diplomas and certificates are mailed to students during the semester after degrees and certificates have been awarded.

Institutional Requirements for Associate Degrees

To receive an associate degree from LCC, a student must meet the following institutional graduation requirements:

1. Complete a program of study approved by the College and consisting of a minimum of 60 credits with no more than 10 percent of these credits acquired on the pass/fail (P/Z) grading system. (See [Degree and Certificate Program Pathways webpage](#)).
2. Maintain a cumulative grade point average of 2.0 or above.
3. Earn toward the program of study at least 15 semester credits directly from LCC (except for approved consortial programs taught primarily by partner schools).
4. Satisfy the LCC General Education Requirements for the specific program of study.
5. Satisfy all general and specific requirements of LCC.
6. No additional associate degree will be granted in the same program of study in which a previous associate degree was earned.
7. The following CANNOT be used for degree requirements:
 - a) courses numbered below 100;
 - b) courses in Mathematics or Statistics that are not listed on the Transfer Degrees (MTA) tab or Applied Degrees tab of LCC [General Education](#);
 - c) courses in English or Writing numbered below 118;
 - d) courses in English as a Second Language;
 - e) courses in Reading;
 - f) courses in non-technical Vocabulary;
 - g) courses in Academic Experience numbered other than 100 or 101;
 - h) courses in Student Development numbered other than 101.
8. Submit an application for graduation to the Registrar's Office the semester the program requirements are completed, on or before the deadline.

Note: Students may not follow program pathways which are expired or whose catalog year predates their first semester of enrollment as shown on their LCC transcript.

Institutional Requirements for Certificates of Achievement and Certificates of Completion

Certificates of Achievement and Certificates of Completion are a designated course or groups of designated courses. To receive a Certificate of Achievement or Certificate of Completion from LCC, a student must meet the following institutional graduation requirements:

1. Complete a program of study approved by the College and consisting of a minimum of 30 semester credits for a Certificate of Achievement and fewer than 30 semester credits for a Certificate of Completion with no more than 10 percent of these credits acquired on the pass/fail (P-Z) grading system. (See [Degree and Certificate Program Pathways webpage](#)).
2. Maintain a grade point average of 2.0 or above in all courses required for the certificate.
 - a) For certificates of the 2024-25 catalog year onward, earn a grade of 2.0 or above in all courses required for the certificate.
3. Satisfy any specific requirements on the program pathway. These may include, but are not limited to, maintaining a cumulative grade point average in all courses taken at LCC, higher grade point minimums in specific courses, selective admissions, or other departmental requirements.
4. Earn toward the program of study at least one-fourth of the semester credits for the certificate directly from LCC (except for approved consortial programs taught primarily by partner schools). Credits earned through comprehensive exams will not be counted toward this requirement.
5. Satisfy all general and specific requirements of LCC.
6. No additional certificate will be granted in the same program of study in which a previous certificate was earned.
7. The following CANNOT be used for certificate requirements:
 - a) courses numbered below 100;
 - b) courses in Mathematics or Statistics that are not listed on the Transfer Degrees (MTA) tab or Applied Degrees tab of LCC [General Education](#);
 - c) courses in English or Writing numbered below 118;
 - d) courses in English as a Second Language;
 - e) courses in Reading;
 - f) courses in non-technical Vocabulary;
 - g) courses in Academic Experience numbered other than 100 or 101;
 - h) courses in Student Development numbered other than 101.
8. Submit an application for graduation to the Registrar's Office the semester the program requirements are completed, on or before the deadline.

Note: Students may not follow program pathways which are expired or whose catalog year predates their first semester of enrollment as shown on their LCC transcript.

Incoming Transfer Student Information

Evaluation and Acceptance of Transfer Credits from Other Institutions

LCC welcomes students who have already successfully completed college-level course work. Accordingly, the college will allow for the transfer and acceptance of credit from other accredited institutions of higher education.

Incoming Transfer Credits

The information below describes alternative, or accelerated degree completion options to obtain credit toward a degree or certificate, including transfer credit, credit for licensure/certification, credit for prior learning, and credits earned during military service. For general rules, view the [Evaluation and Acceptance of Transfer Credits, RO.004](#), Standard Operating Procedure, which is associated with the [LCC Board Policy 3.100](#).

Credit for Licensure and Certifications

LCC recognizes that current licensure or certification represents earned credentials for which credit may be granted. Therefore, the college assesses national and state licensures and certifications as part of its credentialing function. Any student who has applied to LCC may apply for licensure or certification credit evaluation. Please visit the [Licensure and Certification](#) webpage for the list of accepted equivalencies.

Credits Earned in the U.S. Armed Forces

LCC will evaluate the student's military training and coursework for possible award of transfer credit after the student has been admitted to the College and the official Joint Services Transcript has been received.

Credit Earned at Foreign Educational Institution

Current students requesting credit for credits earned at foreign institutions will need to submit their international transcripts to a [National Association of Credential Evaluation Services \(NACES\) member](#) for evaluation before having it sent to LCC.

Credit Earned by Examination

To allow students who may have previous knowledge or experience to prove competency when appropriate and gain credit by comprehensive or other applicable exams.

Credit for Experiential Learning

LCC is in agreement that learning outside the classroom is valid. Therefore, it is the College's function to assess extra-institutional learning and experience as part of its credentialing responsibility.

Current students requesting credit for previously acquired knowledge and learning experience will need to complete an Experiential Learning Application. For more information, go to the [Credit for Prior Learning](#) webpage.

Credits Earned from National Normed Exams

LCC recognizes students may have previous knowledge or experience as measured by

Nationally Normed Exams. Students may receive credit for LCC coursework completed if minimum score requirements are met. Credits can be granted from the following National Normed Exams: Advanced Placement Examination (AP), College Level Examination Program (CLEP), DANTES Subject Standardized Tests (DSST), and International Baccalaureate Program (IB).

General Credits

Due to curricular, financial aid, and Veteran's implications, LCC will not automatically award General Credits (non-equivalent 000) during the initial evaluation of incoming transcripts. All General Credit 000 equivalencies will be removed from the College webpage.

Requests for awarding general credits are allowable only for the following purposes:

- General Associate degree elective(s) which can be requested by a general academic advisor, a program advisor, or Academic Affairs Project Manager (AAPM).
- Specific program requirement(s) which can only be requested by a program advisor or AAPM.
- General education requirement(s) which can only be requested by AAPM.

In addition, please note the following provisos:

- With the exception of Prior Learning Assessments (PLA), general credits must be from a regionally accredited institution and must be college-level (non-developmental).
- Only general credits can be used for program substitutions for a maximum of 12 credits unless approved by Academic Affairs or if the credits are being applied to programs that allow more than 12 general credits, such as General Associate GA, Agricultural Technology AAS, Veterinary Technology AAS, Nursing – RN Option AAS, etc.

The requirement(s) the general credits are intended to satisfy.

- For programs other than the General Associate degree, a substitution form also will be needed per Standard Operating Procedure "Program-Level Course Substitutions and Waivers-RO.007" located on the [LCC Board Policies](#) webpage next to BP 3.090.

Outgoing Transfer Students

Students planning to transfer to another institution should be aware that universities and colleges differ widely in the courses they accept for transfer. A student intending to transfer should follow the transfer guide of the institution to which they intend to enroll. Transfer guides are not LCC degree guides. In order to achieve maximum transferability of courses, students should consult with an academic advisor. Visit the [Transfer Opportunities](#) webpage for more information about transfer programs. For additional transfer opportunities, view the [Transfer Center](#) (formerly known as the University Center) webpage.

Student Bereavement Resources

LCC recognizes that students may experience the loss of a loved one while taking classes. If you have lost someone while actively enrolled in courses, you should consider the following:

- Reach out to your instructor(s) using their preferred method of contact to notify them if you need to miss class or coursework for bereavement purposes, such as attending a funeral, wake, memorial service, bereavement counseling, or other bereavement-related event(s). Contact information for your instructor(s) can be found on your course syllabus.
- If requested by your instructor(s), please be prepared to provide documentation of your loss (e.g., an obituary or funeral program).
- Work with your instructor(s) to determine if you are able to make up any missed coursework. Faculty are encouraged to be sensitive to a student's grief. However, it is at the discretion of your instructor(s) to allow you to make up any missed coursework.
- Contact your [Academic Success Coach](#) if you need assistance with reaching out to your instructors, making a plan to catch up in your course(s), withdrawing from courses, or connecting to on- or off-campus resources to assist you during this time.
- LCC offers free and confidential emotional support counseling by appointment. [LCC Counselors](#) are state-licensed, professional counselors who can help you with managing your loss.

For questions, please contact the Registrar's Office at 517-483-1200, option 2.

Student Due Process

Students have constitutional rights of due process. As such, in cases of allegations of violations of the Student Code of Conduct levied against them, they are entitled to receive proper notice of the charges against them and the opportunity to present their side at a hearing.

Student General Rules, Guidelines, and Code of Conduct

Students must know and abide by the Student General Rules, Guidelines, and Code of Conduct. The Office of Student Compliance is charged with addressing allegations of violations of the Student General Rules, Guidelines, and Code of Conduct.

View [Student General Rules and Guidelines, and Code of Conduct](#) in its entire form.

Student Records Guidelines & Procedures

LCC shall not distribute student lists to non-college agencies except as required by law.

In compliance with the Family Educational Rights and Privacy Act of 1974, as amended, LCC provides the following information:

1. Students and/or a parent or legal guardian of a student, if the student is a dependent, have the right to access, inspect, and review all educational records directly related to the student. Upon presentation of pictured identification and a written request from the student to the Registrar's Office, access to all educational records shall be provided within a reasonable period of time (not to exceed 45 days from the date the request is submitted).
2. Educational records include all information maintained by the College that is directly related to the student with the exception of:
 - a) Financial records of the student's parents.
 - b) Confidential letters of recommendation prior to January 1, 1975.
 - c) Confidential letters and recommendations associated with admissions, application for employment, or receipt of an honor or honorary recognition to which students have waived rights of inspection and review.
 - d) Educational records containing information about more than one student. Note that the College must permit access to that part of the record which pertains only to the inquiring student.
 - e) Reports made by physicians, psychiatrists, or psychologists in connection with their treatment.
 - f) Records of instructional, supervisory, administrative, and certain educational personnel which are in the sole possession of the originator.
 - g) Records of the law enforcement unit of the College if compiled for law enforcement purposes.
 - h) Records which relate exclusively to individuals in their capacity as College employees.
3. Directory information may be released at the discretion of College officials for any student who has not submitted a completed Request to Prevent Disclosure of Directory Information form to the StarZone. The disclosure prevention form remains in effect until the student provides a written release to the Registrar's Office. Directory information includes but is not limited to the following:
 - a) Name of student
 - b) Dates of attendance
 - c) Enrollment status
 - d) Awards, degrees, or certificates received
 - e) Participation in officially recognized activities
 - f) Sport, weight, and height of members of athletic teams
 - g) Previous educational agency or institution attended
 - h) LCC email address

Copies of the Request to Prevent Disclosure of Directory Information form and the Family Educational Rights and Privacy Act are available upon request in the StarZone and the Office of the Dean of Student Affairs.

4. LCC prohibits the release of personally identifiable information other than directory information from educational records without the student's written consent. Exceptions to this statement are listed below:

- a) Academic and administrative officials, staff, and persons who have entered into a partnership or contract with LCC and whom the College has determined to have legitimate educational interest. Officials are defined as faculty, administration, support and professional employees, sworn officers of the police and public safety department as part of an investigation and other persons who manage student record information. An official has a legitimate educational interest if the official needs to review an educational record in order to fulfill their professional responsibility.
- b) Other educational institutions in which the student is enrolled or intends to enroll.
- c) Individuals and organizations who provide financial aid or scholarships to the student.
- d) Authorized representatives of the Comptroller General of the United States, the Secretary of the Department of Health and Human Services, the Department of Veterans Administration, the Department of Education, and administrative heads of state and federal educational agencies authorized by law.
- e) Accrediting organizations to carry out their accrediting functions.
- f) Appropriate authorities in compliance with judicial orders and pursuant to lawfully issued subpoenas. The College shall notify the student of any such orders or subpoenas unless the subpoena or order prohibits notification. The College shall comply with the subpoena ten (10) days after an attempt to notify the student of the request.
- g) Appropriate parties in an emergency if knowledge of the information is necessary to protect the health or safety of the student or other individuals.
- h) The disclosure is to parents, as defined in §99.3 of a dependent student, as defined in section 152 of the Internal Revenue Code of 1986.
- i) An alleged victim of any crime of violence or the results of any disciplinary proceeding conducted by the College against the alleged perpetrator of the crime.
- j) Military recruiters for the purpose of federal military recruiting as stated in Public Law 104-206, Section 509(2).

LCC will maintain a record of each disclosure of identifiable information from the external individuals or agencies listed above. The record will be maintained in the Registrar's Office and will include the date, the name and address of the requesting party, the information requested, and the reason for requesting the information. The College reserves the right to correct any error made on an academic record or evaluation and will notify the student in writing of any record or evaluation correction. Staff of the College are subject to the requirements of the Family Educational Rights and Privacy Act of 1974, as amended.

Students have the right to request correction or amendment of information on educational records that are inaccurate, misleading or which violate privacy rights. Due process

procedures for requesting correction or amendment to educational records are stated in the College Catalog under Student Appeals.

Students who feel their rights under the Family Educational Rights and Privacy Act have been infringed may file complaints with the Family Policy and Regulations Office, U.S. Department of Education, Washington, D.C. 20202.

Student Transcripts

The Registrar's Office maintains the official transcript of every student who attends LCC. The transcript is a copy of the student's academic record and contains the signature of the Registrar. The transcript includes items such as:

- courses attempted and completed
- courses and credits transferred
- credit hours
- Grade Point Average (GPA)
- Associate Degrees awarded by the College
- Certificates of Achievement awarded by the College
- Certificates of Completion awarded by the College

Students may request the official transcript through the National Student Clearinghouse, see the [Requesting Official Transcripts](#) webpage. Transcript requests require 3-5 working days to process, and a fee is charged for each transcript.

To view an unofficial transcript:

- Log into [Self Service Banner](#)
- Click on Student
- Click on Student Records
- Click on Unofficial Academic Transcript

Using a Course More Than Once for Credit toward a Degree or Certificate

In order to ensure that graduates from LCC are academically well rounded, students will not be allowed to use the same course more than once for credit toward a degree or certificate unless specifically required or permitted to do so by the program pathway they are following. Under no circumstances will a student be allowed to use the same course more than once for credit toward the General Associate Degree.

Veteran's Affairs Education Benefit

For students who utilize VA Education Benefits, LCC will maintain records pertaining to student enrollments and VA certifications for a period of at least three (3) years, per State Approving Agency and Dept. of Veteran Affairs policy. Questions pertaining to LCC student VA Education Benefit records should be directed to the [LCC Center for Veteran and Family Support](#).

Student Appeals and Complaints

LCC is committed to student success. Whenever contested issues cannot be resolved through an interactive process with faculty or administration, students are encouraged to submit complaints and concerns they may have to [LCC Student Appeals & Complaints](#).

- The College will promptly review and evaluate complaints and take appropriate actions.
- A complaint is any concern that LCC has violated a law or policy or has incorrectly applied an established process.
- Complaints or appeals may be academic or non-academic.

Before submitting a complaint or appeal, students are encouraged to do the following if applicable:

1. First attempt to resolve matters with the instructor or staff person involved.
2. If not resolved, contact the supervisor of the instructor or staff member involved to seek a resolution.
3. If the issue remains unresolved, submit a Student Complaint form.

Students that have questions or need assistance with this process should contact the LCC [Ombudsperson](#).

Complaints involving matters of a criminal nature should contact [LCC Police Department](#) at 517-483-1800, by [email](#), or in person at the locations listed below:

Downtown Campus: 411 N. Grand Ave., Lansing, MI 48933

West Campus: 5708 Cornerstone Drive, Lansing, MI 48917

For additional information regarding complaints and appeals go to the [LCC Student Appeals & Complaints](#) webpage.

Academic Amnesty

LCC has an Academic Amnesty policy to authorize the elimination of a grade or grades of 0.0, 0.0F, or 0.0U in calculating a student's grade point average (GPA). Academic Amnesty recognizes that factors or reasons may result in a student not achieving satisfactory academic performance and that such performance may be a barrier to the student's eligibility to enter some occupational fields or achieve academic progress. This process applies to qualified students who receive one or more 0.0, 0.0F, or 0.0U grades, resulting in a low GPA possibly blocking their entrance into programs or fields of study. For additional information, please see [Academic Amnesty process](#).

Administrative Appeals

To provide students who experience an emergency situation, unexpected event, or administrative error an avenue to submit an administrative appeal to request an amendment to their academic record that is appropriate to the student's circumstantial need(s). For more information, view the [LCC Student Appeals and Complaints](#) webpage.

Cancelling Course Sections

In the event a class is canceled as a result of College administrative action, students enrolled in that class will receive 100% tuition and fee refund.

To view the Cancelling Course Sections Board Policy 3.080, please visit the [Board of Trustees Board Policies](#) webpage.

Course Participation Verification Policy

[See Enrollment Verification and Student Attendance.](#)

Course Withdrawal Procedure

Students may elect to voluntarily withdraw from courses for a variety of reasons. To view the course withdrawal procedure, [click here](#).

Final Grade Appeals

A Final Grade Appeal should only be submitted when the student believes that the final course grade is incorrect.

Mistakes in calculations, computer errors, or assignment misunderstandings are resolved informally by contacting your instructor. To review the final grade appeal process, [click here](#).

General Student Complaints

To find assistance in resolving matters that are non-academic in nature, view the [LCC Student Appeals and Complaints](#) webpage.

Suggestion Box

Calling all Stars! We value your input. How can we continue to enhance your LCC experience? Whether you have suggestions, comments, or complaints, we want to hear from you. Please share your thoughts with us here.

Please note that this option is designed to gather feedback only and does not supersede or replace appeal, complaint, misconduct, or grievance procedures already in place.

[Click here to have your voice heard!](#)

2024-2025 Degree and Certificate Program Pathways

(Please refer to the [2024-2025 Program Pathways webpage](#) for possible updates)

LCC makes every effort to limit revisions to the pathways during their effective timeframe.

However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.

Program of Study Title	Code	Degree
Accounting	0162	AB
Accounting	0714	CA
Accounting CPA Exam Preparation	0255	AB
Advanced Management	0280	CA
African-American History	0137	AA
Agricultural Technology	1451	AAS
Airframe Maintenance Technology	0757	AAS
Airframe Maintenance Technology	1036	CA
Allied Health	1814	AAS
American Studies	0142	AA
Anthropology	1621	AA
Applied Artificial Intelligence	1852	AAS
Applied Field Survey Methods	1836	CC
Art Foundation	1716	AA
Art History	0746	AA
Automotive Technologies	1791	AAS
Automotive Technologies	1790	CA
Automotive Technology: Advanced Electric Drive/Alternative Fuels	1792	CA
Automotive Technology: Brakes and Suspension Systems Specialist	1793	CC
Automotive Technology: Electrical and HVAC Diagnostic Specialist	1794	CC

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Program of Study Title	Code	Degree
Automotive Technology: Engine and Transmission Overhaul Specialist	1795	CC
Automotive Technology: Engine Performance and Drivability Specialist	1796	CC
Basic Aviation Technology	1037	CC
Basic Emergency Medical Technician	1853	CC
Biological Laboratory Techniques	1608	CC
Biology	0221	AS
Biotechnology	0212	AAS
Building Construction	1766	AAS
Building Construction	0135	CA
Building Construction	1714	CC
Building Maintenance	1481	CA
Business	1821	GA
Business Administration	0243	AB
Business, Enhanced (still under review)	1822	AB
Accounting tracks		
Business Administration tracks		
Business Transfer Studies tracks		
Financial Institutions tracks		
Human Resource Management tracks		
Insurance and Risk Management tracks		
International Business tracks		
Management and Leadership tracks		
Marketing tracks		

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Program of Study Title	Code	Degree
Business Transfer Studies	1622	AA
Chemical Technology	0163	AAS
Chemistry	0117	AS
Child Development and Early Education	1637	AAA
Child Development and Early Education	0133	CA
Child Development and Early Education	1815	CC
Cisco Certified Network Associate Certification Preparation (CCNA)	1469	CC
Civil Technology	0178	AAS
Cloud Computing	1839	AAS
CNC Machine Technology	1798	CA
CNC Machine Technology	1797	CC
Communication	0136	AA
Communication, Journalism, and Language	1823	GA
Communication, Journalism, and Language, Enhanced (still under review)	1834	AAA
Community Paramedicine (still under review)	1819	CC
Computer Aided Design	1801	AAS
Computer Aided Design	1800	CA
Computer Aided Design	1799	CC
Computer Networking Technology	1453	AB

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Program of Study Title	Code	Degree
Computer Programmer/Analyst	0113	AB
Computer Programmer/Analyst	0969	CC
Computer Science	0169	AS
Computer Software Tester	1633	CA
Computer Support Specialist	0713	AB
Computer Support Technician	0743	AAS
Computer Technician	0168	CA
Computer Technology Basics	0844	CC
Conservation and Sustainability	1840	AS
Conservation and Sustainability	1844	CA
Construction Management	1634	AAS
Construction Management	1635	CA
Control Panel Wiring	1471	CC
Correctional Officer	0840	CC
Creative Writing	1623	AA
Criminal Justice	0146	AA
Criminal Justice - Corrections	1209	AAS
Criminal Justice - Digital Evidence Specialist	1803	AAS
Criminal Justice - Digital Evidence Specialist	1802	CC
Criminal Justice - Juvenile Specialization	1475	AAS

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Program of Study Title	Code	Degree
Criminal Justice - Law Enforcement	1210	AAS
Customer Energy Specialist	1022	AAS
Customer Energy Specialist	0893	CA
Cybersecurity	1832	AAS
Cybersecurity Advanced	1845	CC
Cybersecurity Foundations	1833	CC
Dental Hygiene	0279	AAS
Digital Media: Cinematography	1450	CC
Digital Media and Design	1846	AAS
Digital Media Specialist	1458	AAS
Digital Media: Transfer	1452	AAS
Digital Media: Video/Cinema	1454	CA
Drone Pilot and Maintenance	1825	CC
E-Business	0839	AB
E-Business	0845	CA
Economics	0230	AA
Education	1624	AA
Education	1843	GA
EKG Technician	1442	CC
Electrical Apprenticeship	1570	CA

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Program of Study Title	Code	Degree
Electrical Machine Controls	0966	CC
Electrical Technology	0134	AAS
Electrical Technology - Construction	0759	CA
Electrical Technology - Control Maintenance	0760	CA
Electrical Utility/Lineworker	1783	AAS
Electrical Utility/Lineworker	1468	CA
Electrical Wiring	0964	CC
Emergency Medical Services	0276	AAS
EMS Instructor-Coordinator	1638	CC
Energy Auditor	1813	CC
Energy Industry Fundamentals	1777	CC
Energy Management Specialist	1606	AAS
Engineering-Physics	1619	AS
Field Survey Methods and Analysis	1837	CA
Financial Institutions	0103	AB
Financial Institutions	0151	CC
Fire Science Academy (under review)	0709	CC
Fire Science Technology	0123	AAS
Fire Science/Basic EMT	1057	AAS
General Associate Degree	0863	GA

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Program of Study Title	Code	Degree
Geography	1824	AS
Geology	1841	AS
Geospatial Science	0834	CA
Geospatial Science	1820	CC
Geospatial Science Technician	0224	AAS
Graphic Communication	1533	AAA
Graphic Design	1020	CA
Group Fitness Instructor	1704	CC
Heating and Air Conditioning	0836	AAS
Heating and Air Conditioning	0832	CA
Heavy Equipment Repair Technician	1055	AAS
Heavy Equipment Repair Technician	1041	CA
History	0197	AA
Humanities	0119	AA
Human Resource Management	0712	AB
Human Services	0915	AAS
Human Services	1201	CA
Human Services	1199	CC
HVAC/R-Energy Management Engineering Technology	1257	AAS
Industrial Maintenance Technician	1484	CA

2024-2025 Degree and Certificate Program Pathways

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Program of Study Title	Code	Degree
Industrial Manufacturing Engineering Technology	0110	AAS
Information Technology Foundations	0766	CC
Inside Wireman Apprenticeship	1445	AAS
Insurance and Risk Management	1804	AB
Insurance and Risk Management	1838	CC
International Business	0240	AB
Japanese Studies	1787	CC
Journalism	1628	AA
Juvenile Justice	0916	CA
Kinesiology/Exercise Science	1639	AAS
Legal Studies	0101	AB
Legal Studies Post-Bachelor	0744	CA
Literature	0124	AA
Local Corrections Officer	1810	CC
Long-Term Care Nurse Aide	1025	CC
Machine Tool Technology	1470	CA
Magnetic Resonance Imaging Technology	1632	AAS
Magnetic Resonance Imaging Technology	1602	CA
Management	0249	CA
Management and Leadership	0245	AB

2024-2025 Degree and Certificate Program Pathways

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Program of Study Title	Code	Degree
Manufacturing Engineering Technology	1359	AAS
Marketing	0204	AB
Marketing	0225	CA
Massage Therapy	1826	CC
Mathematics	1620	AS
Mechanical Systems	0173	AAS
Mechanical Systems	0147	CA
Mechatronics - Multi-Skilled Maintenance Technology	1780	AAS
Medical Assistant	1811	CA
Medical Insurance Billing and Coding	1488	CC
Microsoft Office Specialist	0841	CC
Mid Michigan Police Academy	1707	CC
Mobile Application Developer	1712	CA
Music Transfer	1827	AM
Music	1828	GA
Music Education/Pre-Music Therapy	1829	AM
Music, Enhanced (still under review)	1835	AM
Music Industry	1830	AM
Music Technology	1358	CC
Musicianship Studies	1352	CC

2024-2025 Degree and Certificate Program Pathways

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Program of Study Title	Code	Degree
Neurodiagnostic Technology	1812	AAS
Neurodiagnostic Technology	1808	CA
Nursing - PN Option	0235	CA
Nursing - RN Option	0222	AAS
Paramedic	0272	CA
Patient Care Technician	1784	CC
Personal Trainer	1705	CA
Pharmacy Technician	1024	CC
Philosophy	0159	AA
Phlebotomy Technician	1010	CC
Political Science	0750	AA
Powerplant Maintenance Technology	0745	AAS
Powerplant Maintenance Technology	1035	CA
Pre-Medical Studies	0754	AS
Psychology	0215	AA
Public Service Careers	1848	GA
Radiologic Technology	0196	AAS
Religious Studies	0751	AA
Robotics and Automated Technology	1605	CA
Robotics and Automated Technology	1789	CC

2024-2025 Degree and Certificate Program Pathways

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Program of Study Title	Code	Degree
Sales Specialist	0242	CA
Science and Mathematics	1831	GA
Sign Language Interpreter	0282	AAA
Sign Language Interpreter	0187	CA
Social Sciences	1842	GA
Sociology	0753	AA
Spanish Studies	1788	CC
Sterile Processing Technician	1017	CC
Studio Art	1781	AFA
Surgical Technology	1021	AAS
Surveying and Materials Technology	1011	CC
Teacher Paraprofessional	1039	AAS
Teacher Paraprofessional	0829	CC
Theatre	1849	AFA
Transfer Studies	1779	AA
Transfer Studies	1782	AS
Transfer Studies	1482	CA
Ultrasound: Diagnostic Medical Sonography	0790	AAS
Vascular Technology	1604	CC
Veterinary Nursing	0287	AAS

2024-2025 Degree and Certificate Program Pathways

(Please refer to the [2024-2025 Program Pathways webpage](#) for possible updates)

LCC makes every effort to limit revisions to the pathways during their effective timeframe.

*However, the College reserves the right to update certificate and degree title changes,
and make course changes as needed, without prior notice.*

Program of Study Title	Code	Degree
Web Site Developer	0843	CC
Welding Technology	0186	AAS
Welding Technology	0156	CA
Welding Technology	1356	CC
World Languages	0132	AA



Accounting A.B.

Career Community: Business

Curriculum Code: 0162

Effective: Fall 2024 – Summer 2029

Purpose of Major

This major is designed for students wishing to work in the field of Accounting on completion of the Associate of Business degree. Graduates of this degree/major are qualified to work as a paraprofessional in most areas of accounting, such as financial reporting, cost accounting, governmental accounting, tax preparation, and auditing. Typically, paraprofessionals work under the supervision of a professional accountant, but may be doing essentially the same type of work. Job titles include bookkeeper, accounting clerk, and tax preparer, among others. Not all courses in this program transfer to all institutions. Students who also wish to transfer to a four-year institution should select the coursework indicated for that institution, and may also complete the coursework for a Business, Enhanced AB degree. This allows completion of credits required for employment and of additional requirements for the Bachelor's. Institutions accepting coursework for the Business, Enhanced AB, Accounting Pathway include Davenport University, Eastern Michigan University, Ferris State University (Business Administration – Professional Track), Northwood University, Oakland University, and Siena Heights University.

Milestone

In addition to the required General Education courses in Math and English, completion of ACCG 210 and ACCG 211 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Business Career Community courses meet this requirement.

- English Composition (second course) or Communication or Applied Communication
Business Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Science or Applied Social Science
Business Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Business Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Business Career Community Required Courses – *These courses are required for all Business programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ACCG 210	Principles of Financial Accg	4 / 4
BUSN 118	Introduction to Business	3 / 3
COMM 110 or COMM 130	Communication in the Workplace Fundamentals Public Speaking	3 / 3 3 / 3
ECON 201	Principles of Economics-Micro	4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LEGL 215	Business Law-Basic Principles	3 / 3
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4
MGMT 225	Principles of Mgmt/Leadership	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For students not considering transfer as an option, MGMT 234 - Diversity in the Workplace, may be substituted for ECON 201 using the Course Substitution process. MGMT 234 meets LCC General Education requirements for Applied Degrees – Humanities or Social Science or Applied Social Science. MGMT 234 does not meet Michigan Transfer Agreement (MTA) Social Science requirements for transfer as a General Education course.

For future transfer to:

- Davenport University choose COMM 110 and STAT 170.
- Eastern Michigan University choose STAT 170.
- Northwood University and Oakland University choose MATH 120.
- Ferris State University choose COMM 130 and STAT 170.
- Sienna Heights University choose STAT 170.

Program of Study Required Courses - *A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACCG 160	Payroll Systems and Taxes	2 / 2
ACCG 161	Accounting with Quickbooks	2 / 2
ACCG 211	Principles of Managerial Accg	4 / 4
ACCG 215	Financial Data Analytics	4 / 4
ACCG 220	Intermediate Accounting I	4 / 4
ACCG 221	Intermediate Accounting II	4 / 4
ACCG 230	Cost/Managerial I	4 / 4
ACCG 240	Federal Income Tax I	4 / 4
ACCG 245 or	Accounting Internship	2 / 2
ACCG 271	Principles of Finance	3 / 3

Note: For future transfer choose ACCG 271.

Program of Study Required Courses, Limited Choice – Natural Sciences Lab or Applied Science and Technology Lab - *Select one course as indicated for each transfer institution. If a specific course is not indicated for the institution you are considering, or if transfer is not your goal, select any recommended course or from [LCC General Education](#), [Applied Degrees](#), [Natural Sciences Lab](#) or [Applied Sciences and Technology Lab](#).*

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6

Course Code	Course Title	Credit / Billing Hours
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Central Michigan University choose BIOL 120.
- Eastern Michigan University choose ASTR 201 or BIOL 120 or BIOL 125 or CHEM 135 or GEOG 221 or ISCI 131.
- Northwood University choose BIOL 120.
- Siena Heights University choose BIOL 125.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

65 credits / 65 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ACCG 210 – Milestone course
BUSN 118
ENGL 121 or ENGL 131
MATH 120 or STAT 170

Semester II
ACCG 160
ACCG 161
ACCG 211 – Milestone course
ACCG 215
COMM 110 or COMM 130

Semester III
ACCG 220
ACCG 230
ECON 201
LEGL 215
MGMT 225

Semester IV
ACCG 221
ACCG 240
ACCG 245 or ACCG 271
MKTG 200
Limited Choice - Natural Sciences Lab or Applied Science and Technology Lab

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Accounting C.A.

Career Community: Business

Curriculum Code: 0714

Effective: Fall 2024 – Summer 2029

Purpose of Major

Certificate holders qualify for clerical-level accounting positions that frequently include the need for general office skills in addition to accounting. Job titles include billing clerk, bookkeeper, payroll clerk, accounts payable clerk, and accounts receivable clerk. In smaller companies, a certificate holder may do all accounting tasks other than those handled by the company's CPA firm or other outside accountants. Accounting majors may complete this certificate as part of the Accounting Associate of Business degree.

Milestone

Completion of ACCG 210 and ACCG 211 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ACCG 160	Payroll Systems and Taxes	2 / 2
ACCG 161	Accounting with Quickbooks	2 / 2
ACCG 210	Principles of Financial Accg	4 / 4
ACCG 211	Principles of Managerial Accg	4 / 4
ACCG 215	Financial Data Analytics	4 / 4
ACCG 240	Federal Income Tax I	4 / 4
CITA 126	Microsoft Excel	3 / 3

Program of Study Required Courses, Limited Choice - Communication – Select one

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3

Note: Students considering completion of the Accounting Associate of Business degree with future transfer options should select the course as indicated below:

- Davenport University or Oakland University choose COMM 110
- Eastern Michigan University or Ferris State University choose COMM 130
- Northwood University or Sienna Heights University choose either course

Program of Study Required Courses, Limited Choice - Composition – Select one

Course Code	Course Title	Credit / Billing Hours
ENGL 121	Composition I	4 / 4
ENGL 127	Business Writing	3 / 3
ENGL 131	Honors Composition I	4 / 4

Note: Students considering completion of the Accounting Associate of Business degree should choose ENGL 121 or ENGL 131.

Program of Study Required Courses, Limited Choice – Select one

Course Code	Course Title	Credit / Billing Hours
ACCG 220	Intermediate Accounting I	4 / 4
CITA 226	Microsoft Excel-Advanced	3 / 3
MGMT 234	Diversity in the Workplace	3 / 3
STAT 170	Introduction to Statistics	4 / 4

Note: Students considering completion of the Accounting Associate of Business degree should choose ACCG 220.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

32 credits / 32 billing hours

Recommended Course Sequence

Semester I (Fall)
ACCG 210 – Milestone course
CITA 126
Limited Choice - Composition
Semester II (Spring)
ACCG 160
ACCG 161
ACCG 211 – Milestone course
ACCG 215
Semester III (Summer)
ACCG 240
Limited Choice - Communication
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Accounting - CPA Exam Preparation A.B.

Career Community: Business

Curriculum Code: 0255

Effective: Fall 2024 – Summer 2029

Description

This degree focuses on helping students with a Bachelor Degree, outside the field of accounting, learn the material to pass the Uniform Certified Public Accountant (CPA) Examination, and provides them with the classes needed to start a career as a professional accountant. The program prepares students for success in all realms of accounting, including careers as an auditor, tax professional, cost accountant, governmental accountant, financial analyst, and many more.

In addition to the 150 credit hours educational requirement, candidates must meet the accounting credit hours requirement, business credit hours requirement, and professional experience requirement. Though this program meets all of the accounting credit hours requirement to become certified and start a career in accounting, this program does not meet all of the business credit hours requirement or professional experience requirement. Students should research all of the requirements to become certified. The current "Guide to Becoming a Michigan CPA," along with other information regarding careers as a C.P.A., can be found on the [Michigan Association of CPA's \(MICPA\) Student Resources page](#).

Before starting this program, students should meet with an Accounting Faculty Advisor.

Milestone

In addition to the required General Education courses in Math and English, completion of ACCG 210 and ACCG 211 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

Contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 127, Business Writing, 3 credits / 3 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours

- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
ECON 260, Comparative Economic Systems, 3 credits / 3 billing hours
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
POLS 260, Comparative Political Systems, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 125, Introductory Biology, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ACCG 210	Principles of Financial Accg	4 / 4
ACCG 211	Principles of Managerial Accg	4 / 4
ACCG 215	Financial Data Analytics	4 / 4
ACCG 220	Intermediate Accounting I	4 / 4
ACCG 221	Intermediate Accounting II	4 / 4
ACCG 230	Cost/Managerial I	4 / 4
ACCG 240	Federal Income Tax I	4 / 4
ACCG 241	Federal Income Tax II	4 / 4
ACCG 260	Accounting Systems	4 / 4
ACCG 271	Principles of Finance	3 / 3
ACCG 280	Governmental Accounting	3 / 3
ACCG 290	Auditing	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

63 credits / 64 billing hours

Recommended Course Sequence

Semester I
Gen Ed - English Composition or Applied English
Gen Ed – English Composition (second course)/ Communications or Applied Communications
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed - Mathematics or Applied Mathematics
ACCG 210 – Milestone course

Semester II
Gen Ed - Natural Sciences Lab or Applied Science and Technology Lab
ACCG 211 – Milestone course
ACCG 215
ACCG 240

Semester III
ACCG 220
ACCG 230
ACCG 241
ACCG 280

Semester IV
ACCG 221
ACCG 260
ACCG 271
ACCG 290

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Advanced Management C.A.

Career Community: Business

Curriculum Code: 0280

Effective: Fall 2024 – Summer 2029

Purpose of Major

This is an advanced certificate designed to be taken after completing an associate or bachelor degree in order to enhance an individual's employment or advancement opportunities. Courses completed as part of the associate's or bachelor's degree will be applied to this certificate. Not all courses transfer to all colleges. Students planning to transfer should work with an academic advisor or program advisor before enrolling in any course.

Milestone

Completion of MGMT 225 or MGMT 300, with a 2.0 or higher, is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
MGMT 224	Human Resource Management	3 / 3
MGMT 304	Organization Development	3 / 3
MGMT 329	Advanced Mgmt Communication	3 / 3
MGMT 332	Ethics: Assumpt for the Future	3 / 3
MGMT 335	Managerial Statistics	3 / 3
MGMT 337	Advanced Human Resource Mgmt	3 / 3
MGMT 345	Context and Transformation	3 / 3

Program of Study Required Courses, Limited Choice – Communication – *Select one*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3

Program of Study Required Courses, Limited Choice – Management/ Leadership

- Select one

Course Code	Course Title	Credit / Billing Hours
MGMT 225	Principles of Mgmt/Leadership	3 / 3
MGMT 300	Leading for Possibility	3 / 3

Program of Study Required Courses, Limited Choice – Quantitative - Select one

Course Code	Course Title	Credit / Billing Hours
ACCG 210	Principles of Financial Accg	4 / 4
ACCG 271	Principles of Finance	4 / 4
MGMT 237	Managing/Continual Improvement	3 / 3

Program of Study Required Courses, Limited Choice – Business - Select one

Course Code	Course Title	Credit / Billing Hours
ACCG 211	Principles of Managerial Accg	4 / 4
BUSN 201	International Business	3 / 3
ECON 201	Principles of Economics - Micro	4 / 4
ECON 202	Principles of Economics - Macro	4 / 4
LEGL 215	Business Law – Basic Principles	3 / 3
MGMT 200	Creative Thinking for Business	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

33 credits / 33 billing hours

Recommended Course Sequence

Semester I
MGMT 224
MGMT 225 or MGMT 300 – Milestone course
MGMT 304
MGMT 332
Limited Choice – Communication

Semester II
MGMT 329
MGMT 335
MGMT 337
MGMT 345
Limited Choice – Business
Limited Choice – Quantitative if taking ACCG 210 or ACCG 271 or MGMT 237

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



African-American History A.A.

Career Community: History, Humanities, and English

Curriculum Code: 0137

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of HIST 150 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education - Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course) or Communication – *Select one*
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
- Humanities and Fine Arts
Program of Study Required Courses will meet this requirement

- Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
STAT 215, Intro to Probability and Stats, 4 credits / 4 billing hours
- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 120, Environmental Science, 4 credits / 6 billing hours
BIOL 125, Introductory Biology, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
GEOG 221, Physical Geography, 4 credits / 4 billing hours
GEOL 221, Physical Geology, 4 credits / 6 billing hours
GEOL 222, Historical Geology, 4 credits / 6 billing hours
GEOL 230, Environmental Geology, 4 credits / 6 billing hours
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
- Social Sciences – *Select two, each from a different discipline*
Program of Study Required Courses will meet this requirement

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ENGL 260	African-American Literature	4 / 4
HIST 150	African-American History	4 / 4
HIST 211	U.S. History to 1877	4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4
HIST 214	African History	4 / 4

Program of Study Required Courses, Limited Choice, Social Sciences – *Select 2*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
ECON 120	Power, Authority and Exchange	4 / 4
GEOG 200	World Regional Geography	4 / 4
POLS 120	American Political System	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for this degree. Select courses not already taken to meet the General Education Social Science requirement. (For the full list of options, see [AA and AS Degree Electives.](#))*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
ECON 120	Power, Authority and Exchange	4 / 4
ENGL 200	Introduction to Literature	3 / 3
ENGL 256	American Literature 1865 to Present	4 / 4
ENGL 270	Gender and Literature	4 / 4

Course Code	Course Title	Credit / Billing Hours
GEOG 200	World Regional Geography	4 / 4
HIST 215	World History to 1500	4 / 4
HIST 216	World History since 1500	4 / 4
HUMS 215	American Cultural Experience	4 / 4
POLS 120	American Political System	4 / 4
RELG 150	Intro to World Religions	4 / 4
SOCL 120	Introduction to Sociology	4 / 4
SOCL 254	Marriage and Family	3 / 3
SOCL 255	Contemporary Social Problems	3 / 3
SOCL 260	Race and Ethnicity	3 / 3

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Mathematics
MTA Natural Science
HIST 211

Semester II
MTA English Comp (2nd course) or Communication
MTA Natural Science
ENGL 260
HIST 150 – Milestone course

Semester III
HIST 212
HIST 214
Limited Choice
Electives as needed for total credits

Semester IV
Limited Choice
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Agricultural Technology A.A.S.

Career Community: Applied Science

Curriculum Code: 1451

Effective: Fall 2024 – Summer 2029

Description

The Agricultural Technology degree is designed to train individuals to work in agri-business or in various other aspects of the agricultural industry, depending upon the specific Certificate program completed at Michigan State University (MSU). MSU certificates include Agricultural Industries, Dairy Management, Electrical Technology, Fruit, Vegetable and Organic Horticulture Management, Horse Management, Landscape and Nursery Management, Livestock Industries, Sports and Commercial Turf Management, and Turfgrass Management Golf Course. This program is offered through a joint agreement between Lansing Community College (LCC) and the Michigan State University Institute of Agricultural Technology (IAT), with Major courses taught by MSU and General Education courses taught by LCC.

Milestone

Completion of the required General Education Math, English and Science courses with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Students may enter this curriculum in one of two ways. A student may begin at LCC, taking general education classes, and apply to the IAT for admittance to one of the specific concentrations listed above. Alternatively, students may be admitted first to a specific Certificate program in the IAT and then decide to enter the joint program to receive the AAS degree.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department, Arts and Sciences Building, Room 3203, telephone number 517-483-1092; the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904; or the MSU Institute of Agricultural Technology, Room 120 Agriculture Hall on the MSU campus, telephone number 517-355-0190.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
Program of Study Required Courses meets this requirement
- English Composition (second course) or Communication or Applied Communication – *Select*
Program of Study Required Courses meets this requirement

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
Program of Study Required Courses meets this requirement
- Mathematics or Applied Mathematics – *Select one*
Program of Study Required Courses meets this requirement
- Natural Sciences Lab or Applied Sciences or Technology Lab – *Select one**
Program of Study Required Courses meets this requirement

**Students who have completed MSU ANS 110 and 110L, ANS 242, CSS 101 and CSS 101L, or HRT 203, and HRT 213 and 213L with grades of 2.0 or higher will satisfy the Applied Science requirement. Students should contact their advisor for information.*

**Program of Study Required Course, English Composition or Applied English –
*Select one***

Course Code	Course Title	Credit / Billing Hours
ENGL 121	Composition I	4 / 4
ENGL 122	Composition II	4 / 4
ENGL 131	Honors Composition I	4 / 4
ENGL 132	Honors Composition II	4 / 4

**Program of Study Required Course, English Comp (second course) or
Communication or Applied Communication – *Select one***

Course Code	Course Title	Credit / Billing Hours
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3

**Program of Study Required Course, Humanities and Fine Arts or Social Science
or Applied Social Science – *Select one***

Course Code	Course Title	Credit / Billing Hours
ECON 201	Principles of Economics-Micro	4 / 4
ENGL 211	World Literature I	4 / 4
ENGL 212	World Literature II	4 / 4
HUMS 160	Mythology	4 / 4
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
JAPN 121	Elementary Japanese I	4 / 4
PSYC 200	Introduction to Psychology	4 / 4
SOCL 120	Introduction to Sociology	4 / 4
SPAN 121	Elementary Spanish I	4 / 4

Program of Study Required Course, Mathematics or Applied Mathematics –

Select one

Course Code	Course Title	Credit / Billing Hours
MATH 119	Math – Applications for Living	4 / 4
MATH 120*	College Algebra	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

*MATH 120 highly recommended

Program of Study Required Course, Natural Sciences Lab or Applied Sciences or Technology Lab – Select one; CHEM 151 & CHEM 161 is one option.

Course Code	Course Title	Credit / Billing Hours
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6
BIOL 127	Cell Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
CHEM 151 and CHEM 161	General Chemistry Lecture I General Chemistry Lab I	4 / 4 1 / 3

MSU Agricultural Technology Courses

Minimum 47 Credits - Required Agricultural Technology certificate from Michigan State University

Institutional Requirements

Choose an appropriate Lansing Community College course or courses so that the total number of credits taken at LCC is 15 or more per college policy, and so that at least 60 credits are earned toward the degree. Part of this requirement may automatically be fulfilled if a student completes 15 or more credits of the General Education – Applied Degree courses.

Minimum Total Credit Hours

66 credits / 20 billing hours

Recommended Course Sequence

Semester I
Agricultural Technology courses from MSU

Semester II
Agricultural Technology courses from MSU

Semester III
Agricultural Technology courses from MSU

Semester IV
Gen Ed - English Composition or Applied English
Gen Ed - English Composition (second course) or Communication or Applied Communication
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed - Mathematics or Applied Mathematics
Gen Ed - Natural Sciences Lab or Applied Sciences or Technology Lab

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Airframe Maintenance Technology A.A.S.

Career Community: Transportation

Curriculum Code: 0757

Effective: Fall 2024 – Summer 2029

Description

Airframe maintenance technicians maintain aircraft in accordance with Federal Aviation Regulations. Airframe technicians perform a wide variety of repairs and alterations to sheet metal and composite aircraft structures. In addition, they inspect and repair or replace complex aircraft components associated with hydraulic/pneumatic, communication/navigation, fuel and flight control systems. Aviation maintenance technicians are employed throughout the world maintaining aircraft for major air carriers, commuter airlines, air freight operators, corporate flight departments, fixed base operators and a variety of other specialized aviation businesses. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

Completion of AVGM 111, AVGM 112, AVGM 113, and AVGM 114, with a 2.0 or higher is a key component for success in this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional information

Students are required to successfully complete the entire 6 semester program with a 2.0 or higher in each class that includes Basic Aviation Technology and Airframe Maintenance Technology in order to be eligible to test for Federal Aviation Administration (FAA) licensure as an Airframe and Powerplant (A&P) Mechanic. All program courses are offered one time per year and this is a full-time program. Program courses are offered in a required sequence. General Education courses may be taken any time throughout the program.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Aviation Technology Program at the Mason-Jewett Field, 661 Aviation Drive, Mason, telephone number 517-483-1406.

General Education - Applied Degree, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 124, Technical Writing, 3 credits / 3 billing hours
ENGL 127, Business Writing, 3 credits / 3 billing hours

- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
HUMS 223, The Western World to 1500, 4 credits / 4 billing hours
HUMS 224, The Western World since 1500, 4 credits / 4 billing hours
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Sciences and Technology Lab – *Select one*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 120, Environmental Science, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AVAF 125	Aircraft Systems I	2 / 2.75
AVAF 126	Aircraft Systems II	6 / 8.25
AVAF 127	Aircraft Systems III	3 / 4
AVAF 134	Aircraft Instruments	2 / 2.75
AVAF 140	Aircraft Welding	2 / 3
AVAF 208	Aircraft Structures I	4 / 5.5
AVAF 209	Aircraft Structures II	4 / 5.75
AVAF 210	Aircraft Structures III	4 / 6
AVAF 211	Aircraft Electrical I	4 / 5.75
AVAF 212	Aircraft Electrical II	4 / 5.75
AVAF 246	Airframe Certification	1 / 1.5
AVEL 202	Flight Line Testing	3 / 4
AVGM 111	Aviation General I	4 / 5
AVGM 112	Aviation General II	6 / 8
AVGM 113	Aviation General III	4 / 5
AVGM 114	Materials and Processes	5 / 7

Minimum Total Credit Hours

75 credits / 98 billing hours

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Required Course Sequence

Semester I (Fall)
AVGM 111 – Milestone course
AVGM 112 – Milestone course
AVGM 113 – Milestone course
AVGM 114 – Milestone course

Semester II (Spring)
AVAF 125
AVAF 126
AVAF 140
AVAF 208
AVAF 211

Semester III (Summer)
AVAF 127
AVAF 134
AVAF 212

Semester IV (Fall)
AVAF 209
AVAF 210
AVAF 246
AVEL 202

Semester V (Spring)
Gen Ed – English Composition or Applied English
Gen Ed – English Composition (second course)/Communication or Applied Communication
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed – Mathematics or Applied Mathematics
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Airframe Maintenance Technology C.A.

Career Community: Transportation

Curriculum Code: 1036

Effective: Fall 2024 – Summer 2029

Description

This certificate of achievement enables a non-licensed individual to expand their knowledge of airframe maintenance practices used to maintain aircraft in accordance with the Title 14 Code of Federal Aviation Regulations. While enrolled in this program, students will learn the basic science and technical knowledge necessary to repair and maintain modern aerospace vehicle airframes. Graduates will have demonstrated technical abilities in flight control rigging and adjustment, airframe structural repair, hydraulic and pneumatic systems inspection and repair, flight control operation, fuel system maintenance and repair, airframe electrical system diagnosis and repair, and airframe inspections. Completion of this certificate may be applied to the Airframe and Powerplant License provided the student meets the requirements of the Federal Aviation Regulation Part 147.

Milestone

Completion of AVAF 212 and AVAF 126 with a 2.0 or higher is a key component for success in this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Aviation Technology Program at the Mason-Jewett Field, 661 Aviation Drive, Mason, telephone number 517-483-1406.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AVAF 125	Aircraft Systems I	2 / 2.75
AVAF 126	Aircraft Systems II	6 / 8.25
AVAF 127	Aircraft Systems III	3 / 4
AVAF 134	Aircraft Instruments	2 / 2.75
AVAF 140	Aircraft Welding	2 / 3
AVAF 208	Aircraft Structures I	4 / 5.5
AVAF 209	Aircraft Structures II	4 / 5.75
AVAF 210	Aircraft Structures III	4 / 6
AVAF 211	Aircraft Electrical I	4 / 5.75
AVAF 212	Aircraft Electrical II	4 / 5.75
AVAF 246	Airframe Certification	1 / 1.5
AVEL 202	Flight Line Testing	3 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

39 credits / 55 billing hours

Required Course Sequence

Semester I (Spring)
AVAF 125
AVAF 126 – Milestone course
AVAF 140
AVAF 208
AVAF 211
Semester II (Summer)
AVAF 127
AVAF 134
AVAF 212 – Milestone course
Semester III (Fall)
AVAF 209
AVAF 210
AVAF 246
AVEL 202

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Allied Health A.A.S.

Career Community: Health and Human Service Careers

Curriculum Code: 1814

Effective: Fall 2024 – Summer 2029

Description

Allied Health is a broad field of study that encompasses a variety of professions involved in the diagnosis, evaluation, and treatment of acute and chronic diseases, disease prevention and wellness, and rehab and health systems management that support health care systems in an array of settings. Therefore, this degree is designed to be customized to a student's goals for a health profession. A minimum of 60 credits is required and includes LCC General Education requirements.

The Career Community block of courses includes courses that are common to all degree options included in the Allied Health area (Dental Hygiene, Emergency Medical Services, Human Services, Kinesiology/Exercise Science, Magnetic Resonance Imaging, Neurodiagnostic Technology, Nursing, Radiologic Technology, Surgical Technology, Ultrasound: Diagnostic Medical Sonography). Students may choose to move into one of the specific degree pathways or continue to complete the Allied Health degree.

This pathway serves as the pathway for students working on admission to a Health Careers selective admission program, and it includes courses in a number of certificate pathways for new students or students who may already have a certain certification or license and are seeking an associate degree for further education or employment opportunities.

The Medical Education and Training Campus (METC) option provides an opportunity for military transfer credit. Additional course choices enhance a student's degree track and may include those that will satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and transfer to a baccalaureate degree program in a health-related field.

Courses appearing in more than one section on this pathway can be counted only once toward the credit total. Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution and may also complete coursework for an Allied Health, Enhanced AAS degree. The Allied Health Enhanced AAS option allows students to transfer additional credits toward a Bachelor's degree.

Milestone

Completion of the required General Education courses in Math and English with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

It is crucial that students meet with a Health Careers academic advisor or program director prior to selecting courses based on academic goals. Students must earn a minimum grade of 2.0 or higher in all courses to earn this degree. Higher grades will be required in some courses and if you are applying to a selective admission program. Please visit [Advising Guides - Health and Human Services Division](#) to review program-specific admission requirements for each selective admission program.

Selective Admission Pre-Programs Advising Guides
Pre-Dental Hygiene Advising Guide
Pre-Magnetic Resonance Imaging Technology Advising Guide
Pre-Neurodiagnostic Medical Technology Advising Guide
Pre-Nursing PN or RN Option 2 Year Track Advising Guide
Pre-Nursing PN or RN Option 2nd Degree Track Advising Guide
Pre-Nursing PN or RN Option Advanced Standing Track
Pre-Radiologic Technology Advising Guide
Pre-Surgical Technology Advising Guide
Pre-Ultrasound: Diagnostic Medical Sonography Advising Guide

Visit [2024-2025 Degree and Certificate Program Pathways](#) to review the pathway for each certificate program:

Certificate Pathways
Group Fitness Instructor C.C. (#1704)
Massage Therapy C.C. (#1826)
Medical Assistant C.A. (#1811)
Medical Insurance Billing and Coding (#1488)
Vascular Technology C.C. (#1604)

Credit for Approved State or National Licensure or Certification and Previously Acquired Knowledge and Learning Experience

Students who have applied to LCC and hold certain current certifications and/or licenses listed at the following link are encouraged to apply for [Licensure or Certification Credit](#) toward this degree. Students who have personal and professional experience gained through actual job-related activities and special training experiences are encouraged to apply for Credit for Prior Learning Experience toward this degree. These learning experiences must directly relate to a specific course or courses required within a student's LCC program. Credits granted through either of these two options that are relevant to this degree may be used toward degree completion. Contact the Experiential Learning Coordinator, Jobs Training Center, West Campus Building, 517-483-1857, or email priorlearning@star.lcc.edu for more information.

Contact Information

Prior to beginning this program, students should meet with a Health Careers advisor in the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Students should also visit the [Health and Human Services Division](#) website for more information.

General Education – Applied Degrees, Recommended Courses

Select courses as indicated for specific majors and/or for transfer. The recommended courses in each General Education category may also meet Michigan Transfer Agreement (MTA) requirements. A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Health and Human Service Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Health and Human Service Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Health and Human Service Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Health and Human Service Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Sciences and Technology Lab
Health and Human Service Career Community Courses meet this requirement.

Students working on admission to a Health Career selective admission program should see [Advising Guides - Health and Human Services Division](#) for the specific General Education courses required for their program.

Military (METC) Radiologic Technology Option: Students with Medical Education and Training Campus (METC) Radiologic Technology Transfer Credit should see the Medical Education and Training Campus (METC) Radiologic Technology section at the end of this pathway for specific General Education options required for their program.

Health and Human Service Career Community Required Courses - *Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum grade of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 145 or BIOL 201 and BIOL 202	Intro Anatomy and Physiology Human Anatomy and Human Physiology	4 / 6 8 / 11
COMM 110 or COMM 120 or COMM 130 or COMM 240 or ENGL 122 or ENGL 132	Communication in the Workplace Dynamics of Communication Fundamentals Public Speaking Interpersonal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or	Math – Applications for Living	4 / 4

Course Code	Course Title	Credit / Billing Hours
MATH 120 or	College Algebra	4 / 4
MATH 126 or	Precalculus	5 / 5
MATH 151 or	Calculus I	4 / 4
STAT 170 or	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future major areas:

- Dental Hygiene students choose COMM 110 or COMM 120 or COMM 130 or COMM 240, and MATH 119 or MATH 120.
- Emergency Medical Services students choose MATH 119 or MATH 120 or MATH 126.
- Human Services students choose BIOL 145, and ENGL 122 or ENGL 132, and MATH 119 or MATH 120 or STAT 170.
- Kinesiology/Exercise Science students choose MATH 120 or MATH 126 or MATH 151 or STAT 170. Students planning to transfer choose MATH 120 or MATH 126 or MATH 151. Non-transfer students may choose STAT 170.
- Magnetic Resonance Imaging students choose BIOL 201 and BIOL 202, and COMM 110 or COMM 120 or COMM 130 or COMM 240, and MATH 120 or STAT 170 or STAT 215.
- Neurodiagnostic Technology students choose COMM 110 or COMM 120 or COMM 130 or COMM 240, and MATH 119 or MATH 120 or STAT 170 or STAT 215.
- Nursing (PN or RN option) students choose BIOL 201 and BIOL 202, and COMM 110 or COMM 120 or COMM 130 or COMM 240, and MATH 119 or STAT 170 or STAT 215.
- Radiologic Technology students choose COMM 110 or COMM 120 or COMM 130 or COMM 240, and MATH 119 or MATH 120 or STAT 170 or STAT 215.
- Surgical Technology students choose BIOL 201 and BIOL 202, and COMM 110 or COMM 120 or COMM 130 or COMM 240, and MATH 119 or STAT 170 or STAT 215.

- Ultrasound: Diagnostic Medical Sonography students choose COMM 110 or COMM 120 or COMM 130 or COMM 240, and MATH 120 or STAT 170 or STAT 215.
- Students considering transfer for all majors choose BIOL 201, BIOL 202, and COMM 130.

Program of Study Required Courses – Limited Choice – *Select 30 credits. Work with an Academic Advisor or Program Advisor to select the most appropriate courses or field-specific major that meets your educational and career goals. One or more certificate pathways may be completed while completing this degree. There is a 6-credit maximum for MGMT courses, a 2-credit maximum for PFFT/PFWT courses, and a 12-credit maximum for Science (BIOL/CHEM/PHYS) courses.*

Course Code	Course Title	Credit / Billing Hours	Certificate Pathway
BIOL 121	Biol Foundation for Physiology	4 / 6	
BIOL 127	Cell Biology	4 / 6	
BIOL 203	Microbiology	3 / 3	
BIOL 204	Microbiology Laboratory	1 / 3	
CHEM 120	Gen Organic & Biological Chem	4 / 4	
CHEM 151	General Chemistry Lecture I	4 / 4	
CHEM 161	General Chemistry Lab I	1 / 3	
CHSE 100	Intro to Health Professions	3 / 3	
CHSE 108	Long-Term Care Nurse Aide	4 / 6.5	1025 – Long-Term Care Nurse Aide C.C. 1784 – Patient Care Technician C.C.
CHSE 109	LTC to AC Nurse Assistant/PCT	3 / 4.75	
CHSE 114	Pathophysiology-Allied Health	3 / 3	
CHSE 117	Health Law and Ethics	2 / 2	
CHSE 120	Medical Terminology	4 / 4	1017 – Sterile Processing Tech. C.C. 1442 – EKG Technician C.C. 1488 – Medical Insurance Billing and Coding C.C.
CHSE 123	Medical Ins Billing/Coding I	4 / 4	1488 – Medical Insurance Billing and Coding C.C.
CHSE 124	Medical Ins Billing/Coding II	4 / 4	1488 – Medical Insurance Billing and Coding C.C.
CHSE 125	Comp-Med Ins Billing/Coding	2 / 2	1488 – Medical Insurance Billing and Coding C.C.
CHSE 127	Medical Ins Billing/Coding III	3 / 3	1488 – Medical Insurance Billing and Coding C.C.
CHSE 130	Medical Ins Bill/Code Extern	3 / 3	1488 – Medical Insurance Billing and Coding C.C.
CHSE 131	Electronic Hlth Records Intro	2 / 2	1488 – Medical Insurance Billing and Coding C.C.

Course Code	Course Title	Credit / Billing Hours	Certificate Pathway
CHSE 136	EKG Technician	3.5 / 4	1442 – EKG Technician C.C
CHSE 143	Phlebotomy Technician	2 / 3	1010 – Phlebotomy Technician C.C.
CHSE 144	Phlebotomy Externship	4 / 4	1010 – Phlebotomy Technician C.C.
CHSE 151	Patient Care Technician	6 / 9.25	1784 – Patient Care Technician C.C.
CHSE 235	Pharmacy Technician	4 / 4	1024 – Pharmacy Technician C.C.
CHSE 236	Pharmacy Technician Externship	3 / 3	1024 – Pharmacy Technician C.C.
EMTA 100	Emergency Medical Responder	4 / 6	
EMTA 121	EMT Medical Trauma	5 / 5	1853 - Basic Emergency Medical Technician C.C.
EMTA 122	EMT Skills	2.75 / 5.5	1853 - Basic Emergency Medical Technician C.C.
EMTA 125	EMT Clinical	2.25 / 2.25	1853 - Basic Emergency Medical Technician C.C.
EMTA 222	EMS Instructor-Coordinator	9 / 9	1638 – EMS Instructor-Coordinator CC
EMTA 224	EMS Instr-Coord Student Teach	2 / 2	1638 – EMS Instructor-Coordinator CC
IDMS 250	Vascular Technology I	6 / 6	1604 – Vascular Technology C.C.
IDMS 251	Vascular Technology II	6 / 6	1604 – Vascular Technology C.C.
IDMS 255	Vascular Scan Lab I	2.5 / 4	1604 – Vascular Technology C.C.
IDMS 256	Vascular Scan Lab II	2.5 / 4	1604 – Vascular Technology C.C.
MEDA 110A	Intro MA Med Terms & Patho I	2.5 / 2.5	1811 – Medical Assistant C.A.
MEDA 110B	Intro MA Med Terms & Patho II	2.5 / 2.5	1811 – Medical Assistant C.A.
MEDA 126A	MA Administrative Skills I	2.5 / 3	1811 - Medical Assistant C.A.
MEDA 126B	MA Administrative Skills II	2.5 / 3	1811 - Medical Assistant C.A.
MEDA 135	MA Pharmacology & Med Math	2 / 2	1811 - Medical Assistant C.A.
MEDA 145	Legal & Ethical Concepts	2 / 2	1811 - Medical Assistant C.A.
MEDA 156A	MA Clinical Procedures IA	3.5 / 5.5	1811 - Medical Assistant C.A.
MEDA 156B	MA Clinical Procedures IB	3.5 / 5.5	1811 - Medical Assistant C.A.
MEDA 166	MA Clinical Procedures II	5 / 7	1811 - Medical Assistant C.A.
MEDA 175	MA Certification Review	3 / 3	1811 - Medical Assistant C.A.
MEDA 177A	MA Practicum Immersion I	1 / 1	1811 - Medical Assistant C.A.
MEDA 177B	MA Practicum Immersion II	2 / 2	1811 - Medical Assistant C.A.
MGMT 223	Supervisory Skills	3 / 3	
MGMT 225	Principles of Mgmt/Leadership	3 / 3	
MGMT 227	Training/Development for Busn	3 / 3	
MGMT 228	Organization Behavior	3 / 3	
MGMT 234	Diversity in the Workplace	3 / 3	
MSGE 131	Massage I	2.13 / 4	1826 – Massage Therapy C.C.
MSGE 132A	Anatomy/Physiology Massage I	2.13 / 4	1826 – Massage Therapy C.C.
MSGE 132B	Anatomy/Physiology Massage II	1.06 / 2	1826 – Massage Therapy C.C.

Course Code	Course Title	Credit / Billing Hours	Certificate Pathway
MSGE 137	Medical Terminology in Massage	1.06 / 2	1826 – Massage Therapy C.C.
MSGE 139A	Pathology for Massage I	.53 / 1	1826 – Massage Therapy C.C.
MSGE 139B	Pathology for Massage II	.53 / 1	1826 – Massage Therapy C.C.
MSGE 141	Massage Clinic I	1.33 / 2.5	1826 – Massage Therapy C.C.
MSGE 151B	Event Massage	.80 / 1.5	1826 – Massage Therapy C.C.
MSGE 151D	Special Populations	.80 / 1.5	1826 – Massage Therapy C.C.
MSGE 231	Massage II	2.13 / 4	1826 – Massage Therapy C.C.
MSGE 232	Massage III	2.13 / 4	1826 – Massage Therapy C.C.
MSGE 241	Massage Clinic II	1.33 / 2.5	1826 – Massage Therapy C.C.
MSGE 242	Massage Clinic III	1.60 / 3	1826 – Massage Therapy C.C.
MSGE 254	Busn App for Massage	1.06 / 2	1826– Massage Therapy C.C.
MSGE 256	Clinical Assess for Massage	1.06 / 2	1826 – Massage Therapy C.C.
MSGE 258	Career Longevity	1.06 / 2	1826– Massage Therapy C.C.
NCHE 102	AHA BLS Provider CPR	0 / 0*	
NURS 200	Nursing Pharmacology	3 / 3.5	
NURS 201	Patient-Centered Care	3 / 3	
PFFT 100	Total Fitness A-Fitness	2 / 3	
PFFT 101	Total Fitness B-Nutrition	2 / 3	
PFFT 102	Total Fitness C-Weight Control	2 / 3	
PFFT 109	Introduction to Fitness	1 / 2	1704 – Group Fitness Instructor C.C.
PFHW 123	Human Nutrition	3 / 3	1704 – Group Fitness Instructor C.C.
PFHW 163	Healthy Lifestyles	2 / 3	
PFHW 181	Stress Management	1 / 1	1704 – Group Fitness Instructor C.C.
PFKN 106	Group Fitness Instructor Prep	3 / 4	1704 – Group Fitness Instructor C.C.
PFKN 170	Foundations of Kinesiology	3 / 3	1704 – Group Fitness Instructor C.C.
PFKN 200	Exercise Physiology	3 / 3	1705 – Personal Trainer C.A.
PFKN 201	Exercise Physiology Lab	1 / 2	1705 – Personal Trainer C.A.
PFKN 205	Sport & Exercise Psychology	3 / 3	1705 – Personal Trainer C.A.
PFKN 208	Biomechanics	3 / 3	1705 – Personal Trainer C.A.
PFKN 210	Athletic Training Principles	3 / 4	1705 – Personal Trainer C.A.
PFKN 250	Measurements in Kinesiology	3 / 4	1704 – Group Fitness Instructor C.C.
PFKN 260	Growth and Motor Behavior	3 / 3	1704 – Group Fitness Instructor C.C.
PFKN 270	Personal Trainer Preparation	4 / 5	1705 – Personal Trainer C.A.
PFKN 280	Kinesiology Internship	3 / 3	1705 – Personal Trainer C.A.
PFWT 112	Intro to Weight Training	1 / 2	1704 – Group Fitness Instructor C.C.
PFWT 123	Weight Training I	2 / 3	
PHYS 120	The Art of Physics	4 / 5	
PHYS 200	Intro to Applied Physics	4 / 5	
PSYC 200	Introduction to Psychology	4 / 4	
SOWK 101	Introduction to Social Work	3 / 3	

Course Code	Course Title	Credit / Billing Hours	Certificate Pathway
STPR 145	Foundations Sterile Processing	5 / 6.5	1017 – Sterile Processing Techn. C.C.
STPR 148	Sterile Processing Externship	2 / 2	1017 – Sterile Processing Techn. C.C.
SURG 103	Surgical Asepsis	2 / 2	

*Flat-rated, not covered by financial aid

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach the 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). It is recommended that students select additional course(s) from the Program of Study Required Courses – Limited Choice area of this pathway or from [General Education – Transfer Degrees \(MTA\)](#). Students are encouraged to meet with an Academic Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 60 billing hours

Course Sequence

Students will work with an advisor to determine the course sequence specific to their educational goals.

Medical Education and Training Campus (METC) - Radiologic Technology Option

METC Radiologic Technologist Program Graduates may receive up to 51 college transfer credits (31 credits didactic courses and 20 credits clinical courses) upon submission and review of METC Transcript and Joint Service Transcript to Lansing Community College. The 51 college transfer credits awarded include the satisfaction of the General Education Natural Sciences requirement. An additional 15-17 semester credits to be earned toward the curriculum and completed at LCC are required to award an associate degree. Transfer credit does not satisfy those additional 15-17 credits required to award the degree.

Joint Service Transcript Program Number

Air Force: L5AQJ4R031 01AA	Diagnostic Imaging Apprentice (Phase 1)
Army: 313-68P10	Radiologist Specialist (Phase 1)
Navy: B-313-0126	Advanced Radiographer (Phase 1)

METC Course Dates: Start date: January 2017 - End Date: February 1, 2025

METC courses completed prior to the above date must be submitted to Lansing Community College's Radiologic Technology Program Director for review of course transfer credit.

General Education - Applied Degrees, Recommended Courses – *Minimum 14 credits*
(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
ANTH 271, Medical Anthropology, 3 credits / 3 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one from the Transfer Degrees (MTA) category*
MATH 119, Math – Applications for Living, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab
Satisfied by the 51-credit transfer agreement

Program of Study Recommended Courses - *Select one or more if needed to reach 15 LCC credits.*

Course Code	Course Title	Credit / Billing Hours
PFFT 109	Introduction to Fitness	1 / 2
PFHW 163	Healthy Lifestyles	2 / 3
PFHW 181	Stress Management	1 / 1

Minimum METC Total

66 credits / 15 billing hours

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



American Studies A.A.

Career Community: History, Humanities, and English

Curriculum Code: 0142

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of HIST 211, HIST 212, and HUMS 215 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course) or Communication – *Select one*
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
- Humanities and Fine Arts
Program of Study Required Courses will meet this requirement
- Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
STAT 215, Intro to Probability and Stats, 4 credits / 4 billing hours

- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
 ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
 BIOL 120, Environmental Science, 4 credits / 6 billing hours
 BIOL 125, Introductory Biology, 4 credits / 6 billing hours
 CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
 GEOG 221, Physical Geography, 4 credits / 4 billing hours
 GEOL 221, Physical Geology, 4 credits / 6 billing hours
 GEOL 222, Historical Geology, 4 credits / 6 billing hours
 GEOL 230, Environmental Geology, 4 credits / 6 billing hours
 ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
- Social Sciences
 Program of Study Required Courses will meet this requirement.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
HIST 211	U.S. History to 1877	4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4
HUMS 215	American Cultural Experience	4 / 4

Program of Study Required Courses – *Select one*

Course Code	Course Title	Credit / Billing Hours
ENGL 255	American Lit to 1865	4 / 4
ENGL 256	American Lit 1865 to Present	4 / 4

Program of Study Required Courses, Limited Choice, Social Sciences – *Select 2*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
ECON 120	Power, Authority and Exchange	4 / 4
GEOG 200	World Regional Geography	4 / 4
POLS 120	American Political System	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for this degree. (For the full list of options, see [AA and AS Degree Electives.](#))*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
ARTH 120	Masterpieces of Art & Music	4 / 4
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
ECON 213	U.S. Economic/Business History	3 / 3
ENGL 200	Introduction to Literature	3 / 3
ENGL 260	African-American Literature	4 / 4
ENGL 270	Gender and Literature	4 / 4
GEOG 200	World Regional Geography	4 / 4

Course Code	Course Title	Credit / Billing Hours
HIST 150	African-American History	4 / 4
HIST 215	World History to 1500	4 / 4
HIST 216	World History since 1500	4 / 4
POLS 120	American Political System	4 / 4
RELG 150	Intro to World Religions	4 / 4
SOCL 120	Introduction to Sociology	4 / 4
SOCL 260	Race and Ethnicity	3 / 3

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Mathematics
MTA Natural Science
HIST 211 – Milestone course

Semester II
MTA English Comp (2nd course) or Communication
MTA Natural Science
ENGL 255 or 256
HUMS 215 – Milestone course

Semester III
HIST 212 – Milestone course
Limited Choice
Electives as needed for total credits

Semester IV
Limited Choice
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Anthropology A.A.

Career Community: Social Sciences

Curriculum Code: 1621

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of ANTH 120 and ANTH 270 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Sociology/Anthropology Program in the Arts & Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Social Science Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Social Science Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meet this requirement.
- Mathematics
Social Science Career Community Courses meet this requirement.
- Natural Sciences
Program of Study Required Courses meet this requirement.
- Social Sciences
Social Science Career Community Courses meet this requirement.

Social Sciences Career Community Courses – *These courses are required for all Social Sciences programs (Anthropology, Political Science, Psychology, and Sociology).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Central Michigan University choose COMM 130 and STAT 170.
- Eastern Michigan University choose COMM 120 or COMM 130.
- Grand Valley State University (International Relations BA) choose COMM 130 and MATH 120.
- Michigan State University choose COMM 130 and MATH 120.
- University of Michigan Ann Arbor choose ENGL 122 and MATH 120.
- University of Michigan Flint choose ENGL 122 and MATH 120.
- Western Michigan University choose ENGL 122 and STAT 170.

Social Sciences Career Community Courses, Limited Choice – *Select 2 as noted below*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
POLS 120	American Political System	4 / 4
PSYC 200	Introduction to Psychology	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Note: Anthropology majors choose ANTH 270, and one other course listed above.

Program of Study Required Courses - *Students who have already selected ANTH 270 as part of the Career Community above, do not repeat enrollment.*

Course Code	Course Title	Credit / Billing Hours
ANTH 120	Introduction to Anthropology	3 / 3
ANTH 275	Biological Anthropology	4 / 4
ANTH 270	Cultural Anthropology	3 / 3
ANTH 276	Introduction to Archaeology	3 / 3

Program of Study Required Courses, Limited Choice - Anthropology – *Select one*

Course Code	Course Title	Credit / Billing Hours
ANTH 271	Medical Anthropology	3 / 3
ANTH 272	Food and Sustainability	3 / 3
ANTH 280	Forensic Anthropology	3 / 3
ANTH 300	Applied Field Survey Methods	4 / 4

For future transfer to:

- Central Michigan University choose ANTH 280.
- Eastern Michigan University choose ANTH 271 or ANTH 280.
- Grand Valley State University choose ANTH 271.
- Michigan State University choose ANTH 280.
- University of Michigan Flint choose ANTH 280.
- Western Michigan University choose ANTH 280.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -

Select two courses from two different disciplines, as indicated for each transfer institution. If specific courses are not noted, select any two courses from different disciplines. A course may also be chosen from the list of LCC General Education Transfer, Humanities and Fine Arts courses.

Course Code	Course Title	Credit / Billing Hours
ARTH 120	Masterpieces of Art & Music	4 / 4
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
ARTS 102	2D Design	3 / 4
ENGL 200	Introduction to Literature	3 / 3
ENGL 201	Introduction to Poetry	4 / 4
ENGL 208	Children's Literature	4 / 4
ENGL 211	World Literature I	4 / 4
ENGL 212	World Literature II	4 / 4
ENGL 220	Science Fiction	4 / 4
ENGL 255	American Lit to 1865	4 / 4
ENGL 256	American Lit 1865 to Present	4 / 4
ENGL 260	African-American Literature	4 / 4
ENGL 266	British Lit to 1800	4 / 4
ENGL 267	British Lit 1800 to Present	4 / 4

Course Code	Course Title	Credit / Billing Hours
ENGL 270	Gender and Literature	4 / 4
ENGL 290	Shakespeare	4 / 4
GRMN 121 or GRMN 122 or GRMN 201 or GRMN 202 or JAPN 121 or JAPN 122 or JAPN 201 or JAPN 202 or SPAN 121 or SPAN 122 or SPAN 201 or SPAN 202	Elementary German I Elementary German II Intermediate German I Intermediate German II Elementary Japanese I Elementary Japanese II Intermediate Japanese I Intermediate Japanese II Elementary Spanish I Elementary Spanish II Intermediate Spanish I Intermediate Spanish II	4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4
HIST 150	African-American History	4 / 4
HIST 211	U.S. History to 1877	4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4
HIST 214	African History	4 / 4
HIST 215	World History to 1500	4 / 4
HIST 216	World History since 1500	4 / 4
HIST 220	Michigan History	4 / 4
HIST 240	Latin American History	4 / 4
HIST 250	History of Modern Asia	4 / 4
HUMS 140	Art of Being Human	4 / 4
HUMS 160	Mythology	4 / 4
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
MUSC 199	Music Appreciation	3 / 3
MUSC 240	Musical Cultures to 1750	4 / 4
MUSC 241	Musical Cultures 1750-Present	4 / 4
PHIL 101	Introduction to Philosophy	3 / 3
PHIL 151	Intro to Logic & Critical Think	4 / 4
PHIL 152	Introduction to Ethics	4 / 4
PHIL 211	Philosophy: Ancient & Medieval	4 / 4
PHIL 212	Philosophy: Modern & Contempory	4 / 4
PHIL 215	Philosophy of Religion	3 / 3
RELG 150	Intro to World Religions	4 / 4
RELG 210	Comparative Religions	3 / 3
RELG 211	Asian Religions and Traditions	4 / 4
RELG 230	Introduction to Christianity	3 / 3
RELG 232	Introduction to Islam	3 / 3

Note: For future transfer to Eastern Michigan University, Michigan State University, University of Michigan Flint, and Western Michigan University choose one HIST and one PHIL course.

Program of Study Required Courses, Limited Choice – Natural Sciences – *Select one. A course may also be chosen from the list of LCC General Education Transfer, Natural Sciences courses.*

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201	Human Anatomy	4 / 6
BIOL 202	Human Physiology	4 / 5
BIOL 203 and BIOL 204	Microbiology Microbiology Laboratory	3 / 3 1 / 3
BIOL 210	Natural Resource Conservation	4 / 6
BIOL 260	Botany	4 / 6
BIOL 265	Zoology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
CHEM 151 and CHEM 161	General Chemistry Lecture I General Chemistry Lab I	4 / 4 1 / 3
CHEM 152 and CHEM 162	General Chemistry Lecture II General Chemistry Lab II	3 / 3 1 / 3
CHEM 182 and CHEM 192	Introductory Organic Chemistry Intro Organic Chem Lab	3 / 3 1 / 3
CHEM 262	Quantitative Analysis	3 / 6
CHEM 272	Organic Chemistry Laboratory	2 / 6
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 121	Physical Science Concepts	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PFHW 123	Human Nutrition	3 / 3
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5
PHYS 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7

For future transfer to:

- Central Michigan University choose BIOL 120.
- Grand Valley State University choose GEOL 221.
- Michigan State University choose BIOL 121 or CHEM 135 or, CHEM 151 and CHEM 161, or PHYS 120.

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for this degree. See notes below for specific courses for each transfer institution and major. If specific courses are not indicated for your transfer institution, select any Elective courses. Courses already taken for Career Community or Program of Study requirements, will not count for Elective credits. (For the full list of options, see [AA and AS Degree Electives](#).)*

Course Code	Course Title	Credit / Billing Hours
ANTH 271	Medical Anthropology	3 / 3
ANTH 272	Food and Sustainability	3 / 3
BIOL 270	Human Genetics	3 / 3
ENGL 122	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4
GRMN 121 or GRMN 122 or GRMN 201 or GRMN 202 or	Elementary German I Elementary German II Intermediate German I Intermediate German II	4 / 4 4 / 4 4 / 4 4 / 4
JAPN 121 or JAPN 122 or JAPN 201 or JAPN 202 or	Elementary Japanese I Elementary Japanese II Intermediate Japanese I Intermediate Japanese II	4 / 4 4 / 4 4 / 4 4 / 4
SPAN 121 or SPAN 122 or SPAN 201 or SPAN 202	Elementary Spanish I Elementary Spanish II Intermediate Spanish I Intermediate Spanish II	4 / 4 4 / 4 4 / 4 4 / 4
GEOG 200	World Regional Geography	4 / 4
GEOG 202	Geography of North America	3 / 3
GEOG 221	Physical Geography	4 / 4
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
GSCI 100	Intro to Geospatial Tech	3 / 3
HUMS 140	Art of Being Human	4 / 4
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
POLS 120	American Political System	4 / 4
POLS 121	State and Local Government	4 / 4
POLS 201	Intro to Political Science	3 / 3
POLS 260	Comparative Political Systems	3 / 3
POLS 270	International Relations	3 / 3
PSYC 200	Introduction to Psychology	4 / 4
PSYC 202	Psychology of Personality	3 / 3

Course Code	Course Title	Credit / Billing Hours
PSYC 203	Social Psychology	3 / 3
PSYC 205	Human Growth and Development	3 / 3
PSYC 209	Cognitive Psychology	3 / 3
PSYC 210	Brain and Behavior	3 / 3
PSYC 221	Child Psychology	3 / 3
PSYC 222	Adolescent Psychology	3 / 3
PSYC 250	Abnormal Psychology	3 / 3
RELG 150	Intro to World Religions	4 / 4
SOCL 254	Marriage and Family	3 / 3
SOCL 255	Contemporary Social Problems	3 / 3
SOCL 260	Race and Ethnicity	3 / 3
STAT 170	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Notes:

Students planning to complete the Applied Field Study Methods CC or Field Survey Methods CA should choose courses included in those program pathways.

For future transfer to:

- Central Michigan University choose ANTH 271, ENGL 122, and PSYC 202 and PSYC 203.
- Eastern Michigan University choose ANTH 271 or ANTH 280, ENGL 122, and SOCL 260.
- Grand Valley State University choose ANTH 272, GEOL 222, and one other course.
- Michigan State University choose ANTH 271 and GEOG 221, GEOL 221, and STAT 215.
- University of Michigan Flint choose ANTH 271 and two courses from the same foreign language: GRMN, JAPN, or SPAN 121 and 122.
- Western Michigan University choose two courses from the same foreign language: GRMN, JAPN, or SPAN 121 and 122 and any Limited Choice.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ANTH 120 – Milestone course
ENGL 121 or ENGL 131
SOCL 120

Semester II
ANTH 270 – Milestone course
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
MATH 120 or STAT 170

Semester III
ANTH 276
Limited Choice - Anthropology
Limited Choice - Humanities and Fine Arts
Limited Choice as needed for total credits

Semester IV
ANTH 275
Limited Choice - Humanities and Fine Arts
Limited Choice - Natural Sciences
Limited Choice as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Applied Artificial Intelligence C.C.

Career Community: Computer Technology and Networking

Curriculum Code: 1852

Effective: Fall 2024 – Summer 2029

Description

Intended for working professionals in the IT industry who already possess a relevant IT degree or two years of on-the-job experience, this certificate provides students with the training and skills required for applied uses of artificial intelligence (AI) within cloud environments. Students learn core concepts related to data preparation, exploration, and analysis; machine learning, natural language processing, and computer vision; and the technologies required to architect, develop, and update large-scale models in the cloud. This certificate requires experience with topics covered within the Cybersecurity Foundations C.C. (1833). Students lacking sufficient background may be required to complete additional coursework before starting this certificate. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

Completion of CITI 120 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

This Applied Artificial Intelligence C.C. is intended for students who have completed Cybersecurity Foundations C.C. (1833), Cybersecurity A.A.S. (1832), or another comparable degree. For detailed admissions requirements, contact the Computer Information Technology Program at 517-267-6406 for assistance.

To be awarded the certificate, a student must earn a minimum grade of 2.0 in each course.

Contact Information

Contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITI 120	Data Analysis with Python	3 / 3
CITI 140	Intro to Machine Learning	3 / 3
CITI 220	Computer Vision	3 / 3
CITO 120	Cloud Architecting with AWS	3 / 3
CITO 140	Cloud Development Ops with AWS	3 / 3
CITO 240	Machine Learning with AWS	3 / 3

Minimum Total Credit Hours

18 credits /18 billing hours

Recommended Course Sequence

Semester I
CITI 120
CITO 120
Semester II
CITI 140
CITO 140
Semester III
CITI 220
CITO 240

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Applied Field Survey Methods CC

Career Community: Social Sciences

Curriculum Code: 1836

Effective: Fall 2024 – Summer 2029

Description

The Applied Field Survey Methods Certificate of Completion is a focused course of study in the Anthropology program that is designed to introduce students to the methods used to collect and analyze data in hands-on field and lab settings. Students will be introduced to survey methods and principles used in archaeology, geography, geology, and geospatial science. Topics and skills emphasized are site mapping, controlled excavation, on-site documentation, artifact curation, and geospatial data analysis. This certificate includes a field internship at an active archaeological survey location.

The coursework may also be applied to the Anthropology Associate of Arts degree.

Milestone

Completion of ANTH 276 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or Student Services, Gannon Building – Star Zone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ANTH 276	Introduction to Archeology	3 / 3
ANTH 300*	Applied Field Survey Methods	8 / 8
GEOG 221	Physical Geography	4 / 4
GSCI 100	Intro to Geospatial Tech	3 / 3

Minimum Total Credit Hours

18 credits / 18 billing hours

Recommended Course Sequence

Semester I
ANTH 276 – Milestone course
GEOG 221
Semester II
ANTH 300*
GSCI 100

*8 credits required for completion

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Art Foundation A.A.

Career Community: Art, Design, and Media

Curriculum Code: 1716

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of ARTS 102, ARTS 103, and ARTS 131 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course) or Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
ENGL 122, Composition II, 4 credits / 4 billing hours
- Humanities and Fine Arts – *Select one from a discipline other than ARTS*
ARTH 120, Masterpieces of Art & Music, 4 credits / 4 billing hours
ARTH 211, Art History to the Renaissance, 4 credits / 4 billing hours
ARTH 212, Art Hist from the Renaissance, 4 credits / 4 billing hours

- Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 120, Environmental Science, 4 credits / 6 billing hours
BIOL 125, Introductory Biology, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
GEOG 221, Physical Geography, 4 credits / 4 billing hours
GEOL 230, Environmental Geology, 4 credits / 6 billing hours
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours
- Social Sciences – *Select two, each from a different discipline*
ANTH 270, Cultural Anthropology, 3 credits / 3 billing hours
COMM 280, Intercultural Communication, 3 credits / 3 billing hours
PSYC 200, Introduction to Psychology, 4 credits / 4 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ARTS 102	2D Design	3 / 4
ARTS 103	3D Design	3 / 4
ARTS 131	Drawing I	3 / 4
ARTS 132	Figure Drawing	3 / 4
ARTS 151	Color	3 / 4
ARTS 200	Painting I	3 / 4

Elective Courses, Recommended Choices – *Select courses to reach the minimum 60 total credits required for this degree. (For the full list of options, see [AA and AS Degree Electives.](#))*

Course Code	Course Title	Credit / Billing Hours
ARTH 120	Masterpieces of Art & Music	4 / 4
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
ARTH 216	Contemporary Art	4 / 4
ARTS 153	Drawing II	3 / 4
ARTS 162	Type Communications	3 / 4
ARTS 171	Adobe Photoshop	3 / 4
ARTS 183	Design History	3 / 3
ARTS 202	Design for Innovation	3 / 4

Minimum Total Credit Hours

60 credits / 67 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Mathematics
ACAD 100
ARTS 102 – Milestone course
ARTS 131 – Milestone course
Semester II
MTA English Comp (second course) or Communication
MTA Humanities and Fine Arts
MTA Social Science
ARTS 103 – Milestone course
ARTS 132
Semester III
MTA Natural Sciences
MTA Social Sciences
ARTS 151
ARTS 200
Semester IV
MTA Natural Sciences
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Art History A.A.

Career Community: History, Humanities, and English

Curriculum Code: 0746

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of ARTH 211 and ARTH 212 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061 or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course) or Communication – *Select one*
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
- Humanities and Fine Arts
Program of Study Required Courses will meet this requirement

- Mathematics – *Select one*
MATH 120, College Algebra, 4 credits / 4 billing hours
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 120, Environmental Science, 4 credits / 6 billing hours
BIOL 125, Introductory Biology, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
GEOG 221, Physical Geography, 4 credits / 4 billing hours
GEOL 230, Environmental Geology, 4 credits / 6 billing hours
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours
- Social Sciences – *Select two, each from a different discipline*
ANTH 270, Cultural Anthropology, 3 credits / 3 billing hours
COMM 280, Intercultural Communication, 3 credits / 3 billing hours
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
PSYC 200, Introduction to Psychology, 4 credits / 4 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ARTH 120	Masterpieces of Art & Music	4 / 4
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
HUMS 160	Mythology	4 / 4

Program of Study Required Courses, Limited Choice – *Select two. ENGL 240, PHIL 101, or RELG 150 will meet the General Education Humanities and Fine Arts requirements.*

Course Code	Course Title	Credit / Billing Hours
ARTH 216	Contemporary Art	4 / 4
ENGL 240	The Film as Art	4 / 4
PHIL 101	Introduction to Philosophy	3 / 3
RELG 150	Intro to World Religions	4 / 4

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for this degree. (For the full list of options, see [AA and AS Degree Electives](#).)*

Course Code	Course Title	Credit / Billing Hours
ARTS 102	2D Design	3 / 4
ENGL 211	World Literature I	4 / 4
ENGL 212	World Literature II	4 / 4
GRMN 121	Elementary German I	4 / 4
GRMN 122	Elementary German II	4 / 4

Course Code	Course Title	Credit / Billing Hours
HIST 235	Modern European History	4 / 4
HUMS 215	American Cultural Experience	4 / 4
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
RELG 211	Asian Religions and Traditions	4 / 4

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Natural Sciences
ARTH 120
Limited Choice

Semester II
MTA English Comp (second course) or Communication
MTA Mathematics
ARTH 211 – Milestone course
HUMS 160
Electives as needed for total credits

Semester III
MTA Social Sciences
ARTH 212 – Milestone course
Limited Choice
Electives as needed for total credits

Semester IV
MTA Natural Sciences
MTA Social Sciences
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Automotive Technologies A.A.S.

Career Community: Transportation

Curriculum Code: 1791

Effective: Fall 2024 – Summer 2029

Description

There is a need for highly skilled automotive technicians because automobiles are more complex than ever, and are being kept for a record-breaking length of time. This Associate Degree will give students the training needed to diagnose, repair, and maintain the automobiles of today, as well as the automobiles of tomorrow. Students explore various aspects of modern automobile theory and operation, diagnosis, repair, and maintenance for all major systems of the vehicle. Students will be trained with the newest and latest tools and equipment in a realistic hands-on laboratory environment.

Milestone

In addition to the required General Education courses in Math and English, completion of AUTM 111 and AUTM 131 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Approximately 70% of the instruction is hands-on laboratory time, and all lab and lectures feature class sizes of less than 16 students to provide generous personal interaction with your instructors. All instructors are ASE certified, and bring their extensive years of experience working within the automotive repair industry to the classroom. All students have the opportunity to take State of Michigan as well as the nationally recognized ASE tests throughout this program to become a certified automotive technician. To assist students with their career goals, LCC Automotive covers the cost of State and ASE tests as well as the cost of most of their automotive textbooks. Select general education courses compliment this degree.

The Automotive Technology Program is a National Automotive Technicians Education Foundation (NATEF) Certified Training Program, evaluated by the National Institute for Automotive Service Excellence (ASE). The Automotive Program is a Snap-On Diagnostics Training Center and a member of the National Alternative Fuels Training Consortium (NAFTC).

Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Students completing this curriculum may also be eligible to apply for multiple certificates in Automotive Technologies.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Automotive Technology Program, West Campus Building, Room M103, telephone number 517-267-6406, or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
PHYS 200, Intro to Applied Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AUTM 102	Automotive/Collision Safety	1 / 1
AUTM 111	Automotive Electrical I	4 / 6
AUTM 113	Automotive Electrical II	4 / 6
AUTM 125	Manual Drive Train and Axles	4 / 6
AUTM 126	Automatic Transmissions	4 / 6
AUTM 131	Automotive Engine Repair	4 / 6
AUTM 141	Braking Systems and ABS	4 / 6
AUTM 151	Suspension and Steering	4 / 6
AUTM 161	Auto Heating/Air Conditioning	4 / 6
AUTM 180	Intro to Alternative Fuels	2 / 2
AUTM 211	Automotive Electrical III	4 / 6
AUTM 270	Gas Eng Drivability Diagnosis	4 / 6
AUTM 273	Lt. Diesel Drivability Diag.	4 / 6
AUTM 275	Ignition/Emission Sys Diag	4 / 6
AUTM 284	Hybrid Systems & Maintenance	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

72 credits / 99 billing hours

Recommended Course Sequence

Semester I (Fall)
Gen Ed – English Composition or Applied English
AUTM 102
AUTM 111 – Milestone course
AUTM 141
AUTM 151
Semester II (Spring)
AUTM 113
AUTM 131 – Milestone course
AUTM 161
AUTM 211
Semester III (Summer)
Gen Ed – English Composition (second course)/Communication or Applied Communication
Gen Ed – Mathematics or Applied Mathematics
Semester IV (Fall)
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
AUTM 125
AUTM 126
AUTM 180
AUTM 270
Semester V (Spring)
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
AUTM 273
AUTM 275
AUTM 284

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Automotive Technologies C.A.

Career Community: Transportation

Curriculum Code: 1790

Effective: Fall 2024 – Summer 2029

Description

There is a need for highly skilled automotive technicians because automobiles are more complex than ever, and are being kept for a record-breaking length of time. This Certificate will give students the training needed to diagnose, repair, and maintain the automobiles of today, as well as the automobiles of tomorrow. Certificate holders may improve their employment opportunities for advancement in this or a related area. Students explore various aspects of modern automobile theory and operation, diagnosis, repair, and maintenance for all major systems of the vehicle. Students will be trained with the newest and latest tools and equipment in a realistic hands-on laboratory environment.

Milestone

Completion of AUTM 111 and AUTM 131 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Approximately 70% of the instruction is hands-on laboratory time, and all lab and lectures feature class sizes of less than 16 students to provide generous personal interaction with your instructors. All instructors are ASE certified, and bring their extensive years of experience working within the automotive repair industry to the classroom. All students have the opportunity to take State of Michigan as well as the nationally recognized ASE tests throughout this program to become a certified automotive technician. To assist students with their career goals, LCC Automotive covers the cost of State and ASE tests as well as the cost of most of their automotive textbooks.

The Automotive Technology Program is a National Automotive Technicians Education Foundation (NATEF) Certified Training Program, evaluated by the National Institute for Automotive Service Excellence (ASE). The Automotive Program is a Snap-On Diagnostics Training Center and a member of the National Alternative Fuels Training Consortium (NAFTC).

Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Automotive Technology Program, West Campus Building, Room M103, telephone number 517-267-6406, or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AUTM 102	Automotive/Collision Safety	1 / 1
AUTM 111	Automotive Electrical I	4 / 6
AUTM 113	Automotive Electrical II	4 / 6
AUTM 131	Automotive Engine Repair	4 / 6
AUTM 141	Braking Systems and ABS	4 / 6
AUTM 151	Suspension and Steering	4 / 6
AUTM 161	Auto Heating/Air Conditioning	4 / 6
AUTM 211	Automotive Electrical III	4 / 6
AUTM 270	Gas Eng Drivability Diagnosis	4 / 6
AUTM 273	Lt. Diesel Drivability Diag.	4 / 6
AUTM 275	Ignition/Emissions Sys Diag	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

41 credits / 61 billing hours

Recommended Course Sequence

Semester I
AUTM 102
AUTM 111 – Milestone course
AUTM 141
AUTM 151
Semester II
AUTM 113
AUTM 131 – Milestone course
AUTM 161
AUTM 211

Semester III
AUTM 270
AUTM 273
AUTM 275

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Automotive Technology: Advanced Electric Drive/Alternative Fuels C.A.

Career Community: Transportation

Curriculum Code: 1792

Effective: Fall 2024 – Summer 2029

Description

There is a need for highly skilled automotive technicians because automobiles are more complex than ever, and are being kept for a record-breaking length of time. This Advanced Electric Drive-Alternative Fuels Certificate will give students the training needed to diagnose, repair, and maintain the automobiles of today, as well as the automobiles of tomorrow. Certificate holders may improve their employment opportunities for advancement in this or a related area. Students will study theory and operation, diagnosis, repair, and maintenance of modern automobile hybrid/electric vehicles, and alternative fueled vehicles. Students will be trained with the newest and latest tools and equipment in a realistic hands-on laboratory environment.

Milestone

Completion of AUTM 111 and AUTM 180 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Approximately 70% of the instruction is hands-on laboratory time, and all lab and lectures feature class sizes of less than 16 students to provide generous personal interaction with your instructors. All instructors are ASE certified, and bring their extensive years of experience working within the automotive repair industry to the classroom. All students have the opportunity throughout this program to take State of Michigan as well as the nationally recognized ASE tests to become a certified automotive technician. To assist students with their career goals, LCC Automotive covers the cost of State and ASE tests for these specialty areas. Most automotive textbooks are provided as part of this Certificate.

The Automotive Technology Program is a National Automotive Technicians Education Foundation (NATEF) Certified Training Program, evaluated by the National Institute for Automotive Service Excellence (ASE). The Automotive Program is a Snap-On Diagnostics Training Center and a member of the National Alternative Fuels Training Consortium (NAFTC).

Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Automotive Technology Program, West Campus Building, Room M103, telephone number 517-267-6406, or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AUTM 102	Automotive/Collision Safety	1 / 1
AUTM 111	Automotive Electrical I	4 / 6
AUTM 113	Automotive Electrical II	4 / 6
AUTM 180	Intro to Alternative Fuels	2 / 2
AUTM 211	Automotive Electrical III	4 / 6
AUTM 270	Gas Eng Drivability Diagnosis	4 / 6
AUTM 280	Electric/Fuel Cell Technology	2 / 2.5
AUTM 282	Gaseous Fuels	3 / 4
AUTM 284	Hybrid Systems & Maintenance	4 / 6
AUTM 286	High Voltage Battery Tech	4 / 6
AUTM 288	High Voltage Management	4 / 7

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

36 credits / 52.5 billing hours

Recommended Course Sequence

Semester I
AUTM 102
AUTM 111 – Milestone course
AUTM 113
AUTM 180 – Milestone course
Semester II
AUTM 211
AUTM 280
AUTM 282

Semester III
AUTM 270
AUTM 284
AUTM 286
AUTM 288

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Automotive Technology: Brakes and Suspension Systems Specialist C.C.

Career Community: Transportation

Curriculum Code: 1793

Effective: Fall 2024 – Summer 2029

Description

There is a need for highly skilled automotive technicians because automobiles are more complex than ever, and are being kept for a record-breaking length of time. This Brakes and Suspension Certificate will give students the training needed to diagnose, repair, and maintain the automobiles of today, as well as the automobiles of tomorrow. Certificate holders may improve their employment opportunities for advancement in this or a related area. Students will study theory and operation, diagnosis, repair, and maintenance of modern automobile Brakes/ABS and Suspension systems. Students will be trained with the newest and latest tools and equipment in a realistic hands-on laboratory environment.

Milestone

Completion of AUTM 141 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Approximately 70% of the instruction is hands-on laboratory time, and all lab and lectures feature class sizes of less than 16 students to provide generous personal interaction with your instructors. All instructors are ASE certified, and bring their extensive years of experience working within the automotive repair industry to the classroom. Students have the opportunity throughout this program to take State of Michigan as well as the nationally recognized ASE tests to become a certified automotive technician. To assist students with their career goals, LCC Automotive covers the cost of State and ASE tests for these specialty areas. Most automotive textbooks are provided as part of this Certificate.

The Automotive Technology Program is a National Automotive Technicians Education Foundation (NATEF) Certified Training Program, evaluated by the National Institute for Automotive Service Excellence (ASE). The Automotive Program is a Snap-On Diagnostics Training Center and a member of the National Alternative Fuels Training Consortium (NAFTC).

Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Automotive Technology Program, West Campus Building, Room M103, telephone number 517-267-6406, or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AUTM 102	Automotive/Collision Safety	1 / 1
AUTM 111	Automotive Electrical I	4 / 6
AUTM 141	Braking Systems and ABS	4 / 6
AUTM 151	Suspension and Steering	4 / 6

Minimum Total Credit Hours

13 credits / 19 billing hours

Recommended Course Sequence

Semester I
AUTM 102
AUTM 111
AUTM 141 – Milestone course
AUTM 151

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Automotive Technology: Electrical and HVAC Diagnostic Specialist C.C.

Career Community: Transportation

Curriculum Code: 1794

Effective: Fall 2024 – Summer 2029

Description

There is a need for highly skilled automotive technicians because automobiles are more complex than ever, and are being kept for a record-breaking length of time. This Electrical and HVAC certificate will give students the training needed to diagnose, repair, and maintain the automobiles of today, as well as the automobiles of tomorrow. Certificate holders may improve their employment opportunities for advancement in this or a related area. Students will study theory and operation, diagnosis, repair, and maintenance of modern automobile electrical and heat/air conditioning systems. Students will be trained with the newest and latest tools and equipment in a realistic hands-on laboratory environment.

Milestone

Completion of AUTM 111 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Approximately 70% of the instruction is hands-on laboratory time, and all lab and lectures feature class sizes of less than 16 students to provide generous personal interaction with your instructors. All instructors are ASE certified, and bring their extensive years of experience working within the automotive repair industry to the classroom. All students have the opportunity throughout this program to take State of Michigan as well as the nationally recognized ASE tests to become a certified automotive technician. To assist students with their career goals, LCC Automotive covers the cost of State and ASE tests for these specialty areas. Most automotive textbooks are provided as part of this Certificate.

The Automotive Technology Program is a National Automotive Technicians Education Foundation (NATEF) Certified Training Program, evaluated by the National Institute for Automotive Service Excellence (ASE). The Automotive Program is a Snap-On Diagnostics Training Center and a member of the National Alternative Fuels Training Consortium (NAFTC).

Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Automotive Technology Program, West Campus Building, Room M103, telephone number 517-267-6406, or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AUTM 102	Automotive/Collision Safety	1 / 1
AUTM 111	Automotive Electrical I	4 / 6
AUTM 113	Automotive Electrical II	4 / 6
AUTM 161	Auto Heating/Air Conditioning	4 / 6
AUTM 211	Automotive Electrical III	4 / 6

Minimum Total Credit Hours

17 credits / 25 billing hours

Recommended Course Sequence

Semester I
AUTM 102
AUTM 111 – Milestone course
AUTM 113
Semester II
AUTM 161
AUTM 211

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Automotive Technology: Engine and Transmission Overhaul Specialist C.C.

Career Community: Transportation

Curriculum Code: 1795

Effective: Fall 2024 – Summer 2029

Description

There is a need for highly skilled automotive technicians because automobiles are more complex than ever, and are being kept for a record-breaking length of time. This Engine and Transmission Certificate will give students the training needed to diagnose, repair, and maintain the automobiles of today, as well as the automobiles of tomorrow. Certificate holders may improve their employment opportunities for advancement in this or a related area. Students will study theory and operation, diagnosis, repair, and maintenance of modern automobile Engines, Transmissions, and Drivelines. Students will be trained with the newest and latest tools and equipment in a realistic hands-on laboratory environment.

Milestone

Completion of AUTM 125 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Approximately 70% of the instruction is hands-on laboratory time, and all lab and lectures feature class sizes of less than 16 students to provide generous personal interaction with your instructors. All instructors are ASE certified, and bring their extensive years of experience working within the automotive repair industry to the classroom. All students have the opportunity throughout this program to take State of Michigan as well as the nationally recognized ASE tests to become a certified automotive technician. To assist students with their career goals, LCC Automotive covers the cost of State and ASE tests for these specialty areas. Most automotive textbooks are provided as part of this Certificate.

The Automotive Technology Program is a National Automotive Technicians Education Foundation (NATEF) Certified Training Program, evaluated by the National Institute for Automotive Service Excellence (ASE). The Automotive Program is a Snap-On Diagnostics Training Center and a member of the National Alternative Fuels Training Consortium (NAFTC).

Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Automotive Technology Program, West Campus Building, Room M103, telephone number 517-267-6406, or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AUTM 102	Automotive/Collision Safety	1 / 1
AUTM 111	Automotive Electrical I	4 / 6
AUTM 125	Manual Drive Train and Axles	4 / 6
AUTM 126	Automatic Transmissions	4 / 6
AUTM 131	Automotive Engine Repair	4 / 6

Minimum Total Credit Hours

17 credits / 25 billing hours

Recommended Course Sequence

Semester I
AUTM 102
AUTM 111
AUTM 125 – Milestone course
Semester II
AUTM 126
AUTM 131

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Automotive Technology: Engine Performance and Drivability Specialist C.C.

Career Community: Transportation

Curriculum Code: 1796

Effective: Fall 2024 – Summer 2029

Description

There is a need for highly skilled automotive technicians because automobiles are more complex than ever, and are being kept for a record-breaking length of time. This Engine Performance and Drivability Certificate will give students the training needed to diagnose, repair, and maintain the automobiles of today, as well as the automobiles of tomorrow. Certificate holders may improve their employment opportunities for advancement in this or a related area. Students will study the theory and operation, diagnosis, repair, and maintenance within the automobile drivability and engine performance specialty areas. Students will be trained with the newest and latest tools and equipment in a realistic hands-on laboratory environment.

Milestone

Completion of AUTM 111 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Approximately 70% of the instruction is hands-on laboratory time, and all lab and lectures feature class sizes of less than 16 students to provide generous personal interaction with your instructors. All instructors are ASE certified, and bring their extensive years of experience working within the automotive repair industry to the classroom. All students have the opportunity to take State of Michigan as well as the nationally recognized ASE tests throughout this program to become a certified automotive technician. To assist students with their career goals, LCC Automotive covers the cost of State and ASE tests for these specialty areas. Most automotive textbooks are provided as part of this Certificate.

The Automotive Technology Program is a National Automotive Technicians Education Foundation (NATEF) Certified Training Program, evaluated by the National Institute for Automotive Service Excellence (ASE). The Automotive Program is a Snap-On Diagnostics Training Center and a member of the National Alternative Fuels Training Consortium (NAFTC).

Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Automotive Technology Program, West Campus Building, Room M103, telephone number 517-267-6406, or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AUTM 102	Automotive/Collision Safety	1 / 1
AUTM 111	Automotive Electrical I	4 / 6
AUTM 113	Automotive Electrical II	4 / 6
AUTM 211	Automotive Electrical III	4 / 6
AUTM 270	Gas Eng Drivability Diagnosis	4 / 6
AUTM 273	Lt. Diesel Drivability Diag.	4 / 6
AUTM 275	Ignition/Emission Sys Diag.	4 / 6

Minimum Total Credit Hours

25 credits / 37 billing hours

Recommended Course Sequence

Semester I
AUTM 102
AUTM 111 - Milestone course
Semester II
AUTM 113
AUTM 211
Semester III
AUTM 270
AUTM 273
AUTM 275

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Basic Aviation Technology C.C.

Career Community: Transportation

Curriculum Code: 1037

Effective: Fall 2024 – Summer 2029

Description

This certificate of completion enables a non-licensed individual to develop the knowledge and understanding of basic aviation maintenance practices used to maintain aircraft in accordance with the Title 14 Code of Federal Aviation Regulations. While enrolled in this program, students will learn the basic science and technical knowledge necessary to repair and maintain modern aerospace vehicles. Graduates will have demonstrated technical abilities in aircraft ground handling and servicing, aircraft fueling procedures, parking and mooring, equipment nomenclature and identification, unapproved parts identification, and airport operations. Completion of this certificate may be applied to the Airframe and Powerplant License provided the student meets the requirements of the Federal Aviation Regulation Part 147.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Aviation Technology Program at the Mason-Jewett Field, 661 Aviation Drive, Mason, telephone number 517-483-1406.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AVGM 111	Aviation General I	4 / 5
AVGM 112	Aviation General II	6 / 8
AVGM 113	Aviation General III	4 / 5
AVGM 114	Materials and Processes	5 / 7

Minimum Total Credit Hours

19 credits / 25 billing hours

Required Course Sequence

Semester I (Fall)
AVGM 111
AVGM 112
AVGM 113
AVGM 114

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Basic Emergency Medical Technician C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1853

Effective: Fall 2024 – Summer 2026

Description

All Emergency Medical Services courses are approved by the Michigan Department of Health and Human Services. Basic Emergency Medical Technicians are members of the health care team in the pre-hospital emergency care setting. EMT personnel staff ambulances and are also employed in hospitals, industry, and other public service agencies. They are expected to respond rapidly and effectively to many forms of trauma and medical emergencies and work in close contact with emergency physicians. The job is often fast-paced and always challenging. State licensing is required.

Milestone

Completion of EMTA 121 and EMTA 122 with a 3.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

To be eligible to receive the Basic Emergency Medical Technician Certificate of Completion and apply for National Registry of Emergency Medical Technicians (NREMT) Certification, all courses in this curriculum must be completed with a 3.0 grade or better.

Advising guides and current information regarding program requirements are available through the [LCC EMS webpage](#).

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Emergency Medical Services Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
EMTA 121	EMT Medical Trauma	5 / 5
EMTA 122	EMT Skills	2.75 / 5.5
EMTA 125	EMT Clinical	2.25 / 2.25

Minimum Total Credit Hours

10 credits / 12.75 billing hours

Required Course Sequence

Semester I
EMTA 121 – Milestone course
EMTA 122 – Milestone course
EMTA 125

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Biological Laboratory Techniques C.C.

Career Community: Science and Mathematics

Curriculum Code: 1608

Effective: Fall 2024 – Summer 2029

Description

The Biological Laboratory Techniques certificate is a laboratory-intensive curriculum which emphasizes the wide-ranging applications of recombinant DNA technology (genetic engineering) including the preparation of purified DNA, Polymerase Chain Reaction, and DNA "fingerprinting". Graduates will be able to work in many areas of biotechnology, such as human genetic disease research, improvement of disease-resistance in plants, enhanced crop production, pharmaceutical research, biological cleanup of environmental pollution, forensic science, or genome sequencing projects. If you plan to transfer to a four-year school, please see an academic advisor before enrolling. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course. This certificate program is designed for students interested in molecular biology, biochemistry, genetics, biotechnology, and forensic technologies, and is used to supplement and strengthen S.T.E.M. laboratory skills in other degree programs.

Milestone

Completion of BIOL 127, CHEM 151, and CHEM 161 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

BIOL 275 is only offered during Fall semester. BIOL 276 and ISCI 245 are only offered during Spring semester.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department, Arts and Sciences Building, Room 3203, telephone number 517-483-1092, or the Academic Advising Center, Gannon Building – StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BIOL 127	Cell Biology	4 / 6
BIOL 203	Microbiology	3 / 3
BIOL 204	Microbiology Laboratory	1 / 3
BIOL 275	Molecular Biology I	4 / 6

Course Code	Course Title	Credit / Billing Hours
BIOL 276	Molecular Biology II	4 / 6
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
ISCI 245	S.T.E.M. Workplace Practices	4 / 6

Minimum Total Credit Hours

25 credits / 37 billing hours

Recommended Course Sequence

Semester I
BIOL 127 – Milestone course
CHEM 151 – Milestone course
CHEM 161 – Milestone course
Semester II (Fall)
BIOL 203
BIOL 204
BIOL 275
Semester III (Spring)
BIOL 276
ISCI 245

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Biology A.S.

Career Community: Science and Mathematics

Curriculum Code: 0221

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree is designed for students who plan to transfer to a four-year university to pursue a baccalaureate degree in Biology with a variety of concentrations. Students completing this curriculum will also satisfy Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482). This degree includes a set of courses common to all Science and Mathematics majors and many transfer institutions. Students are encouraged to work with an academic advisor and program advisor to explore transfer opportunities.

Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution.

Milestone

In addition to the required General Education courses in Math and English, completion of BIOL 127 and 128, and CHEM 151 and CHEM 161 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

BIOL 260 and BIOL 275 are only offered in Fall semester

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department, Arts and Sciences Building, Room 3203, telephone number 517-483-1092, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA) - Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Science and Math Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Science and Math Career Community Courses meet this requirement.
- Humanities and Fine Arts.
Program of Study Required Courses meet this requirement.

- Mathematics
Science and Math Career Community Courses meet this requirement.
- Natural Sciences
Science and Math Career Community and Program of Study Required Courses meet this requirement.
- Social Sciences
Science and Math Career Community and Program of Study Required Courses meets this requirement.

Science and Math Career Community Courses – These courses are required for all Science and Math programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 127 or	Cell Biology	4 / 6
GEOG 221 or	Physical Geography	4 / 4
GEOL 221 or	Physical Geology	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3
COMM 240 or	Interpersonal Communication	3 / 3
COMM 260 or	Nonverbal Communication	3 / 3
ENGL 122 or	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4
ENGL 121 or	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4
MATH 120 or	College Algebra	4 / 4
MATH 126 or	Precalculus	5 / 5
MATH 151	Calculus I	4 / 4

Notes:

Choose BIOL 127, and MATH 126 or MATH 151 for this degree.

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
CHEM 152	General Chemistry Lecture II	4 / 4
CHEM 162	General Chemistry Lab II	1 / 3
CHEM 251	Organic Chemistry Lecture I	4 / 4
CHEM 252	Organic Chemistry Lecture II	4 / 4
CHEM 272	Organic Chemistry Laboratory	2 / 6
MATH 126 or MATH 151	Precalculus Calculus I	5 / 5 4 / 4

Note: If BIOL 127 and, MATH 126 or MATH 151 were completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -

Select two courses from [LCC General Education, Transfer Degrees \(MTA\), Humanities and Fine Arts](#); courses must be from different disciplines.

Program of Study Required Courses, Limited Choice – Social Sciences - Select two from [LCC General Education, Transfer Degrees \(MTA\), Social Sciences](#), from different disciplines. Students considering adding Secondary Education Certification in order to teach in Michigan Public Schools are strongly encouraged to select PSYC 200.

Note: For future transfer (Secondary Education Certification) choose PSYC 200.

Students considering adding Secondary Education Certification in Math or Science in order to teach in Michigan Public Schools are strongly encouraged to select EDUC courses as listed to meet the Michigan Transfer Agreement (MTA) Social Science requirement.

For future transfer (Secondary Education Certification) to:

- Central Michigan University, Ferris State University, or Michigan State University choose EDUC 204.
- Eastern Michigan University, Grand Valley State University, University of Michigan Flint, or Western Michigan University choose EDUC 220.

Elective Courses, Recommended Choices – Select courses as needed to reach the 60-credit minimum required for this degree. For information on preferred courses for specific concentrations identified by transfer institutions, consult with a Program Advisor. (For the full list of options, see [AA and AS Degree Electives](#).)

Course Code	Course Title	Credit / Billing Hours
BIOL 210	Natural Resource Conservation	4 / 6
BIOL 260	Botany	4 / 6
BIOL 265	Zoology	4 / 6
BIOL 270	Human Genetics	3 / 3
MATH 152	Calculus II	4 / 4

Minimum Total Credit Hours

60 credits / 72 billing hours

Recommended Course Sequence

Semester I
ACAD 100
CHEM 151 – Milestone course
CHEM 161 – Milestone course
ENGL 121 or ENGL 131
MATH 126 or MATH 151

Semester II
CHEM 152
CHEM 162
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
Limited Choice – Humanities and Fine Arts

Semester III
BIOL 127 – Milestone course
CHEM 251
Limited Choice – Humanities and Fine Arts
Limited Choice – Social Sciences
Electives as needed to reach the 60 credits required for the degree

Semester IV
BIOL 128 – Milestone course
CHEM 252
CHEM 272
Limited Choice - Social Sciences
Electives as needed to reach the 60 credits required for the degree

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Biotechnology A.A.S.

Career Community: Science and Mathematics

Curriculum Code: 0212

Effective: Fall 2024 – Summer 2029

Description

The Biotechnology degree is a laboratory-intensive curriculum which emphasizes the wide-ranging applications of DNA technology including the preparation of gene libraries, Polymerase Chain Reaction forensic DNA methods and bioinformatics. Graduates will be able to work in many areas of biotechnology, such as human genetic disease research, improvement of disease-resistance in plants, enhanced crop production, pharmaceutical research, biological cleanup of environmental pollution, forensic science, or genome sequencing projects. Near the end of the degree the Science Department will make every effort to arrange for internships in university or industrial research laboratories for students who wish to gain further experience. If you plan to transfer to a four-year school, please see an academic advisor before enrolling. Not all courses in this program transfer to all colleges as equivalent. Students planning to transfer should see an academic advisor before enrolling in any course. This program is designed for students interested in molecular biology, biochemistry, genetics, biotechnology, and forensic technologies.

Milestone

In addition to the required General Education courses in Math and English, completion of BIOL 127, BIOL 203, BIOL 204, CHEM 151, and CHEM 161 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

BIOL 260, BIOL 275, and CHEM 262 are only offered during Fall semester. BIOL 276 and ISCI 245 are only offered during Spring semester.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department in the Arts and Sciences Building, Room 3203, telephone number 517-483-1092, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English
Science and Mathematics Career Community Courses meet this requirement.

- English Composition (second course)/Communication or Applied Communication Science and Mathematics Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences Program of Study Required Courses meet this requirement.
- Mathematics or Applied Mathematics Science and Mathematics Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab Science and Mathematics Career Community Courses meet this requirement.

Science and Mathematics Career Community Courses - *These courses are required for all Science and Math programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 127 or	Cell Biology	4 / 6
GEOG 221 or	Physical Geography	4 / 4
GEOL 221 or	Physical Geology	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3
COMM 240 or	Interpersonal Communication	3 / 3
COMM 260 or	Nonverbal Communication	3 / 3
ENGL 122 or	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4
ENGL 121 or	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4
MATH 120 or	College Algebra	4 / 4
MATH 126 or	Precalculus	5 / 5
MATH 151	Calculus I	4 / 4

Notes:

Choose BIOL 127 and MATH 126 for this degree.

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BIOL 127	Cell Biology	4 / 6
BIOL 203	Microbiology	3 / 3
BIOL 204	Microbiology Laboratory	1 / 3
BIOL 270	Human Genetics	3 / 3
BIOL 275	Molecular Biology I	4 / 6
BIOL 276	Molecular Biology II	4 / 6
CHEM 152	General Chemistry Lecture II	3 / 3
CHEM 162	General Chemistry Lab II	1 / 3
CHEM 251	Organic Chemistry Lecture I	4 / 4
CHEM 262	Quantitative Analysis	3 / 6
ISCI 245	S.T.E.M. Workplace Practices	4 / 6
MATH 126	Precalculus	5 / 5
STAT 215	Intro to Probability and Stats	4 / 4

Note: If BIOL 127 and MATH 126 were completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choices – Humanities and Fine Arts or Social Sciences or Applied Social Sciences - Select one from [LCC General Education, Applied Degrees, Humanities and Fine Arts or Social Sciences or Applied Social Sciences](#)

Program of Study Required Courses, Limited Choice – Select a minimum of 2 credits

Course Code	Course Title	Credit / Billing Hours
BIOL 128	Organismal Biology	4 / 6
BIOL 260	Botany	4 / 6
CHEM 252	Organic Chemistry Lecture II	4 / 4
CHEM 272	Organic Chemistry Laboratory	2 / 6
CITF 110	Intro Computer Info Systems	3 / 3
CJUS 210	Intro to Forensic Science	3 / 3
PHYS 221	Introductory Physics I	4 / 6
SCIN 287	Science Technology Internship	2-4 / 2-4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 77 billing hours

Recommended Course Sequence

Semester I (Fall)
ACAD 100
ENGL 121 or ENGL 131
CHEM 151 – Milestone course
CHEM 161 – Milestone course
MATH 126

Semester II (Spring)
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
BIOL 127 – Milestone course
CHEM 152
CHEM 162
ISCI 245

Semester III (Summer)
STAT 215
Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences

Semester IV (Fall)
BIOL 203 – Milestone course
BIOL 204 – Milestone course
BIOL 275
CHEM 251
CHEM 262

Semester V (Spring)
BIOL 270
BIOL 276
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Building Construction A.A.S.

Career Community: Building and Construction Trades

Curriculum Code: 1766

Effective: Fall 2024 – Summer 2029

Description

The Building Construction Degree is designed to prepare students to work as entry-level foremen, superintendents, project managers, estimating/scheduling assistants, as well as laborers (masons, concrete construction, and carpenters). Building Construction professionals plan, direct, or coordinate activities related to the construction and maintenance of buildings and infrastructure. This curriculum incorporates elements required for home construction, renovation work, and small-scale commercial construction. The curriculum provides graduates with a broad foundation of technical and management abilities with an emphasis on job entry skill development, estimating, scheduling, project management, and specialized technical skills related to one of six construction focus areas (masonry, concrete, framing, doors/windows/siding, roofing, and interior installation/finishes).

Milestone

In addition to the required General Education courses in Math and English, completion of DCTM 100 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

If students have already completed ELTE 102, HVAC 102, METS 102, TECH 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the DCTM 102 requirement.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Building Construction Technologies Program at the West Campus Building, Room M103, telephone number 517-483-5338 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BLDT 120	Structural Framing	4 / 6
BLDT 130	Building Exterior Construction	4 / 6
BLDT 140	Building Interior Construction	4 / 6
BLDT 150	Intro Masonry/Concrete Const	4 / 6
BLDT 180	Builder Pre-Licensure Prep	4 / 4
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 101	Drafting/Intro to CAD	3 / 4
DCTM 102	Industrial/Construction Safety	2 / 3
DCTM 103	Codes and Specifications	3 / 3
DCTM 200	Construction Management I	4 / 6
ELTE 110	Practical Electricity	4 / 6
HVAC 100	Fundamentals of HVAC	3 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
ARCH 113	Materials & Methods of Const.	4 / 6
CIVL 120	Surveying	4 / 6
DCTM 210	MEP Equipment for Buildings	3 / 3
METS 140	Rigging	3 / 4.5

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

64 credits / 81 billing hours

Recommended Course Sequence

Semester I (Fall)
Gen Ed – Mathematics or Applied Mathematics
BLDT 120
DCTM 100 – Milestone course
DCTM 101
DCTM 102

Semester II (Spring)
Gen Ed – English Composition or Applied English
BLDT 130
BLDT 150
DCTM 103
HVAC 100

Semester III (Fall)
Gen Ed – English Composition (second course)/Communication or Applied Communication
BLDT 140
DCTM 200
Limited Choice

Semester IV (Spring)
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
BLDT 180
ELTE 110

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Building Construction C.A.

Career Community: Building and Construction Trades

Curriculum Code: 0135

Effective: Fall 2024 – Summer 2029

Description

The Building Construction Certificate is designed to prepare students to work in entry-level positions (masons, concrete, and carpenters). This curriculum incorporates elements required for home construction, renovation work and small-scale commercial construction. The curriculum provides a broad foundation of technical skills related to concrete, framing, doors/windows/siding, roofing, interior installation/finishes.

Milestone

Completion of DCTM 200 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed ELTE 102, HVAC 102, METS 102, TECH 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the DCTM 102 requirement.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Building Construction Technologies Program in the West Campus Building, Room M103, telephone number 517-483-5338 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BLDT 120	Structural Framing	4 / 6
BLDT 130	Building Exterior Construction	4 / 6
BLDT 140	Building Interior Construction	4 / 6
BLDT 180	Builder Pre-Licensure Prep	4 / 4
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 101	Drafting/Intro to CAD	3 / 4
DCTM 102	Industrial/Construction Safety	2 / 3
DCTM 103	Codes and Specifications	3 / 3
DCTM 200	Construction Management I	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

31 credits / 42 billing hours

Recommended Course Sequence

Semester I - Fall
BLDT 120
BLDT 140
DCTM 102
DCTM 103
DCTM 200 – Milestone course
Semester II - Spring
BLDT 130
BLDT 180
DCTM 100
DCTM 101

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Building Construction C.C.

Career Community: Building and Construction Trades

Curriculum Code: 1714

Effective: Fall 2024 – Summer 2029

Description

The Building Construction Certificate is designed to prepare students to work in entry-level carpenter positions. This curriculum incorporates elements required for home construction, renovation work and small-scale commercial construction. The curriculum provides a broad foundation of technical skills related to framing, doors/windows/siding, roofing, and interior installation/finishes.

Milestone

Completion of BLDT 120 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed ELTE 102, HVAC 102, METS 102, TECH 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the DCTM 102 requirement.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Building Construction Technologies Program in the West Campus Building, Room M103, telephone number 517-483-5338 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BLDT 120	Structural Framing	4 / 6
BLDT 130	Building Exterior Construction	4 / 6
BLDT 140	Building Interior Construction	4 / 6
BLDT 180	Builder Pre-Licensure Prep	4 / 4
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 102	Industrial/Construction Safety	2 / 3

Minimum Total Credit Hours

21 credits / 29 billing hours

Recommended Course Sequence

Semester I (Fall)
BLDT 120 - Milestone course
BLDT 140
DCTM 102

Semester II (Spring)
BLDT 130
BLDT 180
DCTM 100

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Building Maintenance C.A.

Career Community: Building and Construction Trades

Curriculum Code: 1481

Effective: Fall 2024 – Summer 2029

Description

Graduates of this curriculum will be well versed in all aspects of building maintenance. Building Maintenance Technicians work on systems that control temperature, humidity, and air quality of enclosed spaces. These technicians must be able to maintain the aesthetic and structural integrity of buildings. They may also be responsible for maintenance and upkeep of mechanical, plumbing, and electrical equipment, as well as grounds keeping. They should be versatile enough to do routine painting, drywall plastering, woodworking, and pool maintenance as well as some custodial work. Technicians must have a strong mechanical aptitude, be self-motivated, willing to accept challenges, have a structured approach to problem solving and the ability to work well with others.

Milestone

Completion of HVAC 100 and HVAC 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for HVAC 110, HVAC 113, HVAC 115, and the BLDT classes.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Heating and Air Conditioning Program, West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 101	Drafting/Intro to CAD	3 / 4
HVAC 100	Fundamentals of HVAC	3 / 3
HVAC 110	Applied Electricity I	3 / 4
HVAC 111	Applied Electricity II	3 / 4
HVAC 113	HVAC/R Piping	3 / 4
HVAC 115	Sheet Metal Fab & Installation	2 / 3

Course Code	Course Title	Credit / Billing Hours
HVAC 120	Heating I	3 / 4
HVAC 130	Air Conditioning I	3 / 4
TECH 102	General Industry Safety	2 / 3

Program of Study Required Courses, Limited Choice – *Select one or two courses, minimum four credits*

Course Code	Course Title	Credit / Billing Hours
BLDT 120	Structural Framing	4 / 6
BLDT 130	Building Exterior Construction	4 / 6
BLDT 140	Building Interior Construction	4 / 6
ELTE 112	Basic Wiring Installation	2 / 3
HVAC 220	Heating II	3 / 4
HVAC 221	Introduction to Hydronics	3 / 4
WELD 103	Combination Welding	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

32 credits / 43 billing hours

Recommended Course Sequence

Semester I
DCTM 100
HVAC 100 – Milestone course
HVAC 110 = Milestone course
HVAC 113
HVAC 115
TECH 102

Semester II
DCTM 101
HVAC 111
HVAC 120
HVAC 130
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Business G.A.

Career Community: Business

Curriculum Code: 1821

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree is designed for students wishing to work in any Business-related field. This degree includes a common set of courses applicable to all Business majors and to many transfer institutions. Students beginning their college study in this degree program are encouraged to work with academic and program advisors throughout their first few semesters of study to determine their specific major area and, transfer destination if transfer is a goal. Students may select the Business Transfer Studies degree geared to any transfer major, including Economics, or a specific Associate in Business major (Accounting, Business Administration, Field Sales and Marketing, Financial Institutions, Human Resource Management, Insurance and Risk Management, International Business, Management, Marketing), which prepares students to work in the field on completion of the Associate degree and may also allow transfer to specific institutions.

Not all courses in this pathway transfer to all colleges. Students who also wish to transfer to a four-year institution should select coursework indicated for that institution and may complete the coursework for a Business, Enhanced AB degree. The Business, Enhanced AB option allows students to transfer additional credits toward the Bachelor's degree. This allows completion of credits required for employment and of additional requirements for the Bachelor's.

Milestone

In addition to the required General Education courses in Math and English, completion of BUSN 118 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degrees - Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition
Business Career Community Courses meet this requirement.
- English Composition (second course) or Communication or Applied Communication
Business Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Science or Applied Social Science
Business Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Business Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Business Career Community Required Courses – *These courses are required for all Business programs. They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ACCG 210	Principles of Financial Accg	4 / 4
BUSN 118	Introduction to Business	3 / 3
COMM 110 or COMM 130	Communication in the Workplace Fundamentals Public Speaking	3 / 3 3 / 3
ECON 201	Principles of Economics - Micro	4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LEGL 215	Business Law – Basic Principles	3 / 3
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4
MGMT 225	Principles of Mgmt/Leadership	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Davenport University and Western Michigan University choose COMM 110 and STAT 170.
- Central Michigan University and Ferris State University choose COMM 130 and STAT 170.
- Eastern Michigan University choose STAT 170.
- Grand Valley State University, Michigan State University, and University of Michigan-Flint choose COMM 130 and MATH 120.
- Northwood University and Oakland University choose MATH 120.
- Siena Heights University choose STAT 170.

For students not considering transfer as an option, MGMT 234, Diversity in the Workplace, may be substituted for ECON 201 using the Course Substitution process. MGMT 234 meets LCC General Education requirements for Applied Degrees – Humanities or Social Science or Applied Social Science. MGMT 234 does not meet the Michigan Transfer Agreement (MTA) Social Science requirement for transfer as a General Education course.

Program of Study Required Courses, Limited Choice – Natural Sciences or

Applied Natural Science - *Select one course as indicated for each transfer institution. If a specific course is not indicated for the institution you are considering, or if transfer is not your goal, select any recommended course or from [LCC General Education, Applied Degrees, Natural Sciences Lab or Applied Sciences and Technology Lab](#).*

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

Notes:

For future transfer to:

- Central Michigan University choose BIOL 120.
- Eastern Michigan University choose ASTR 201 or BIOL 120 or 125 or CHEM 135 or GEOG 221 or ISCI 131.
- Northwood University choose BIOL 120.
- Siena Heights University choose BIOL 120 or CHEM 135 or PHYS 120.

Program of Study Required Courses – Limited Choice - *Select 24 credits. Work with an Academic Advisor or Program Advisor to select the most appropriate courses or to select a field-specific major or transfer major that meets your educational and career goals. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACCG 101	Accounting Info for Management	3 / 3
ACCG 160	Payroll Systems and Taxes	2 / 2
ACCG 161	Accounting with Quickbooks	2 / 2
ACCG 211	Principles of Managerial Accg	4 / 4
ACCG 220	Intermediate Accounting I	4 / 4
ACCG 221	Intermediate Accounting II	4 / 4
ACCG 230	Cost/Managerial I	4 / 4
ACCG 240	Federal Income Tax I	4 / 4
ACCG 241	Federal Income Tax II	4 / 4
ACCG 245	Accounting Internship	2 / 2
ACCG 260	Accounting Systems	4 / 4
ACCG 271	Principles of Finance	3 / 3
ACCG 280	Governmental Accounting	2 / 2
ACCG 290	Auditing	4 / 4
ANTH 270*	Cultural Anthropology	3 / 3
ASTR 201*	Introductory Astronomy	4 / 5
BUSN 201	International Business	3 / 3
BUSN 250	Personal Finance	3 / 3
BUSN 251	Understanding Investments	3 / 3
BUSN 260	Starting a Business	4 / 4
BUSN 285	Business Admin Internship	3 / 3
CHEM 135*	Chemistry in Society	4 / 5
CITA 110	Intro to Microsoft Office	3 / 3
CITA 119	Microsoft Word	3 / 3
CITA 126	Microsoft Excel	3 / 3
CITA 226	Microsoft Excel - Advanced	3 / 3
CITF 110	Intro Computer Info Systems	3 / 3
CJUS 101	Intro to Criminal Justice	3 / 3
CJUS 204	Criminal Investigation	4 / 4
COMM 280*	Intercultural Communication	3 / 3
ECON 202*	Principles of Economics-Macro	4 / 4
ENGL 122* or ENGL 132*	Composition II Honors Composition II	4 / 4 4 / 4
GEOG 200*	World Regional Geography	4 / 4
GEOG 221*	Physical Geography	4 / 4
GRMN 121* or JAPN 121* or	Elementary German I Elementary Japanese I	4 / 4 4 / 4

Course Code	Course Title	Credit / Billing Hours
SPAN 121*	Elementary Spanish I	4 / 4
GRMN 122* or	Elementary German II	4 / 4
JAPN 122* or	Elementary Japanese II	4 / 4
SPAN 122*	Elementary Spanish II	4 / 4
INSU 105	Prin of Managing Evolving Risk	3 / 3
INSU 110	Personal Insurance	3 / 3
INSU 125	Commercial Insurance	3 / 3
INSU 175	Intro to Financial Advising	3 / 3
INSU 250	Claims and Underwriting	3 / 3
INSU 260	Life/Health Insur Licensing	2 / 2
INSU 270	Property/Casualty Insur Licens	2 / 2
INSU 285	Insurance Agency Operations	3 / 3
INSU 295	Insurance Internship	3 / 3
LABR 200	Intro to Labor Relations	3 / 3
LABR 204	Employment Law for Managers	3 / 3
MATH 141*	Calculus with Applications	4 / 4
MGMT 150	Managing Customer Relations	3 / 3
MGMT 200	Creative Thinking for Business	3 / 3
MGMT 201	Time Management for Business	1 / 1
MGMT 202	Managing Difficult People	1 / 1
MGMT 224	Human Resource Management	3 / 3
MGMT 227	Training/Development for Busn	3 / 3
MGMT 228	Organization Behavior	3 / 3
MGMT 229	Compensation Management	3 / 3
MGMT 231	Developing and Leading Teams	3 / 3
MGMT 234	Diversity in the Workplace	3 / 3
MGMT 280	Mgmt/Leadership Internship	3 / 3
MGMT 300	Leading for Possibility	3 / 3
MGMT 304	Organization Development	3 / 3
MGMT 329	Advanced Mgmt Communication	3 / 3
MGMT 332	Ethics: Assumpt for the Future	3 / 3
MGMT 335	Managerial Statistics	3 / 3
MGMT 345	Context and Transformation	3 / 3
MKTG 119	Mktg/Manage Your Profess Image	3 / 3
MKTG 120	Sales	3 / 3
MKTG 130	Retailing	3 / 3
MKTG 140	Principles of Advertising	3 / 3
MKTG 204	Marketing Research	3 / 3
MKTG 210	Intro to Digital Marketing	3 / 3
MKTG 229	Public Relations	3 / 3
MKTG 235	Marketing Internship	3 / 3
MUSC 199* or	Music Appreciation	3 / 3
MUSC 240* or	Musical Cultures to 1750	4 / 4

Course Code	Course Title	Credit / Billing Hours
MUSC 241*	Musical Cultures 1750-Present	4 / 4
PFHW 123*	Human Nutrition	3 / 3
PHIL 152*	Introduction to Ethics	4 / 4
SOCL 120*	Introduction to Sociology	4 / 4
STAT 215*	Intro to Probability and Stats	4 / 4

*Indicates Michigan Transfer Agreement (MTA) courses – minimum 2.0 grade needed.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

College-Ready Students (Full-time)

Semester I
ACAD 100 (if waived, add Career Community Required Course)
BUSN 118 – Milestone course
ENGL 121 or ENGL 131
Limited Choice - Natural Science or Applied Science and Technology Lab

Semester II
LEGL 215
MATH 120 or STAT 170
MGMT 225
MKTG 200

Semester III - Summer (Optional)
ACCG 210
ECON 201

Semester IV
ACCG 210 (if no Summer enrollment)
COMM 110 or COMM 130
ECON 201 (if no Summer enrollment)
Students who have decided on an academic program within the Business Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.

Semester IV
Limited Choice course(s) for students completing the Business GA

Semester V
Limited Choice courses as needed for students completing the Business GA

College-Ready Students (Part-time)

Semester I
ACAD 100 (if waived, add Career Community Required Course)
BUSN 118 – Milestone course
ENGL 121 or ENGL 131

Semester II
MATH 120 or STAT 170
Limited Choice - Natural Science or Applied Science and Technology Lab

Semester III - Summer (Optional)
MGMT 225
MKTG 200

Semester IV
ACCG 210
COMM 110 or COMM 130 (if Summer enrollment)
MGMT 225 (if no Summer enrollment)
MKTG 200 (if no Summer enrollment)

Semester V
COMM 110 or COMM 130 (if no Summer enrollment)
ECON 201
LEGL 215
Students who have decided on an academic program within the Business Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.
Limited Choice course(s) for students completing the Business GA

Semester VI
Limited Choice courses as needed for students completing the Business GA

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Business Administration A.B.

Career Community: Business

Curriculum Code: 0243

Effective: Fall 2024 – Summer 2029

Purpose of Major

This major is designed for students wishing to work in the field of Business Administration on completion of the Associate of Business degree. This degree provides basic instruction in key business areas such as management, marketing, finance, and other key business areas. Graduates may qualify for entry-level hands-on positions. Additional education will enhance an individual's employment and advancement opportunities. Not all courses in this program transfer to all colleges. Students who also wish to transfer to a four-year institution should select coursework indicated for that institution and may complete the coursework for a Business, Enhanced AB degree. The Business, Enhanced AB option allows students to transfer additional credits toward the Bachelor's degree. This allows completion of credits required for employment and of additional requirements for the Bachelor's. Institutions accepting coursework for Business, Enhanced AB, Business Administration Pathway include Davenport University, Eastern Michigan University, Ferris State University (Business Administration – Professional Track), Northwood University, Oakland University, and Siena Heights University.

Milestone

In addition to the required General Education courses in Math and English, completion of BUSN 118 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Business Career Community courses meet this requirement.

- English Composition (second course) or Communication or Applied Communication
Business Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Science or Applied Social Science
Business Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Business Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Business Career Community Required Courses – *These courses are required for all Business programs. They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ACCG 210	Principles of Financial Accg	4 / 4
BUSN 118	Introduction to Business	3 / 3
COMM 110 or COMM 130	Communication in the Workplace Fundamentals Public Speaking	3 / 3 3 / 3
ECON 201	Principles of Economics - Micro	4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LEGL 215	Business Law – Basic Principles	3 / 3
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4
MGMT 225	Principles of Mgmt/Leadership	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For students not considering transfer as an option, MGMT 234, Diversity in the Workplace, may be substituted for ECON 201 using the Course Substitution process. MGMT 234 meets LCC General Education requirements for Applied Degrees – Humanities or Social Science or Applied Social Science. MGMT 234 does not meet Michigan Transfer Agreement (MTA) Social Science requirements for transfer as a General Education course.

For future transfer to:

- Davenport University choose COMM 110 and STAT 170.
- Eastern Michigan University choose STAT 170.
- Ferris State University choose COMM 130 and STAT 170.
- Northwood University and Oakland University choose MATH 120.
- Siena Heights University choose STAT 170.

Program of Study Required Courses - A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
ACCG 211	Principles of Managerial Accg	4 / 4
BUSN 201	International Business	3 / 3
BUSN 285	Business Admin Internship	3 / 3
ECON 202	Principles of Economics - Macro	4 / 4
MGMT 228	Organization Behavior	3 / 3

Note: BUSN 285 may be waived based on the recommendation of a Program Advisor.

Program of Study Required Courses, Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab - *Select one course as indicated for each transfer institution. If a specific course is not indicated for the institution you are considering, or if transfer is not your goal, select any recommended course or from [LCC General Education](#), [Applied Degrees](#), [Natural Sciences Lab](#) or [Applied Sciences and Technology Lab](#).*

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Central Michigan University choose BIOL 120.
- Eastern Michigan University choose ASTR 201 or BIOL 120 or 125 or CHEM 135 or GEOG 221 or ISCI 131.
- Northwood University choose BIOL 120.
- Siena Heights University choose BIOL 120 or CHEM 135 or PHYS 120.

Program of Study Required Courses, Limited Choice – *Select 7 credits, choosing courses as indicated for each transfer institution. A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACCG 160	Payroll Systems and Taxes	2 / 2
ACCG 161	Accounting with Quickbooks	2 / 2
BUSN 150	Legal Issues: Start Small Busn	2 / 2
BUSN 250	Personal Finance	3 / 3
BUSN 251	Understanding Investments	3 / 3
BUSN 260	Starting a Business	4 / 4
CITA 110	Intro to Microsoft Office	3 / 3
CITF 110	Intro Computer Info Systems	3 / 3
INSU 105	Prin of Managing Evolving Risk	3 / 3
INSU 110	Personal Insurance	3 / 3
INSU 125	Commercial Insurance	3 / 3
INSU 175	Intro to Financial Advising	3 / 3
INSU 260	Life/Health Insur Licensing	2 / 2
INSU 270	Property/Casualty Insur Licens	2 / 2
MATH 141	Calculus with Applications	4 / 4
MGMT 150	Managing Customer Relations	3 / 3
MGMT 200	Creative Thinking for Business	3 / 3
MGMT 223	Supervisory Skills	3 / 3
MGMT 224	Human Resource Management	3 / 3
MGMT 227	Training/Development for Busn	3 / 3
MGMT 234	Diversity in the Workplace	3 / 3
MGMT 335	Managerial Statistics	3 / 3
MKTG 119	Mktg/Manage Your Profess Image	3 / 3
MKTG 120	Sales	3 / 3
MKTG 140	Principles of Advertising	3 / 3
MKTG 210	Intro to Digital Marketing	3 / 3
MKTG 229	Public Relations	3 / 3

For future transfer to:

- Davenport University choose MGMT 227, MGMT 234, and MKTG 210.
- Eastern Michigan University choose CITF 110 and MGMT 234
- Ferris State University choose MGMT 224 and 4 credits from any Limited Choice.

- Northwood University choose MGMT 200, MGMT 234, and MGMT 335.
- Oakland University choose CITA 110 and MATH 141.
- Siena Heights University choose MGMT 200, MGMT 234, and MKTG 119.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ACCG 210
BUSN 118 – Milestone course
ENGL 121 or ENGL 131
Limited Choice – Natural Sciences Lab or Applied Science and Technology Lab

Semester II
ACCG 211
BUSN 201
ECON 201
MATH 120 or STAT 170

Semester III
ECON 202
LEGL 215
MGMT 225
MGMT 228
MKTG 200

Semester IV
BUSN 285
COMM 110 or COMM 130
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Business Transfer Studies A.A.

Career Community: Business

Curriculum Code: 1622

Effective: Fall 2024 – Summer 2029

Purpose of Major

This major focuses on preparing students for transfer to a four-year institution with the goal of admission to the College of Business in any major offered by that institution, including Economics for students wishing to earn a Bachelor's of Business Administration in Economics. Not all institutions offer all majors. Institutions and major areas for which this pathway is designed are listed below:

- Central Michigan University (Accounting, Economics, Finance, General Management, Hospitality Services Administration, Human Resources Management, International Business, Law and Economics, Logistics Management, Marketing, Marketing: Professional Sales Concentration, Personal Financial Planning, Purchasing and Supply Management, Real Estate Development and Finance)
- Eastern Michigan University (Accounting, Economics, Human Resources Management, International Business, Management, Purchasing/Supply Chain Management, Marketing, Sales)
- Ferris State University (Advanced Fleet Management, Human Resource Management, International Business Management, Risk Management and Insurance, Lean Systems, Leadership and Project Management, Operations and Supply Management, Small Business Entrepreneurship)
- Grand Valley State University (Accounting, Economics, Finance, General Business, General Management, Human Resource Management, International Business, Marketing, Marketing: Distribution and Logistics Emphasis, Marketing: Sales Emphasis, Operations Management, Supply Chain Management)
- Michigan State University (Accounting, Finance, Hospitality Business, Human Resources Management, Management, Marketing, Supply Chain Management)
- Oakland University (Accounting, Economics, General Business, Human Resources Management, Management, Marketing)
- Olivet College (Accounting, Business Administration, Business Analysis in Insurance, Financial Planning, Insurance and Risk Management, Management, Marketing)
- University of Michigan Flint (Accounting, Entrepreneurship and Innovation Management, Finance, General Business, International Business, Marketing, Operations and Supply Chain Management, Organizational Behavior and Human Resources Management)
- Western Michigan University (Accounting, E-Business Design, Economics, Finance, General Business, Human Resource Management, Integrated Supply Chain Management, Management, Marketing, Marketing: Advertising and Promotion, Marketing: Food and Consumer Package Goods, Marketing: Sales and Business, Personal Financial Planning)

Milestone

In addition to the required General Education courses in Math and English, completion of BUSN 118 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

Business, Enhanced AB with Business Transfer Studies Option

Central Michigan University, Eastern Michigan University, Ferris State University, and Oakland University allow students to transfer additional credits toward the Bachelor's degree. Students wishing to transfer should complete the requirements for the Business Transfer Studies AA with transfer to Central Michigan University, Eastern Michigan University, Ferris State University (Business Administration with Concentration), or Oakland University; then, complete the Business, Enhanced AB requirements. The Business, Enhanced AB degree, Business Transfer Studies track, meets requirements for transfer to Central Michigan University, Eastern Michigan University, Ferris State University (Business Administration with Concentrations), or Oakland University in the following majors:

- Central Michigan University (Accounting, Economics, Finance, General Management, Hospitality Services Administration, Human Resources Management, International Business, Law and Economics, Logistics Management, Marketing, Marketing: Professional Sales Concentration, Personal Financial Planning, Purchasing and Supply Management, Real Estate Development and Finance)
- Eastern Michigan University (Accounting, Economics, Human Resources Management, International Business, Management, Purchasing/Supply Chain Management, Marketing, Sales)
- Ferris State University – Business Administration with Concentrations (Advanced Fleet Management, Human Resource Management, International Business Management, Risk Management and Insurance, Lean Systems, Leadership and Project Management, Operations and Supply Management, Small Business Entrepreneurship)
- Oakland University (Accounting, Economics, General Business, Human Resources Management, Management, Marketing)

Career-Specific AB Options

The coursework in the Business Transfer Studies A.A. Pathway does not prepare students to work in the field of their choice on completion of the Associate's degree. Students who wish to work in their field of choice on completion of the Associate's degree should select a major in Accounting, Business Administration, Field Sales and Marketing, Financial Institutions, Human Resource Management, Insurance and Risk Management, International Business, Management and Leadership, or Marketing. Students who wish to work in the field on completion of the A.B. and also transfer to a four-year institution with the majority of their coursework accepted for transfer may complete the coursework for the Enhanced Associate in Business degree related to a specific AB pathway.

General Education – Transfer (MTA) Recommended Choices

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#).

- English Composition
Business Career Community Courses will meet this requirement.
- English Composition (second course) or Communication
Business Career Community Courses will meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses will meet this requirement.
- Mathematics
Business Career Community Courses will meet this requirement.
- Natural Sciences
Program of Study Required Courses will meet this requirement.
- Social Sciences
Business Career Community and Program of Study Required Courses will meet this requirement.

Business Career Community Required Courses - *These courses are required for all Business programs. They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ACCG 210	Principles of Financial Accg	4 / 4
BUSN 118	Introduction to Business	3 / 3
COMM 110 or COMM 130	Communication in the Workplace Fundamentals Public Speaking	3 / 3 3 / 3
ECON 201	Principles of Economics - Micro	4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LEGL 215	Business Law–Basic Principles	3 / 3

Course Code	Course Title	Credit / Billing Hours
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4
MGMT 225	Principles of Mgmt/Leadership	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Central Michigan University, Ferris State University, and Grand Valley State University choose COMM 130, and STAT 170.
- Eastern Michigan University and Oakland University, choose STAT 170.
- Michigan State University and University of Michigan Flint, choose COMM 130, and MATH 120.
- Olivet College and Western Michigan University, choose MATH 120.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts

– Select two courses as indicated for each major and transfer institution. If specific courses are not noted, select any two courses from different disciplines from [LCC General Education](#), [Transfer Degrees \(MTA\)](#), [Humanities and Fine Arts](#).

Course Code	Course Title	Credit / Billing Hours
ENGL 260	African-American Literature	4 / 4
GRMN 121 or GRMN 122 or JAPN 121 or JAPN 122 or JAPN 201 or JAPN 202 or SPAN 121 or SPAN 122 or SPAN 201 or SPAN 202	Elementary German I Elementary German II Elementary Japanese I Elementary Japanese II Intermediate Japanese I Intermediate Japanese II Elementary Spanish I Elementary Spanish II Intermediate Spanish I Intermediate Spanish II	4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4
PHIL 152	Introduction to Ethics	4 / 4

For future transfer to:

- Central Michigan University, Davenport University, Ferris State University, Grand Valley University, Michigan State University, Northwood University, Sienna Heights University, University of Michigan-Flint, and Western Michigan University – Choose PHIL 152, and a second course from a discipline other than PHIL.
- International Business majors only - Central Michigan University, Ferris State University, Grand Valley State University, and University of Michigan Flint choose GRMN 121 or JAPN 121 or SPAN 121, and PHIL 152.

Program of Study Required Courses, Limited Choice – Natural Sciences - *Select two courses from different disciplines as indicated for each transfer institution. One must be a lab course. If specific courses are not noted, select any two courses below from different disciplines or from [LCC General Education, MTA, Natural Sciences](#).*

Course Code	Course Title	Credit / Billing Hours
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PFHW 123	Human Nutrition	3 / 3
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Central Michigan choose BIOL 120 and another course from a different discipline.
- Eastern Michigan University, choose BIOL 120 or BIOL 125, and one from CHEM 135, GEOG 221, or ISCI 131.
- Northwood University choose BIOL 120, and another course from a discipline other than BIOL.
- Siena Heights University choose BIOL 120 or CHEM 135 or PHYS 120.

Program of Study Required Courses, Limited Choice – Social Sciences - *Select one course as indicated for each transfer institution. If specific courses are not noted, select any course from a discipline other than ECON or from [LCC General Education, Transfer Degrees \(MTA\), Social Sciences](#).*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
POLS 201	Intro to Political Science	3 / 3

Note: For future transfer to Eastern Michigan University, choose ANTH 270 or POLS 201.

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for the degree. See the notes below for specific course selections for each transfer institution and major. (For the full list of options, see [AA and AS Degree Electives](#).)*

Course Code	Course Title	Credit / Billing Hours
ACCG 211	Principles of Managerial Accg	4 / 4
BUSN 201	International Business	3 / 3
CITA 110	Intro to Microsoft Office	3 / 3
CITF 110	Intro Computer Info Systems	3 / 3
CITP 110	Intro to Programming – Python	4 / 4
ECON 120	Power, Authority, and Exchange	4 / 4
ECON 202	Principles of Economics - Macro	4 / 4
ECON 213	U.S. Economic/Business History	3 / 3
ECON 260	Comparative Economic Systems	3 / 3
ENGL 122 or ENGL 132	Composition II Honors Composition II	4 / 4 4 / 4
GRMN 121 or GRMN 122 or JAPN 121 or JAPN 122 or JAPN 201 or JAPN 202 or SPAN 121 or SPAN 122 or SPAN 201 or SPAN 202	Elementary German I Elementary German II Elementary Japanese I Elementary Japanese II Intermediate Japanese I Intermediate Japanese II Elementary Spanish I Elementary Spanish II Intermediate Spanish I Intermediate Spanish II	4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4
INSU 105	Prin of Managing Evolving Risk	3 / 3
INSU 110	Personal Insurance	3 / 3
INSU 125	Commercial Insurance	3 / 3
INSU 175	Intro to Financial Advising	3 / 3
MATH 120	College Algebra	4 / 4
MATH 141	Calculus with Applications	4 / 4
MGMT 224	Human Resource Management	3 / 3
MGMT 228	Organization Behavior	3 / 3
STAT 215	Intro to Probability and Stats	4 / 4

Notes:

INSU 105, INSU 110, INSU 125, and INSU 175 are not highly transferrable and therefore should only be selected when students are preparing to transfer to the institutions which will accept the courses as noted below.

For future transfer to:

- Central Michigan University, Ferris State University, Grand Valley State University, and University of Michigan-Flint (International Business majors), choose four credits of the same foreign language chosen to meet the Humanities requirement, based on proficiency testing, ACCG 211 and ECON 202.
- Central Michigan University (Economics majors), choose ACCG 211, ECON 120, and ECON 202.
- Central Michigan University (all other majors), Eastern Michigan University, and Ferris State University (all majors except International Business), choose ACCG 211, ECON 202, and ENGL 122 or ENGL 132.
- Grand Valley State University (all majors except International Business), choose ACCG 211, ECON 202, and MATH 120.
- Michigan State University (all majors) choose ACCG 211, ECON 202, and STAT 215.
- Oakland University and Western Michigan University choose ACCG 211, ECON 202, and ENGL 122 or ENGL 132.
- Olivet College (Insurance and Risk Management majors only) choose INSU 105, INSU 110, INSU 125, and INSU 175.
- Olivet College (all other majors) choose ACCG 211, ECON 202, and STAT 215.
- University of Michigan Flint (all majors except International Business), choose ACCG 211, ECON 202, and MATH 141.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
ACAD 100
BUSN 118 – Milestone course
ENGL 121 or ENGL 131
Limited Choice – Natural Sciences

Semester II
ECON 201
LEGL 215
MATH 120 or STAT 170
MKTG 200

Semester III
ACCG 210
MGMT 225
Limited Choice – Humanities and Fine Arts
Limited Choice – Natural Sciences
Limited Choice – Social Sciences

Semester IV
COMM 110 or COMM 130
Limited Choice – Humanities and Fine Arts
Electives as needed for total credits and transfer requirements
Semester V
Electives as needed for total credits and transfer requirements

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Chemical Technology A.A.S.

Career Community: Science and Mathematics

Curriculum Code: 0163

Effective: Fall 2024 – Summer 2029

Description

Graduates with associate degrees in Chemical Technology are in great demand by the chemical industry. This program prepares students to work with chemists and chemical engineers in many settings. Research, development, and production of pharmaceuticals, agricultural chemicals, and plastics as well as related functions such as sales and technical writing are some of the opportunities that are available to persons with this type of training. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of BIOL 127, CHEM 151, and CHEM 161 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department in the Arts and Sciences Building, Room 3203, telephone number 517-483-1092, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English
Science and Mathematics Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Science and Mathematics Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Science and Mathematics Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Science and Mathematics Career Community Courses meet this requirement

- Natural Sciences Lab or Applied Sciences and Technology Lab
Science and Mathematics Career Community Courses meet this requirement

Science and Math Career Community Courses – *These courses are required for all Science and Mathematics programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 127 or GEOG 221 or GEOL 221 or PHYS 251	Cell Biology Physical Geography Physical Geology Physics I with Calculus	4 / 6 4 / 4 4 / 6 5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 120 or MATH 126 or MATH 151	College Algebra Precalculus Calculus I	4 / 4 5 / 5 4 / 4

Notes:

Choose BIOL 127 and MATH 126 for this degree.

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Program of Study Required Courses - *If BIOL 127 and MATH 126 were completed as part of the Career Community block, do not repeat enrollment.*

Course Code	Course Title	Credit / Billing Hours
BIOL 127	Cell Biology	4 / 6
CHEM 152	General Chemistry Lecture II	3 / 3
CHEM 162	General Chemistry Lab II	1 / 3
CHEM 251	Organic Chemistry Lecture I	4 / 4
CHEM 252	Organic Chemistry Lecture II	4 / 4
CHEM 262	Quantitative Analysis	3 / 6
CHEM 272	Organic Chemistry Laboratory	2 / 6
ISCI 245	S.T.E.M. Workplace Practices	4 / 6
MATH 126	Precalculus	5 / 5
PHYS 221	Introductory Physics I	4 / 6
STAT 215	Intro to Probability and Stats	4 / 4

Program of Study Required Courses, Limited Choices – Humanities and Fine Arts or Social Sciences or Applied Social Sciences - *Select one from [LCC General Education](#), [Applied Degrees](#), [Humanities and Fine Arts or Social Sciences](#) or [Applied Social Sciences](#)*

Program of Study Required Courses, Limited Choice – Select 4 credits

Course Code	Course Title	Credit / Billing Hours
BIOL 203	Microbiology	3 / 3
BIOL 204	Microbiology Laboratory	1 / 3
ENVR 131	Industrial Process Safety	3 / 3
PHYS 222	Introductory Physics II	4 / 6
SCIN 287	Science Technology Internship	2-4 / 2-4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 79 billing hours

Recommended Course Sequence

Semester I
ACAD 100
BIOL 127 – Milestone course
CHEM 151 – Milestone course
CHEM 161 – Milestone course
ENGL 121 or ENGL 131

Semester II
CHEM 152
CHEM 162
ISCI 245
MATH 126
Limited Choice

Semester III
CHEM 251
CHEM 262
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
STAT 215
Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences

Semester IV
CHEM 252
CHEM 272
PHYS 221
Limited Choice, if needed

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Chemistry A.S.

Career Community: Science and Mathematics

Curriculum Code: 0117

Effective: Fall 2024 – Summer 2029

Revised: 8/15/24

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of CHEM 151 and CHEM 161 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department in the Arts & Sciences Building, Room 3203, telephone number 517-483-1092 or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Transfer Degree (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Science and Mathematics Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Science and Mathematics Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meet this requirement.
- Mathematics
Science and Mathematics Career Community Courses meet this requirement.
- Natural Sciences
Science and Mathematics Career Community and Program of Study Required Courses meet this requirement.

- Social Science
Science and Mathematics Career Community and Program of Study Required Courses meet this requirement.

Science and Math Career Community Courses – *These courses are required for all Science and Mathematics programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 127 or	Cell Biology	4 / 6
GEOG 221 or	Physical Geography	4 / 4
GEOL 221 or	Physical Geology	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3
COMM 240 or	Interpersonal Communication	3 / 3
COMM 260 or	Nonverbal Communication	3 / 3
ENGL 122 or	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4
ENGL 121 or	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4
MATH 120 or	College Algebra	4 / 4
MATH 126 or	Precalculus	5 / 5
MATH 151	Calculus I	4 / 4

Notes:

Choose BIOL 127 and MATH 151 for this degree.

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BIOL 127	Cell Biology	4 / 6
CHEM 152	General Chemistry Lecture II	3 / 3
CHEM 162	General Chemistry Lab II	1 / 3
CHEM 251	Organic Chemistry Lecture I	4 / 4
CHEM 252	Organic Chemistry Lecture II	4 / 4
CHEM 262	Quantitative Analysis	3 / 6
CHEM 272	Organic Chemistry Laboratory	2 / 6
MATH 151	Calculus I	4 / 4
MATH 152	Calculus II	4 / 4

Note: If BIOL 127 and MATH 151 were completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -

Select two courses from different disciplines from [LCC General Education, Transfer Degrees \(MTA\), Humanities and Fine Arts](#).

Program of Study Required Courses – Limited Choice – Social Sciences -

Select two courses from different disciplines from [LCC General Education, Transfer Degrees \(MTA\), Social Sciences](#).

Notes:

For future transfer (Secondary Education Certification) choose PSYC 200.

Students considering adding Secondary Education Certification in Math or Science in order to teach in Michigan Public Schools are strongly encouraged to select EDUC courses as listed to meet the Michigan Transfer Agreement (MTA) Social Science requirement.

For future transfer (Secondary Education Certification) to:

- Central Michigan University, Ferris State University, or Michigan State University choose EDUC 204.
- Eastern Michigan University, Grand Valley State University, University of Michigan Flint, or Western Michigan University choose EDUC 220.

Elective Courses, Recommended Choices – Select courses as needed to reach the minimum 60 total credits required for this degree. For information on preferred courses for specific concentrations identified by transfer institutions, consult with an Academic or Program Advisor. (For the full list of options, see [AA and AS Degree Electives](#).)

Course Code	Course Title	Credit / Billing Hours
MATH 253	Calculus III	4 / 4
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7

Minimum Total Credit Hours

60 credits / 73 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or 131
CHEM 151 – Milestone course
CHEM 161 – Milestone course
MATH 151
Limited Choice – Social Sciences

Semester II
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
CHEM 152
CHEM 162
MATH 152
Limited Choice - Humanities and Fine Arts

Semester III
BIOL 127
CHEM 251
CHEM 262
Limited Choice - Social Sciences
Elective courses as needed for total credits

Semester IV
CHEM 252
CHEM 272
Limited Choice - Humanities and Fine Arts
Elective courses as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Child Development and Early Education A.A.A.

Career Community: Education

Curriculum Code: 1637

Effective: Fall 2024 – Summer 2029

Description

This degree program prepares individuals to work in early childhood education and care programs as a lead teacher, teacher assistant, or program director and/or transfer to a four-year institution to major in Education with Michigan teacher certification in Birth-Pre-K and Pre-K – 3. The Child Development and Early Education Associate in Applied Arts Degree at Lansing Community College is accredited by the Commission on the Accreditation of Early Childhood Higher Education Programs of the National Association for the Education of Young Children (NAEYC), 1401 H Street NW, Suite 600, Washington, DC 20005. The curriculum is aligned with the NAEYC Professional Standards and Competencies for Early Childhood Educators, the Michigan Core Knowledge and Core Competencies for the Early Care and Education Workforce, and the Michigan Department of Education Birth-Kindergarten Standards for Teacher Certification. Students learn to plan and implement high quality, developmentally appropriate programs for children birth to age 12 in a variety of early childhood education settings. Graduates of the associate degree program meet the educational requirements for childcare center program directors as specified by the State of Michigan Child Care Licensing Bureau. This degree articulates with certain Child Development/Early Education bachelor degrees. Several semesters of daytime field work in early education and childcare settings is required.

Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution.

Milestone

In addition to the required General Education courses in Math and English, completion of CHDV 100, CHDV 101, and CHDV 111 with a 2.5 or higher, and EDUC 204 or EDUC 220 with a 2.0 or higher, is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

This degree is designed for students seeking an associate degree. It is also for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Criminal background checks and DHHS Central Registry Clearance are required for students in CHDV field placement classes to meet State of Michigan Child Care Licensing regulations. In addition, students may also be required to show proof of vaccinations, including COVID, prior to beginning field placement.

Students enrolled in CHDV 284 may be required to complete a TB test for field placement.

All CHDV courses must be completed with a minimum 2.5 grade and all non-CHDV courses must be completed with a minimum 2.0 grade to receive this degree.

To finish this Associate's Degree in the shortest possible time, students must enroll in CHDV 100, CHDV 101, and CHDV 111 in the first semester.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Child Development Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or Student Services, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

Select courses as indicated for specific transfer institutions and majors. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition
Education Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Education Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meet this requirement.
- Mathematics
Education Career Community Courses meet this requirement.
- Natural Sciences
Program of Study Required Courses meet this requirement.
- Social Sciences
Education Career Community Courses meet this requirement.

Education Career Community Required Courses – *These courses are required for all Education programs (Child Development and Early Education, Education, and Teacher Paraprofessional). Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum grade of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
CHDV 101	Child Growth/ Development: 0-12 Yrs	4 / 4
COMM 120 or COMM 130 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
EDUC 204 or EDUC 220	Educational Psychology Introduction to Education	3 / 3 3 / 3
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Central Michigan University (Pre-K – 3 and Pre-K – 6) choose EDUC 220, ENGL 122 or ENGL 132, and MATH 120.
- Eastern Michigan University (Early Childhood Comprehensive) choose ENGL 122 or ENGL 132, and MATH 120.
- Ferris State University choose EDUC 220, ENGL 122 or ENGL 132, and MATH 120.
- Grand Valley State University choose EDUC 204, ENGL 122 or ENGL 132, and MATH 120.
- Michigan State University choose COMM 130, EDUC 204, and MATH 120.
- Western Michigan University choose COMM 130, EDUC 220, and MATH 119.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHDV 100	Foundations Early Childhood Ed	3 / 3
CHDV 111	Child Guidance/Communication	4 / 4
CHDV 135	Inclusion for Every Learner	3 / 3
CHDV 215	Infant Toddler Program Dev	4 / 4
CHDV 220	Preschool Curriculum Approach	4 / 4
CHDV 230	Early Childhood Program Admin	3 / 3
CHDV 284	Early Childhood Practicum	5 / 5

Program of Study Required Courses, Limited Choices – Humanities and Fine Arts

– Select two from different disciplines (alpha course codes), as indicated for each transfer institution and major. If specific courses are not indicated, choose any two courses from different disciplines.

Course Code	Course Title	Credit / Billing Hours
ENGL 208	Children's Literature	4 / 4
HIST 215 or HIST 216 or HIST 220	World History to 1500 World History since 1500 Michigan History	4 / 4 4 / 4 4 / 4
MUSC 199	Music Appreciation	3 / 3
RELG 210	Comparative Religions	3 / 3
SPAN 121	Elementary Spanish I	4 / 4

For future transfer to:

- A program for K-12 certification (Pre-K – 3 or Pre-K – 6) choose ENGL 208.
- Central Michigan University (Pre-K – 3 or Pre-K – 6) choose HIST 220.
- Eastern Michigan University (Elementary Comprehensive or Early Childhood Comprehensive) choose HIST 220.
- Ferris State University (Pre-K – 3) choose HIST 220.
- Grand Valley State University (Pre-K – 6) choose HIST 215 or HIST 216.
- Michigan State University choose HIST 220.
- Western Michigan University choose RELG 210.

Program of Study Required Courses, Limited Choice - Natural Sciences – *Select two from different disciplines, as indicated for each transfer institution and major. If specific courses are not indicated, choose any two courses from different disciplines. One must be a lab course.*

Course Code	Course Title	Credit / Billing Hours
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
ISCI 121	Physical Science Concepts	4 / 6
PFHW 123	Human Nutrition	3 / 3
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Central Michigan University (Early Childhood Development) choose BIOL 120 and CHEM 135.
- Eastern Michigan University (Children and Families) choose BIOL 125, and CHEM 135 or PFHW 123.
- Ferris State University (Pre-K – 6) choose BIOL 125 and ISCI 121.
- Grand Valley State University (Pre-K – 6) choose BIOL 125 and ISCI 121.
- Michigan State University choose BIOL 120 and PHYS 120.
- Western Michigan University choose BIOL 120 and PHYS 120.

Program of Study Required Courses, Limited Choice – *Select two credits*

Course Code	Course Title	Credit / Billing Hours
CHDV 122	Creativity and Play	1 / 1
CHDV 123	Literacy and Play	1 / 1
CHDV 124	Young Investigators: Math/Sci	1 / 1
CHDV 129	Caring for Youngest Learners	2 / 2
CHDV 132	Leadership Early Childhood Ed	2 / 2
CHDV 222	Caring for School Age Children	2 / 2

Note: For future transfer to Grand Valley State University choose CHDV 222.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I (Fall)
ACAD 100
CHDV 100 – Milestone course
CHDV 101 – Milestone course
CHDV 111 – Milestone course
ENGL 121 or ENGL 131

Semester II (Spring)
CHDV 135
CHDV 215 or CHDV 220
COMM 120, COMM 130, ENGL 122, or ENGL 132
MATH 119, MATH 120, or STAT 170

Semester III (Fall)
CHDV 215 or CHDV 220
EDUC 204 or EDUC 220 – Milestone course
Limited Choice
Limited Choice – Humanities and Fine Arts
Limited Choice – Natural Sciences

Semester IV (Spring)
CHDV 230
CHDV 284
Limited Choice – Humanities and Fine Arts
Limited Choice – Natural Sciences

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Child Development and Early Education C.A.

Career Community: Education

Curriculum Code: 0133

Effective: Fall 2024 – Summer 2029

Description

This certificate program prepares individuals for positions as assistant teachers or teachers in early childhood education and care programs. The curriculum is aligned with the NAEYC (National Association for the Education of Young Children) Professional Standards and Competencies for Early Childhood Educators, the Michigan Core Knowledge and Core Competencies for the Early Care and Education Workforce, and the Michigan Department of Education Birth-Kindergarten Standards for Teacher Certification. Courses for the certificate can be applied toward the associate degree. This curriculum requires four semesters to complete. Several semesters of daytime field work in early education and child care settings is required.

Milestone

Completion of CHDV 100, CHDV 101, and CHDV 111 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

- All CHDV courses must be completed with a minimum 2.5 grade and all non-CHDV courses must be completed with a 2.0 grade to receive this certificate.
- Criminal background checks and DHHS Central Registry Clearance are required for students in CHDV field placement classes to meet State of Michigan Child Care Licensing regulations. In addition, students may also be required to show proof of vaccinations, including COVID, prior to beginning field placement.
- Students enrolled in CHDV 284 may be required to complete a TB test for field placement.

To finish this Certificate in the shortest possible time, students must enroll in CHDV 100, CHDV 101, and CHDV 111 in the first semester.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Child Development and Early Education Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHDV 100	Foundations Early Childhood Ed	3 / 3
CHDV 101	Child Growth/Develop: 0-12 Yrs	4 / 4
CHDV 111	Child Guidance/Communication	4 / 4
CHDV 135	Inclusion for Every Learner	3 / 3
CHDV 215	Infant Toddler Program Dev	4 / 4
CHDV 220	Preschool Curriculum Approach	4 / 4
CHDV 230	Early Childhood Program Admin	3 / 3
CHDV 284	Early Childhood Practicum	5 / 5

Program of Study Required Courses, Limited Choice- *Select one*

Course Code	Course Title	Credit / Billing Hours
ENGL 121	Composition I	4 / 4
ENGL 131	Honors Composition 1	4 / 4

Program of Study Required Courses, Limited Choice - *Select one or two courses, minimum of 2 credits*

Course Code	Course Title	Credit / Billing Hours
CHDV 122	Creativity and Play	1 / 1
CHDV 123	Literacy and Plan	1 / 1
CHDV 124	Young Investigators: Math/Sci	1 / 1
CHDV 129	Caring for Youngest Learners	2 / 2
CHDV 132	Leadership Early Childhood Ed	2 / 2
CHDV 222	Caring for School Age Children	2 / 2

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

36 credits / 36 billing hours

Recommended Course Sequence

Semester I (Fall)
CHDV 100 – Milestone course
CHDV 101 – Milestone course
CHDV 111 – Milestone course

Semester II (Spring)
CHDV 135
CHDV 215
ENGL 121 or 131
Semester III (Fall)
CHDV 220
CHDV 230
Semester IV (Spring)
CHDV 284
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice



Child Development and Early Education C.C.

Career Community: Education

Curriculum Code: 1815

Effective: Fall 2024 – Summer 2029

Description

This certificate program prepares individuals for gainful, entry-level positions as assistant teachers, lead teachers, or program directors in early childhood education and care programs. This certificate can be used for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. The curriculum is aligned with the NAEYC (National Association for the Education of Young Children) Professional Standards and Competencies for Early Childhood Educators, the Michigan Core Knowledge and Core Competencies for the Early Care and Education Workforce, and the Michigan Department of Education Birth-Kindergarten Standards for Teacher Certification. Courses for the certificate can be applied toward the associate degree. This curriculum requires two semesters to complete. One course of daytime field work in an early education and child care settings is required.

Milestone

Completion of CHDV 100, CHDV 101, and CHDV 111 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

All CHDV courses must be completed with a minimum 2.5 grade and all non-CHDV courses must be completed with a 2.0 grade to receive this certificate.

Criminal background checks and DHHS Central Registry Clearance are required for students in CHDV 111 to meet State of Michigan Child Care Licensing regulations. In addition, students may also be required to show proof of vaccinations, including COVID, prior to beginning field placement.

CHDV 111 should be completed in the first semester, as it is a prerequisite for CHDV 230.

Students seeking immediate employment, select CHDV 230 plus a one-credit elective (CHDV 122 or CHDV 124). Students seeking to transfer to a four-year college or university, select ENGL 121, EDUC 204, or EDUC 220.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Child Development and Early Education Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHDV 100	Foundations Early Childhood Ed	3 / 3
CHDV 101	Child Growth/Develop: 0-12 Yrs	4 / 4
CHDV 111	Child Guidance/Communication	4 / 4
CHDV 123	Literacy and Play	1 / 1
CHDV 129	Caring for Youngest Learners	2 / 2

Program of Study Required Courses, Limited Choice – *Select 4 credits.*

Course Code	Course Title	Credit / Billing Hours
CHDV 122	Creativity and Play	1 / 1
CHDV 124	Young Investigators: Math/Sci	1 / 1
CHDV 230	Early Childhood Program Admin	3 / 3
EDUC 204 or EDUC 220	Educational Psychology Intro to Education	3 / 3 3 / 3
ENGL 121	Composition I	4 / 4

Minimum Total Credit Hours

18 credits / 18 billing hours

Recommended Course Sequence

Semester I
CHDV 100 – Milestone course
CHDV 111 – Milestone course
CHDV 129
Semester II
CHDV 101 – Milestone course
CHDV 123
Limited Choice (total 4 credits)

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Cisco Certified Network Associate Certification Preparation (CCNA) C.C.

Career Community: Computer Technology and Networking

Curriculum Code: 1469

Effective: Fall 2024 – Summer 2029

Description

The Cisco Certified Network Associate Certification Preparation (CCNA) curriculum prepares students for the CCNA certification exam. CCNA is the industry standard foundational certification for networking careers. This curriculum provides a highly concentrated training experience in computer networking and is designed for retraining and professional development. Students completing this certificate may use the credits towards the Computer Networking and Cybersecurity Associate of Business Degree (1453).

Milestone

Completion of CITN 220 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITN 220	Introduction to Networks	3 / 3
CITN 225	Switch Route Wireless Essentials	3 / 3
CITN 240	Ent Networking Sec Automation	3 / 3
CITS 125	Computer Support: A+ Cert Prep	6 / 6

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
CITN 222	Wireless Networking & Security	3 / 3
CITN 280	IT Security Foundations	3 / 3
CITO 100	Cloud Foundations with AWS	3 / 3

Minimum Total Credit Hours

18 credits / 18 billing hours

Recommended Course Sequence

Semester I
CITN 220 (First 8 weeks) – Milestone course
CITN 225 (Second 8 weeks)
CITS 125
Semester II
CITN 240 (First 8 weeks)
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Civil Technology A.A.S.

Career Community: Building and Construction Trades

Curriculum Code: 0178

Effective: Fall 2024 – Summer 2029

Description

Civil engineering technicians apply theory and principles of civil engineering in planning, designing, and overseeing the construction and maintenance of structures and facilities in the highway system. They may work at construction or survey sites, offices or in testing labs with engineers, surveyors, supervisors, managers, or skilled trade workers. The successful civil engineering technician must have a working knowledge of college algebra and trigonometry, civil drafting, communications, construction materials, surveying, and must be computer literate. Civil engineering technicians work for construction, engineering, and architecture firms, government agencies, mapping agencies, and private petroleum and mining companies. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of CIVL 101 and CIVL 120 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

If students have already completed ELTE 102, HVAC 102, METS 102, TECH 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the DCTM 102 requirement.

Students will need to talk to a program advisor before enrolling in the Civil Technology Internship.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Civil Technology Program at the West Campus Building, Room M103, telephone number 517-483-5338 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education-Applied Degree, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 124, Technical Writing, 3 credits / 3 billing hours

- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences– *Select one*
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours
GEOL 230, Environmental Geology, 4 credits / 6 billing hours
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CIVL 101	Civil Drafting	3 / 4
CIVL 110	Density Certification	2 / 2
CIVL 120	Surveying	4 / 6
CIVL 124	Route Survey	4 / 6
CIVL 131	Traffic Technology	3 / 3
CIVL 135	Soils Technology	3 / 3
CIVL 141	Site Inspection	3 / 3
CIVL 143	Site Dsgn & Layout/Civil Techn	3 / 4
CIVL 241	Statics/Strength of Materials	4 / 5
CIVL 290	Civil Technology Internship	2 / 2
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 102	Industrial/Construction Safety	2 / 3
DCTM 103	Codes and Specifications	3 / 3
GSCI 210	Global Positioning Systems	3 / 4
METS 140	Rigging	3 / 4.5

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

62 credits / 75.5 billing hours

Recommended Course Sequence

Semester I - Fall
CIVL 101 – Milestone course
CIVL 120 – Milestone course
DCTM 100
DCTM 102
DCTM 103
Semester II - Spring
Gen Ed – English Composition or Applied English
Gen Ed – Mathematics or Applied Mathematics
CIVL 110
CIVL 124
CIVL 141
Semester III – Fall
Gen Ed – English Comp (second course)/ Communication or Applied Communication
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
CIVL 131
GSCI 210
METS 140
Semester IV - Spring
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
CIVL 135
CIVL 143
CIVL 241
Semester V - Summer
CIVL 290

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Cloud Computing A.A.S.

Career Community: Computer, Engineering, Manufacturing and Information Technology

Curriculum Code: 1839

Effective: Fall 2024 – Summer 2029

Description

Cloud computing provides remote computing resources that leverage virtualization technologies to create business solutions that are scalable, performant, and cost-effective. Students learn to design, create, maintain, and automate cloud environments with architectures that promote security and efficiency using services from industry leaders. This degree integrates several fields within information technology, including networking, programming, cybersecurity, databases, and artificial intelligence. Students completing this curriculum may also be eligible to apply for the certificate of completion in Cybersecurity Foundations (1833). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of CITP 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students select one subspecialty from the following options:

- A. Artificial Intelligence/Machine Learning Operations (AIOps/MLOps)
- B. Full-Stack Development (Web) with C#
- C. Full-Stack Development (Web) with Java
- D. Security/System Operations (SecOps/SysOps)

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 127, Business Writing, 3 credits / 3 billing hours

- English Composition (second course)/Communication or Applied Communication – *Select one*
CITS 110, Helpdesk Support Specialist, 3 credits / 3 billing hours
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
ENGL 122, Composition II, 4 credits / 4 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours

Please check with specific institutions to determine whether courses transfer or not. Generally speaking, ENGL 121, ENGL 122, SOCL 120, STAT 170, and BIOL 120 provide more transfer options, but this varies by institution.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITD 120	SQL Concepts	3 / 3
CITI 100	AI Foundations	3 / 3
CITN 280	IT Security Foundations	3 / 3
CITO 100	Cloud Foundations with AWS	3 / 3
CITO 120	Cloud Architecting with AWS	3 / 3
CITO 140	Cloud Development Ops with AWS	3 / 3
CITP 110	Intro to Programming-Python	4 / 4
CITS 225	Networking for PC Technicians	3 / 3

Program of Study Required Courses, Limited Choice - *Select one course, minimum of 3 credits*

Course Code	Course Title	Credit / Billing Hours
CITF 120	Operating Systems Concepts	3 / 3
CITS 125	Computer Support: A+ Cert Prep	6 / 6

Program of Study Required Courses by Subspecialty – *Select one concentration (A, B, C, or D) and complete all courses listed for that subspecialty.*

A. Artificial Intelligence/Machine Learning Operations (AIOps/MLOps)

Subspecialty

Course Code	Course Title	Credit / Billing Hours
CITI 120	Data Analysis with Python	3 / 3
CITI 140	Intro to Machine Learning	3 / 3
CITI 210	Natural Language Processing	3 / 3
CITI 220	Computer Vision	3 / 3
CITO 240	Machine Learning with AWS	3 / 3

B. Full-Stack Development (Web) with C# Subspecialty

Course Code	Course Title	Credit / Billing Hours
CITP 140	Software Testing	3 / 3
CITP 180	Intro to C#.NET Programming	4 / 4
CITP 280	Advanced C#.NET Programming	4 / 4
CITW 160	Web Development HTML & CSS	3 / 3
CITW 165	Web Development JavaScript	3 / 3

C. Full-Stack Development (Web) with Java Subspecialty

Course Code	Course Title	Credit / Billing Hours
CITP 140	Software Testing	3 / 3
CITP 190	Intro to Programming in JAVA	4 / 4
CITP 290	Adv JAVA Programming for Busn	4 / 4
CITW 160	Web Development HTML & CSS	3 / 3
CITW 165	Web Development JavaScript	3 / 3

D. Security/System Operations (SecOps/SysOps) Subspecialty

Course Code	Course Title	Credit / Billing Hours
CITC 282	Ethical Hacking	3 / 3
CITC 285	System Defense	3 / 3
CITC 287	Cybersecurity Incident Respons	3 / 3
CITF 140	Information Technology Ethics	3 / 3
CITN 230	Linux Operating System	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 62 billing hours

Recommended Full-Time Course Sequence

Semester I
Gen Ed – Mathematics or Applied Mathematics
CITI 100
CITP 110 – Milestone course
CITF 120 or CITS 125

Semester II
CITD 120
CITO 100
CITS 225
Limited Choice: Select the course for your subspecialty A. CITI 120 B. CITP 140 C. CITP 140 D. CITF 140
Limited Choice: Select the course for your subspecialty A. CITI 140 B. CITW 160 C. CITW 160 D. CITC 287

Semester III
Gen Ed - English Composition or Applied English
CITN 280
CITO 120
CITO 140
Limited Choice: Select the course for your subspecialty A. CITI 210 B. CITP 180 C. CITP 190 D. CITN 230

Semester IV
Gen Ed – English Composition (second course)/ Communication or Applied Communication
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed - Natural Sciences Lab or Applied Science and Technology
Limited Choice: Select the course for your subspecialty
<ul style="list-style-type: none"> A. CITI 220 B. CIP 280 C. CIP 290 D. CITC 282
Limited Choice:
<ul style="list-style-type: none"> A. CITO 240 B. CITW 165 C. CITW 165 D. CITC 285

Recommended Part-Time Course Sequence

Semester I
Gen Ed - English Composition or Applied English
CITP 110 – Milestone course

Semester II
Gen Ed – English Composition (second course)/ Communication or Applied Communication
CITD 120

Semester III
CITF 120 or CITS 125

Semester IV
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
CITS 225

Semester V
Gen Ed – Mathematics or Applied Mathematics
CITI 100

Semester VI
Gen Ed - Natural Sciences Lab or Applied Science and Technology
CITO 100

Semester VII
CITO 120
Limited Choice: Select the course for your subspecialty
<ul style="list-style-type: none"> A. CITI 120 B. CIP 140 C. CIP 140 D. CITF 140
Semester VIII
CITO 140
Limited Choice: Select the course for your subspecialty
<ul style="list-style-type: none"> A. CITI 140 B. CITW 160 C. CITW 160 D. CITC 287
Semester IX
CITN 280
Limited Choice: Select the course for your subspecialty
<ul style="list-style-type: none"> A. CITI 210 B. CIP 180 C. CIP 190 D. CITN 230
Semester X
Limited Choice: Select the course for your subspecialty
<ul style="list-style-type: none"> A. CITI 220 B. CIP 280 C. CIP 290 D. CITC 282
Limited Choice: Select the course for your subspecialty
<ul style="list-style-type: none"> A. CITO 240 B. CITW 165 C. CITW 165 D. CITC 285

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CNC Machine Technology C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 1798

Effective: Fall 2024 – Summer 2029

Description

This certificate is designed for a person interested in developing or advancing their skill set in the machinist or tool & die trade. Students receive hands-on instruction in manual machining, advanced computer numerical control (CNC) machining/programming, advanced computer aided machining (CAM), basics of geometric dimensioning and tolerancing, blueprint reading, and manufacturing principles. Employment possibilities include entry-level positions in manufacturing companies. Technical math, blueprint reading, and metallurgy are just some of the skills and knowledge that are necessary for this type of work.

Milestone

Completion of METM 112 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

All course work will apply to the Associate in Applied Science Degree in Manufacturing Engineering Technology.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
METD 100	Basic Mechanical Drafting	3 / 4
METD 130	Geometric Dimension/Tolerance	4 / 6
METM 108	Machine Tool Operations	4 / 6
METM 112	Introduction to CNC Machining	4 / 6
METM 150	Advanced CNC Machining	4 / 6
METM 190	Metallurgy and Heat Treatment	4 / 6
METM 195	Quality/Metrology/Inspection	4 / 6
METM 220	Basic Mastercam	4 / 6
METM 221	Advanced Mastercam	4 / 6
TECH 102	General Industry Safety	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

37 credits / 55 billing hours

Recommended Course Sequence

Semester I
METD 100
METM 108
METM 190
TECH 102
Semester II
METD 130
METM 112 – Milestone course
METM 220
Semester III
METM 150
METM 195
METM 221

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



CNC Machine Technology C.C.

Career Community: Electrical and Manufacturing

Curriculum Code: 1797

Effective: Fall 2024 – Summer 2029

Description

This certificate is designed for a person interested in developing their skill set in the machinist or tool and die trade. Students receive hands-on instruction in manual machining, basic computer numerical control (CNC) machining/programming, basic computer aided machining (CAM), basics of geometric dimensioning and tolerancing, blueprint reading, and manufacturing principles. Employment possibilities include entry-level positions in manufacturing companies. Technical math, blueprint reading, and metallurgy are just some of the skills and knowledge that are necessary for this type of work.

Milestone

Completion of METM 108 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
METD 100	Basic Mechanical Drafting	3 / 4
METD 130	Geometric Dimension/Tolerance	4 / 6
METM 108	Machine Tool Operations	4 / 6
METM 112	Introduction to CNC Machining	4 / 6
METM 220	Basic Mastercam	4 / 6
TECH 102	General Industry Safety	2 / 3

Minimum Total Credit Hours

21 credits / 31 billing hours

Recommended Course Sequence

Semester I
METD 100
METM 108 – Milestone course
TECH 102

Semester II
METD 130
METM 112
METM 220

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Communication A.A.

Career Community: Communication, Journalism, and Language

Curriculum Code: 0136

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree is designed for students who plan to transfer to a four-year university to pursue a baccalaureate degree in Communication with a variety of concentrations, including a major in Communication Disorders, as a junior. Students may also pursue Secondary Education Certification in Communication/Theater Arts in order to teach in Michigan public schools. Students completing this curriculum will satisfy the Michigan Transfer Agreement (MTA) requirements for General Education between two and four-year institutions in Michigan and will qualify for the Transfer Studies Certificate of Achievement (1482).

Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution and may also complete coursework for a Communication, Journalism, and Language, Enhanced AA degree. The Enhanced AA option allows students to transfer additional credits toward the Bachelor's degree.

Milestone

In addition to the required General Education courses in Math and English, completion of COMM 120 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education - Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Career Community Courses will meet this requirement.
- English Composition (second course) or Communication
Program of Study Required Courses will meet this requirement
- Humanities and Fine Arts – *Select two*
Career Community Courses will meet this requirement

- Mathematics – *Select one*
Career Community Courses will meet this requirement
- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
Program of Study Required Courses will meet this requirement.
- Social Sciences – *Select one from a different discipline other than COMM*
Program of Study Required Courses will meet this requirement

Communications and Language Career Community Courses – *These courses are required for all Communications and Language programs (Communication, Sign Language Interpreter, and World Language). Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132 or SIGN 160	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II Intro to the Deaf Community	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4 3 / 3
DMAC 260 or ENGL 200 or ENGL 261 or JAPN 121 or SIGN 162 or SPAN 121 or THEA 110	World Cinema Introduction to Literature Creative Writing I Elementary Japanese I American Sign Language II Elementary Spanish I Introduction to Theatre	4 / 4 3 / 3 3 / 3 4 / 4 3 / 3 4 / 4 3 / 3
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LING 230 or SIGN 161	Introduction to Linguistics American Sign Language I	3 / 3 3 / 3
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Students considering adding Secondary Certification in Communication/Theater Arts choose THEA 110.

Students considering transfer choose LING 230.

For future transfer to:

- Central Michigan University, Eastern Michigan University, Ferris State University, and University of Michigan Flint choose ENGL 122 and MATH 120.
- Western Michigan University choose ENGL 122 and MATH 119.
- Michigan State University and Grand Valley State University choose COMM 130 and MATH 120.

Program of Study Required Courses – *COMM 120 will also meet the General Education English Composition (second course) requirement. DMAC 260 or THEA 110, and LING 230 will also meet the General Education Humanities and Fine Arts requirements.*

Course Code	Course Title	Credit / Billing Hours
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
COMM 200	Small Group Communication	3 / 3
COMM 240	Interpersonal Communication	3 / 3
COMM 280	Intercultural Communication	3 / 3
DMAC 260 or THEA 110	World Cinema Introduction to Theater	4 / 4 3 / 3
LING 230	Introduction to Linguistics	3 / 3

Notes:

If COMM 120, COMM 130, COMM 200, COMM 240, DMAC 260, LING 230, or THEA 110 were completed as part of the Career Community block of courses, do not repeat enrollment.

Students considering adding secondary certification in Communication and Theater Arts Secondary Education, choose THEA 110.

Program of Study Required Courses, Limited Choice – Natural Sciences - *Select two courses, from two different disciplines, as indicated for each transfer institution and major. One must be a lab course. Students considering moving into a Communication Disorders major are strongly encouraged to select the Science courses designated for that major. If specific courses are not indicated, select any two courses from different disciplines from [LCC General Education, MTA, Natural Sciences](#).*

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6

Course Code	Course Title	Credit / Billing Hours
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PFHW 123	Human Nutrition	3 / 3
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Central Michigan University, Eastern Michigan University, Grand Valley University (Communication Disorders) or Western Michigan University (Speech, Language, and Hearing Disorders) choose BIOL 125 and CHEM 135 or PHYS 120.
- Central Michigan University (Communication) choose BIOL 120 and any non-BIOL course.
- Ferris State University (Communication or Sports Communication) choose BIOL 125 and PFHW 123.
- Grand Valley State University (B.S. in Communication Disorders) choose BIOL 121 and PHYS 120.

Program of Study Required Courses, Limited Choice – Social Sciences - *Select one as indicated for each transfer institution and major. If specific courses are not indicated, select any course or choose from [LCC General Education Transfer Degrees: MTA Social Science](#). Students considering the possibility of adding Secondary K-12 Certification at some point in the future are strongly encouraged to select the courses indicated. These selections will satisfy requirements for admission to the Teacher Education program, required for certification, as well as satisfying Social Science General Education requirements and will prevent possible delay in degree completion.*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
EDUC 204	Educational Psychology	3 / 3
EDUC 220	Intro to Education	3 / 3
POLS 201	Introduction to Political Science	3 / 3
POLS 240	Introduction to Public Policy	3 / 3
PSYC 200	Introductory Psychology	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

For future transfer to:

- Central Michigan University, Eastern Michigan University, Grand Valley State University (Communication Disorders) or Western Michigan University (Speech, Language, or Hearing Disorders) choose PSYC 200.
- Eastern Michigan University (Secondary Certification in Communication/Theater Arts) choose EDUC 204.
- Michigan State University (Communication) choose PSYC 200.

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for the degree. See the notes below for the courses indicated for each transfer institution and major. (For the full list of options, see [AA and AS Degree Electives](#).)*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
ANTH 271	Medical Anthropology	3 / 3
CHSE 120	Medical Terminology	4 / 4
COMM 110	Communication in the Workplace	3 / 3
COMM 260	Nonverbal Communication	3 / 3
COMM 270	Mass Communication	3 / 3
DMAC 120	Intro to Audio Production	4 / 4
DMAC 140	Pre-Production Design	3 / 3
DMAC 141	Ethics and Impact of the Media	3 / 3
EDUC 230	Intro to Special Education	3 / 3
ENGL 122 or ENGL 132	Composition II Honors Composition II	4 / 4 4 / 4
ENGL 124	Technical Writing	3 / 3
ENGL 127	Business Writing	3 / 3
ENGL 200	Introduction to Literature	3 / 3
ENGL 260	African-American Literature	4 / 4
GRMN 121 or JAPN 121 or SPAN 121	Elementary German I Elementary Japanese I Elementary Spanish I	4 / 4 4 / 4 4 / 4
GRMN 122 or JAPN 122 or SPAN 122	Elementary German II Elementary Japanese II Elementary Spanish II	4 / 4 4 / 4 4 / 4
JAPN 201 or SPAN 201	Intermediate Japanese I Intermediate Spanish I	4 / 4 4 / 4
JAPN 202 or SPAN 202	Intermediate Japanese II Intermediate Spanish II	4 / 4 4 / 4
INSU 105	Prin of Managing Evolving Risk	3 / 3
JRNL 151	Newswriting and Reporting	3 / 3
JRNL 254	Opinion Writing	3 / 3
MGMT 224	Human Resource Management	3 / 3
MGMT 329	Advanced Mgmt Communication	3 / 3
PHIL 101	Introduction to Philosophy	3 / 3
PHIL 151	Intro to Logic and Critical Think	4 / 4
PHIL 152	Introduction to Ethics	4 / 4
PHOT 111	Digital Photography I	3 / 3
PSYC 202	Psychology of Personality	3 / 3
PSYC 203	Social Psychology	3 / 3
PSYC 205	Human Growth and Development	3 / 3
RELG 150	Intro to World Religions	4 / 4
SIGN 160	Intro to the Deaf Community	3 / 3

Course Code	Course Title	Credit / Billing Hours
SIGN 161	American Sign Language I	3 / 3
SIGN 162	American Sign Language II	3 / 3
SIGN 163	American Sign Language III	3 / 3
STAT 170	Introduction to Statistics	4 / 4
THEA 181	Improvisation	2.5 / 4
THEA 220	Play Directing	3 / 4

Notes:

Due to limited transferability, DMAC 140, DMAC 141, INSU 105, JRNL 254, and MGMT 329 should only be chosen if they are specifically indicated for an institution and program as noted below.

For future transfer to:

- Central Michigan University (BA in Communication) choose COMM 260, , and 2 courses from any language: GRMN or JAPN or SPAN 121 and SPAN 122.
- Central Michigan University (BAA in Communication Disorders with American Sign Language Minor) choose COMM 260, and 2 from ENGL 200 or PHIL 101 or RELG 150, SIGN 163, and STAT 170.
- Eastern Michigan University (BA in Communication) choose ANTH 270 or ENGL 260, COMM 260, and any combination of Limited Choice.
- Eastern Michigan University (BS in Communication Disorders with Communication Minor) choose CHSE 120, COMM 260, EDUC 230, and 4 credits from any Limited Choice.
- Eastern Michigan University (Secondary Certification in Communication/Theater Arts) choose ANTH 270 or ENGL 260, COMM 260, EDUC 230, THEA 181, and THEA 220.
- Ferris State University (Communication) choose COMM 260, COMM 270, and 2 from DMAC 140 or DMAC 141 or JRNL 151 or JRNL 254.
- Ferris State University (Sport Communication with Management and Leadership Concentration) choose COMM 260, COMM 270, INSU 105, MGMT 224, and MGMT 329.
- Grand Valley State University (B.S. in Communication Studies) choose COMM 260, COMM 270, DMAC 141, PHOT 111, and STAT 170.
- Grand Valley State University (B.S. in Communication Disorders) choose COMM 260, COMM 270, STAT 170, and any combination of Limited Choice.
- Michigan State University (Communication – variety of concentrations) choose COMM 270 and 4 courses from the same foreign language: GRMN, JAPN, or SPAN 121, 122, 201, and 202.
- University of Michigan Flint (Communication) choose COMM 260, COMM 270, and GRMN or JAPN or SPAN 121 and 122 or SIGN 161 and SIGN 162.
- Western Michigan University (Communication) choose COMM 110, COMM 260, COMM 270, and GRMN or JAPN or SPAN 121 and 122.
- Western Michigan University (Speech, Language, and Hearing Disorders) choose COMM 110, COMM 260, COMM 270, SIGN 160, SIGN 161, and SIGN 162.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
ACAD 100
COMM 120 – Milestone
COMM 130
ENGL 121 or ENGL 131
Limited Choice – Natural Sciences

Semester II
COMM 240
COMM 280
MATH 119 or MATH 120 or STAT 170
Limited Choice – Social Sciences
Electives as needed

Semester III
COMM 200
DMAC 260 or THEA 110
LING 230
Limited Choice – Natural Sciences

Semester IV
Electives as needed

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Communication, Journalism, and Language G.A.

Career Community: Communication, Journalism, and Language

Curriculum Code: 1823

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree is designed for students wishing to work in a field related to Communication.

Pathways included in this Career Community are Communication, Journalism, Sign Language Interpreter, and World Languages. The degree includes a common set of courses applicable to the Communication and Language majors listed above and to many transfer institutions.

Students beginning college in this degree program are encouraged to work with academic and program advisors throughout their first few semesters of study to determine their specific major area and transfer institution (if transfer is a goal).

Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution and may also complete coursework for a Communication, Journalism, and Language, Enhanced AA degree. The Enhanced AA option allows students to transfer additional credits toward the Bachelor's degree.

Milestone

In addition to the required English and Mathematics courses, completion of LING 230 or SIGN 160 with a 2.0 or higher is a key component for success in completing this program. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the English Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061.

General Education – Applied Degrees - Recommended Courses

Select courses as indicated for specific transfer institutions and majors. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category may also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Communication, Journalism, and Language Career Community Courses meet this requirement.

- English Composition (second course) or Communication or Applied Communication
Communication, Journalism, and Language Career Community Courses meet this requirement.
COMM 120, COMM 130, ENGL 122, and ENGL 132 meet MTA requirements.
SIGN 160 meets General Education Applied Degree requirements but does not satisfy MTA.
SIGN 160 is a required course for the Sign Language Interpreter A.A.A. degree and transfers to Bachelor's degree programs articulated with LCC.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Communication, Journalism, and Language Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Communication, Journalism, and Language Career Community Courses meet this requirement.
- Natural Sciences or Applied Sciences and Technology Lab Course
Program of Study Required Courses – Natural Sciences meet this requirement.

Communication and Language Career Community Courses – *These courses are required for all Communication and Language programs (Communication, Sign Language Interpreter, and World Language). They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132 or SIGN 160	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II Intro to the Deaf Community	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4 3 / 3
DMAC 260 or ENGL 200 or ENGL 261 or JAPN 121 or SIGN 162 or	World Cinema Introduction to Literature Creative Writing Elementary Japanese I American Sign Language II	4 / 4 3 / 3 3 / 3 4 / 4 3 / 3

Course Code	Course Title	Credit / Billing Hours
SPAN 121 or THEA 110	Elementary Spanish I Introduction to Theater	4 / 4 3 / 3
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LING 230 or SIGN 161	Introduction to Linguistics American Sign Language I	3 / 3 3 / 3
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future major areas:

- Communication choose DMAC 260 and LING 230 plus one of the following: COMM 120, ENGL 122, or ENGL 132.
- Communication (Secondary Education certification) choose LING 230 and THEA 110 plus one of the following: COMM 120, ENGL 122, or ENGL 132.
- Sign Language Interpreter choose SIGN 160, SIGN 161, and SIGN 162.
- World Language (including Secondary Education certification) choose LING 230 and JAPN 121 or SPAN 121 plus one of the following: COMM 120, COMM 130, COMM 200, COMM 240, COMM 260, ENGL 122, or ENGL 132.

Program of Study Required Courses, Limited Choice – Natural Sciences or Applied Science and Technology Lab - *Select one as indicated for each transfer institution and major or choose one from [LCC General Education: Applied Degrees, Natural Sciences Lab or Applied Science and Technology Lab](#).*

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4

Course Code	Course Title	Credit / Billing Hours
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Central Michigan University, Eastern Michigan University, Grand Valley University (Communication Disorders) or Western Michigan University (Speech, Language, and Hearing Disorders) choose BIOL 125 and CHEM 135 or PHYS 120.
- Central Michigan University (Communication) choose BIOL 120 and any non-BIOL course.
- Ferris State University (Communication or Sports Communication) choose BIOL 125.
- Grand Valley State University (B.S. in Communication Disorders) choose BIOL 121 and PHYS 120.

Program of Study Required Courses – Limited Choices - *Select a minimum of 36 credits. Work with an Academic Advisor or Program Advisor to select the most appropriate courses or to select a field-specific major or transfer major that meets your educational and career goals. Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ANTH 120	Introduction to Anthropology	3 / 3
ANTH 270	Cultural Anthropology	3 / 3
ANTH 271	Medical Anthropology	3 / 3
ARTS 102	2D Design	3 / 4
ARTS 151	Color	3 / 4
ARTS 171	Adobe Photoshop	3 / 4
BUSN 118	Introduction to Business	3 / 3
CHEM 135	Chemistry in Society	4 / 5
CHSE 120	Medical Terminology	4 / 4
COMM 110	Communication in the Workplace	3 / 3
COMM 200	Small Group Communication	3 / 3
COMM 240	Interpersonal Communication	3 / 3
COMM 260	Nonverbal Communication	3 / 3
COMM 270	Mass Communication	3 / 3
COMM 280	Intercultural Communication	3 / 3
DMAC 120	Intro to Audio Production	4 / 4
DMAC 131	Digital Cinematography I	4 / 4
DMAC 132	Video Post-Production I	4 / 4
DMAC 140	Pre-Production Design	3 / 3
DMAC 141	Ethics and Impact of the Media	3 / 3

Course Code	Course Title	Credit / Billing Hours
EDUC 204	Educational Psychology	3 / 3
EDUC 220	Introduction to Education	3 / 3
EDUC 226	Reading in Elementary School	3 / 3
EDUC 230	Intro to Special Education	3 / 3
ENGL 124	Technical Writing	3 / 3
ENGL 127	Business Writing	3 / 3
ENGL 122 or ENGL 132	Composition II Honors Composition II	4 / 4 4 / 4
GRMN 121 or JAPN 121 or SPAN 121	Elementary German I Elementary Japanese I Elementary Spanish I	4 / 4 4 / 4 4 / 4
GRMN 122 or JAPN 122 or SPAN 122	Elementary German II Elementary Japanese II Elementary Spanish II	4 / 4 4 / 4 4 / 4
JAPN 201 or SPAN 201	Intermediate Japanese I Intermediate Spanish I	4 / 4 4 / 4
JAPN 202 or SPAN 202	Intermediate Japanese II Intermediate Spanish II	4 / 4 4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4
HUMS 160	Mythology	4 / 4
ISCI 131	Integrated Physical Science	4 / 6
JRNL 151	Newswriting and Reporting	3 / 3
JRNL 254	Opinion Writing	3 / 3
MGMT 223	Supervisory Skills	3 / 3
MGMT 224	Human Resource Management	3 / 3
MGMT 329	Advanced Mgmt Communication	3 / 3
MKTG 140	Principles of Advertising	3 / 3
PFHW 123	Human Nutrition	3 / 3
PHIL 101	Introduction to Philosophy	3 / 3
PHIL 151	Intro to Logic & Critical Think	4 / 4
PHIL 152	Introduction to Ethics	4 / 4
PHOT 111	Digital Photography I	3 / 3
PHYS 120	The Art of Physics	4 / 5
POLS 201	Intro to Political Science	3 / 3
POLS 240	Introduction to Public Policy	3 / 3
POLS 270	International Relations	3 / 3
PSYC 200	Introduction to Psychology	4 / 4
PSYC 202	Psychology of Personality	3 / 3
PSYC 203	Social Psychology	3 / 3
PSYC 205	Human Growth and Development	3 / 3
PSYC 221	Child Psychology	3 / 3
RELG 150	Intro to World Religions	4 / 4
SIGN 160	Intro to the Deaf Community	3 / 3

Course Code	Course Title	Credit / Billing Hours
SIGN 161	American Sign Language I	3 / 3
SIGN 162	American Sign Language II	3 / 3
SIGN 163	American Sign Language III	3 / 3
SIGN 166	Fingerspelling	3 / 3
SIGN 167	Beginning Sign to Voice	3 / 3
SIGN 170	Expressive/Receptive ASL	3 / 3
SIGN 200	Sign Practicum Seminar	2 / 2
SIGN 260	Linguistic Principles of ASL	3 / 3
SIGN 263	Intermediate Sign to Voice	3 / 3
SIGN 266	Post-Secondary Interpreting	2 / 2
SIGN 267	Sign Practicum I	3 / 3
SIGN 268	Sign Practicum II	3 / 3
SIGN 270	Advanced Interpreting	3 / 3
SIGN 271	Advanced Sign to Voice	3 / 3
SIGN 293	Principles of Interpreting	3 / 3
SOCL 120	Introduction to Sociology	4 / 4
SOCL 260	Race and Ethnicity	3 / 3
STAT 170	Introduction to Statistics	4 / 4
THEA 220	Play Directing	3 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

College-ready Full-time

Semester I
ACAD 100 (if waived, substitute Career Community course)
ENGL 121 or 131
LING 230 or (SIGN 160 and SIGN 161)
Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab

Semester II
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132 or SIGN 162
DMAC 260 or ENGL 200 or ENGL 261 or JAPN 121 or SPAN 121 or THEA 110 (if no SIGN 162)
MATH 119 or 120 or STAT 170
Students who have decided on an academic program within the Communication, Journalism, and Language Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.

Semester III
Limited Choice courses for students completing the Communication, Journalism, and Language GA

Semester IV
Limited Choice courses for students completing the Communication, Journalism, and Language GA

College-ready Part-time

Semester I
ACAD 100 (if waived, substitute Career Community course)
ENGL 121
LING 230 or (SIGN 160 and SIGN 161)

Semester II
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132 or SIGN 162
MATH 119 or 120 or STAT 170

Semester III (Summer – optional)
DMAC 260 or ENGL 200 or ENGL 261 or JAPN 121 or SPAN 121 or THEA 110 (if no SIGN 162)
Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab
Students who have decided on an academic program within the Communication, Journalism, and Language Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.

Semester IV
DMAC 260 or ENGL 200 or ENGL 261 or JAPN 121 or SPAN 121 or THEA 110 (if no SIGN 162 and no Summer enrollment)
Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab (if no Summer enrollment)
Students who have decided on an academic program within the Communication, Journalism, and Language Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.
Limited Choice courses for students completing the Communication, Journalism, and Language GA
Semester V
Limited Choice courses for students completing the Communication, Journalism, and Language GA

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Computer Aided Design A.A.S.

Career Community: Electrical and Manufacturing

Curriculum Code: 1801

Effective: Fall 2024 – Summer 2029

Description

This program prepares individuals to apply technical skills and knowledge of computer software installed on a variety of stationary devices and mobile devices to the CAD design process leading through to output of product manufacturing. Automation design brings together engineering. Graphics design systems across the production cycle and links communication to the industry 4.0 concept. Students receive detailed instruction on building virtual representations of products by employing 3D parametric Solid Modeling found in the automotive, aerospace, medical, nuclear, special machinery, and defense industries. Computer Aided Design software is also applied to staging a product through virtual simulation and analysis of computer numerical control, computer programming of robotic systems, metrology quality control actions. Solid models are used in assemblies and drawings to convey material properties, dimensions and tolerances, execution of engineering change orders through tool production, additive manufacturing, and 3D printing.

Milestone

In addition to the required General Education courses in Math and English, completion of METD 110, METD 150, and METD 220 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours

- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses will meet this requirement

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
METD 110	Mechanical CAD Drafting I	4 / 6
METD 111	Mechanical CAD Drafting II	4 / 6
METD 130	Geometric Dimension/ Tolerance	4 / 6
METD 150	Industrial Blueprint Reading	3 / 3
METD 220	Basic Unigraphics/NX	4 / 6
METD 221	Advanced Unigraphics/NX	4 / 6
METD 240	Basic NX Machining	4 / 5
METD 250	Detailing Assembly Drawings	4 / 6
METM 100	Manufacturing Processes	3 / 4.5
METM 108	Machine Tool Operations	4 / 6
METM 190	Metallurgy and Heat Treatment	4 / 6
METM 195	Quality/Metrology/Inspection	4 / 6
METM 220	Basic Mastercam	4 / 6
METS 115	Intro to Mechanical Systems	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

67 credits / 91.5 billing hours

Recommended Course Sequence

Semester I
Gen Ed – Mathematics or Applied Mathematics
METD 110 – Milestone course
METD 150 – Milestone course
METM 100
METM 108

Semester II
Gen Ed – English Composition or Applied English
METD 111
METD 220 – Milestone course
METM 195
METS 115

Semester III
Gen Ed – English Composition (second course)/Communication or Applied Communication
METD 130
METD 221
METD 250
METM 220

Semester IV
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
METD 240
METM 190

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Computer Aided Design C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 1800

Effective: Fall 2024 – Summer 2029

Description

This program prepares individuals to apply technical skills and computer software and hardware to the design and manufacturing of machined components relating to various industries. Students receive instruction in the use of engineering graphics, two-dimensional and three-dimensional engineering design graphics, parametric modeling, computer numerical control programming, 3D printing, and additive manufacturing. Industry 4.0 processes are applied inside the CAD system to stage products for metrology inspection, metallurgy, geometric dimensioning and tolerancing, tools for production, and engineering changes. Employment possibilities include entry-level positions in engineering firms, consulting firms, and manufacturing companies that make automotive, defense industry, special machinery, and medical components, to name a few.

Milestone

Completion of METD 110 and METD 150 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
METD 110	Mechanical CAD Drafting I	4 / 6
METD 111	Mechanical CAD Drafting II	4 / 6
METD 130	Geometric Dimension/ Tolerance	4 / 6
METD 150	Industrial Blueprint Reading	3 / 3
METD 220	Basic Unigraphics/NX	4 / 6
METM 100	Manufacturing Processes	3 / 4.5
METM 108	Machine Tool Operations	4 / 6
METM 190	Metallurgy and Heat Treatment	4 / 6
METM 195	Quality/Metrology/ Inspection	4 / 6
METM 220	Basic Mastercam	4 / 6
METS 115	Intro to Mechanical Systems	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

42 credits / 61.5 billing hours

Recommended Course Sequence

Semester I
METD 110 – Milestone course
METD 150 – Milestone course
METM 100
METM 108

Semester II
METD 111
METD 220
METM 195
METS 115

Semester III
METD 130
METM 190
METM 220

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Computer Aided Design C.C.

Career Community: Electrical and Manufacturing

Curriculum Code: 1799

Effective: Fall 2024 – Summer 2029

Description

This certificate provides an introduction to manufacturing principles and prepares individuals to pursue entry-level employment and advanced training in automation design. Students receive instruction in the use of two-dimensional engineering design graphics, computer numerical control programming, manufacturing processes, tools for production, and engineering changes. Employment possibilities include entry-level positions in engineering firms, consulting firms, and manufacturing companies that make automotive, defense, special machinery, and medical components, to name a few.

Milestone

Completion of METD 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
METD 110	Mechanical CAD Drafting I	4 / 6
METD 111	Mechanical CAD Drafting II	4 / 6
METD 150	Industrial Blueprint Reading	3 / 3
METM 100	Manufacturing Processes	3 / 4.5
METM 108	Machine Tool Operations	4 / 6
METS 115	Intro to Mechanical Systems	4 / 6

Minimum Total Credit Hours

22 credits / 31.5 billing hours

Recommended Course Sequence

Semester I
METD 110 – Milestone course
METD 150
METM 100
METM 108
Semester II
METD 111
METS 115

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Computer Networking Technology A.B.

Career Community: Computer Technology and Networking

Curriculum Code: 1453

Effective: Fall 2024 – Summer 2029

Description

Networking technology binds computers and connects people with information, and information security seeks to protect this information. Students learn to design, create, and administer efficient information technology networks of data, voice, image, and video communications. Students learn to provide the technical management and support to keep systems running 24/7, and to safeguard the data they control. This degree focuses on technical competencies, as well as communication with users, management, and project planning skills. Students will be prepared to earn several industry-respected certifications. Students completing this curriculum may also be eligible to apply for certificates of completion in Cisco Certified Network Associate Certification Preparation (CCNA) (1469) and in Information Technology Foundations (0766). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of CITS 125 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 127, Business Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
CITS 110, Helpdesk Support Specialist, 3 credits / 3 billing hours
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours

- Mathematics or Applied Mathematics – *Select one*
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BUSN 118	Introduction to Business	3 / 3
CITF 110	Intro Computer Info Systems	3 / 3
CITF 140	Information Technology Ethics	3 / 3
CITN 220	Introduction to Networks	3 / 3
CITN 225	Switch Route Wireless Essentials	3 / 3
CITN 230	Linux Operating System	3 / 3
CITN 240	Ent Networking Sec Automation	3 / 3
CITN 280	IT Security Foundations	3 / 3
CITP 110	Intro to Programming-Python	4 / 4
CITS 125	Computer Support: A+ Cert Prep	6 / 6

Program of Study Required Courses, Limited Choice – *Select three*

Course Code	Course Title	Credit / Billing Hours
CITD 250	Database Concepts	3 / 3
CITF 120	Operating Systems Concepts	3 / 3
CITF 240	IT Project Management	3 / 3
CITI 100	AI Foundations	3 / 3
CITI 120	Data Analysis with Python	3 / 3
CITN 222	Wireless Networking & Security	3 / 3
CITN 250	Microsoft Network Server	3 / 3
CITO 100	Cloud Foundations with AWS	3 / 3
CITO 120	Cloud Architecting with AWS	3 / 3
CITS 285	IT Professional Internship	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 62 billing hours

Recommended Course Sequence

Semester I
Gen Ed – Mathematics or Applied Mathematics
CITF 110
CITP 110
CITS 125 – Milestone course

Semester II
Gen Ed - English Composition or Applied English
CITF 140
CITN 220 (First 8 weeks)
CITN 225 (Second 8 weeks)
CITN 230

Semester III
Gen Ed - Natural Sciences Lab or Applied Science and Technology
CITN 280
CITN 240
Limited Choice

Semester IV
Gen Ed – English Composition (second course)/ Communication or Applied Communication
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
BUSN 118
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Computer Programmer/Analyst A.B.

Career Community: Computer Technology and Networking

Curriculum Code: 0113

Effective: Fall 2024 – Summer 2029

Description

Programmer/analysts plan, develop, test, and document computer programs at the request of a specific user, applying knowledge of programming, project management, testing, and quality assurance techniques and computer systems. They may evaluate user requests to determine feasibility, cost, and time required, as well as compatibility with current system and computer capabilities. In addition, they read manuals, periodicals, and technical reports to develop programs that meet user requirements and to remain current with developments and standards in the information technology industry. They formulate a plan outlining steps required to develop programs and convert project specifications into program source instructions which are entered into the computer system and tested. They may write documentation and the user manual. Students completing this curriculum may also be eligible for the Computer Programmer/Analyst Certificate of Completion (0969), Computer Software Tester Certificate of Achievement (1633), and Mobile Application Developer Certificate of Achievement (1712). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of CITP 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences– *Select one*
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BUSN 118	Introduction to Business	3 / 3
CITD 120	SQL Concepts	3 / 3
CITF 110	Intro Computer Info Systems	3 / 3
CITF 260	Systems Analysis and Design	4 / 4
CITP 110	Intro to Programming-Python	4 / 4
CITP 130	Intro to Mobile App Devel	3 / 3
CITP 140	Software Testing	3 / 3
CITP 190	Intro to Programming in JAVA	4 / 4
CITW 150	Internet Literacy	3 / 3
CITW 160	Web Development HTML & CSS	3 / 3

Program of Study Required Courses, Limited Choice - Introductory Programming

- *Select one*

Course Code	Course Title	Credit / Billing Hours
CITP 150	Intro to VB.NET Programming	4 / 4
CITP 180	Intro to C#.NET Programming	4 / 4

Program of Study Required Courses, Limited Choice - Computer - *Select two courses, minimum 6 credits*

Course Code	Course Title	Credit / Billing Hours
CITD 250	Database Concepts	3 / 3
CITF 140	Information Technology Ethics	3 / 3
CITN 120	Networking Concepts	3 / 3
CITP 295	Programming Internship	3 / 3
CITW 165	Web Development JavaScript	3 / 3
CITW 180	Web Development ASP.NET	4 / 4
CITW 185	Web Development PHP & MySQL	4 / 4

Program of Study Required Courses, Limited Choice - Advanced Programming -

Select one

Course Code	Course Title	Credit / Billing Hours
CITP 230	Mobile App Devel for Android	4 / 4
CITP 235	Mobile App Devel for Apple	4 / 4
CITP 280	Advanced C#.NET Programming	4 / 4
CITP 290	Adv JAVA Programming for Busn	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

65 credits / 66 billing hours

Recommended Course Sequence

Semester I
Gen Ed – Mathematics or Applied Mathematics
CITF 110
CITP 110 – Milestone course
CITP 130
CITW 150

Semester II
Gen Ed – English Composition or Applied English
BUSN 118
CITD 120
CITW 160
Limited Choice - Introductory Programming

Semester III
Gen Ed – English Composition (second course)/ Communication or Applied Communication
CITP 140
CITP 190
Limited Choice - Computer

Semester IV
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
CITF 260
Limited Choice - Advanced Programming
Limited Choice - Computer

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Computer Programmer/Analyst C.C.

Career Community: Computer Technology and Networking

Curriculum Code: 0969

Effective: Fall 2024 – Summer 2029

Description

The Computer Programmer/Analyst certificate is a start for students new to the Information Technology field. The classes offered in this certificate represent the building blocks for other degrees and certificate programs. Students will learn computer skills and concepts that will help them decide their future path based on their interests. This is a stackable certificate with Computer Programmer Analyst AB (0113).

Milestone

Completion of CIP 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BUSN 118	Introduction to Business	3 / 3
CITD 120	SQL Concepts	3 / 3
CITF 110	Intro Computer Info Systems	3 / 3
CITP 110	Intro to Programming-Python	4 / 4
CITW 150	Internet Literacy	3 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
CITP 150	Intro to VB.NET Programming	4 / 4
CITP 180	Intro to C#.NET Programming	4 / 4
CITP 190	Intro to Programming in JAVA	4 / 4

Minimum Total Credit Hours

20 credits / 20 billing hours

Recommended Course Sequence

Semester I
BUSN 118
CITF 110
CITP 110 – Milestone course

Semester II
CITD 120
CITW 150
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Computer Science A.S.

Career Community: Science and Mathematics

Curriculum Code: 0169

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree is designed for students who plan to transfer to a four-year university to pursue a Bachelor's of Science degree in Computer Science with a variety of concentrations. Students completing this degree will also satisfy Michigan Transfer Agreement (MTA) requirements for General Education and may qualify for an LCC Transfer Studies Certificate of Achievement. This degree includes a set of courses common to all Science and Math majors and all transfer institutions. Students are encouraged to work with an academic advisor and program advisor to explore transfer opportunities.

Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution.

Milestone

In addition to the required General Education courses in Math and English, completion of CPSC 230 and MATH 151 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

CPSC and MATH 260 are only offered during Spring semester.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department, Arts and Sciences Building, Room 3203, telephone number 517-483-1092.

General Education – Transfer Degrees (MTA) - Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Science and Mathematics Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Science and Mathematics Career Community Courses meet this requirement.
- Humanities and Fine Arts.
Program of Study Required Courses meets this requirement.
- Mathematics
Science and Mathematics Career Community Courses meet this requirement.

- Natural Sciences
Science and Mathematics Career Community Courses meet this requirement.
- Social Sciences
Science and Mathematics Career Community Courses meet this requirement.

Science and Math Career Community Courses – *These courses are required for all Science and Math programs. They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 127 or	Cell Biology	4 / 6
GEOG 221 or	Physical Geography	4 / 4
GEOL 221 or	Physical Geology	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3
COMM 240 or	Interpersonal Communication	3 / 3
COMM 260 or	Non-Verbal Communication	3 / 3
ENGL 122 or	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4
ENGL 121 or	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4
MATH 120 or	College Algebra	4 / 4
MATH 126 or	Pre-calculus	5 / 5
MATH 151	Calculus I	4 / 4

Notes:

Choose MATH 151, and BIOL 127 or PHYS 251 for this degree.

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Program of Study Required Courses - Some courses meet General Education

requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
BIOL 127 or PHYS 251	Cell Biology Physics I with Calculus	4 / 6 5 / 7
CPSC 101	Intro to Computer Science	3 / 3
CPCS 230	Algorithms and Computing with C++	4 / 4
CPSC 231	Computing and Data Structures	4 / 4
CPSC 260	Computer Science Structures	4 / 4
MATH 151	Calculus I	4 / 4
MATH 152	Calculus II	4 / 4
MATH 253	Calculus III	4 / 4

Notes:

If MATH 151, and BIOL 127 or PHYS 251 was completed as part of the Career Community block, do not repeat enrollment.

CPSC 260 is only offered in Spring.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -

Select two courses from different disciplines, from [LCC General Education, Transfer Degrees \(MTA\), Humanities and Fine Arts](#).

Note: PHIL 151 is highly recommended for one of the courses.

Program of Study Required Courses, Limited Choice – Social Sciences - Select two from [LCC General Education, Transfer Degrees \(MTA\), Social Sciences](#), from different disciplines.

Elective Courses, Recommended Choices – Select courses as needed to reach the minimum 60 credits required for the degree. For information on preferred courses for specific concentrations identified by transfer institutions, consult with a Program Advisor. (For the full list of options, see [AA and AS Degree Electives](#))

Course Code	Course Title	Credit / Billing Hours
CPSC 131	Numerical Methods with MATLAB	3 / 4
MATH 254	Intro to Differential Equation	4 / 4
MATH 260	Linear Algebra	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Note: Math 260 is highly recommended for transfer students.

Minimum Total Credit Hours

60 credits / 64 billing hours

Recommended Course Sequence

Semester I (Fall)
ACAD 100
CHEM 151
CHEM 161
ENGL 121 or ENGL 131
MATH 151 – Milestone course

Semester II (Spring)
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
CPCS 101
MATH 152
Limited Choice – Social Sciences

Semester III (Suggested for Summer)
BIOL 127 or PHYS 251
Limited Choices – Humanities and Fine Arts

Semester IV (Fall)
CPSC 230 – Milestone course
MATH 253
Limited Choice – Social Sciences

Semester V (Spring)
CPSC 231
CPSC 260
Limited Choices – Humanities and Fine Arts
Electives as needed (MATH 260 is highly recommended)

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Computer Software Tester C.A.

Career Community: Computer Technology and Networking

Curriculum Code: 1633

Effective: Fall 2024 – Summer 2029

Description

Software Testing, or Software Quality Assurance, is one of many essential jobs in the computing industry. Companies need people to create software programs or applications as well as professionals to discover defects in these applications. Software testers must be knowledgeable about computers and their usage to meet the goals of the organization. They are familiar with programming and how software is put together. Knowledge of testing principles, such as test planning, test case design and implementation, test documentation, and the use of automated testing software are necessary. Soft skills are also essential to work effectively as a member of an organizational team. Students completing this certificate may use the credits towards the Computer Programmer/Analyst Associate of Business degree (0113).

Milestone

Completion of CIP 140 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITF 110	Intro Computer Info Systems	3 / 3
CITF 240	IT Project Management	3 / 3
CITF 260	Systems Analysis and Design	4 / 4
CITP 110	Intro to Programming-Python	4 / 4
CITP 140	Software Testing	3 / 3
CITP 240	Advanced Software Testing	3 / 3
CITW 150	Internet Literacy	3 / 3
COMM 110	Communication in the Workplace	3 / 3

Program of Study Required Courses, Limited Choice - Writing – Select one

Course Code	Course Title	Credit / Billing Hours
ENGL 124	Technical Writing	3 / 3
ENGL 127	Business Writing	3 / 3

Program of Study Required Courses, Limited Choice - Programming – Select one

Course Code	Course Title	Credit / Billing Hours
CITP 150	Intro to VB.NET Programming	4 / 4
CITP 180	Intro to C#.NET Programming	4 / 4
CITP 190	Intro to Programming in JAVA	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

33 credits / 33 billing hours

Recommended Course Sequence

Semester I
CITF 110
CITP 110
CITP 140 – Milestone course
COMM 110
Limited Choice - Writing

Semester II
CITF 240
CITF 260
CITP 240
CITW 150
Limited Choice - Programming

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Computer Support Specialist A.B.

Career Community: Computer Technology and Networking

Curriculum Code: 0713

Effective: Fall 2024 – Summer 2029

Description

Computer support specialists install, modify and make minor repairs to computer hardware and software systems and provide technical assistance and training to system users. They install or assist service personnel in installation of hardware and peripheral components, such as monitors, keyboards, printers, and disk drives on user's premises, following design or installation specifications. They may also load software packages into the computer; instruct users in use of equipment, software, and manuals; answer clients' inquiries concerning the systems operation; and diagnose system hardware, software, and operator problems. Students completing this curriculum may also be eligible to apply for certificates of completion in Microsoft Office Specialist (0841) and Computer Technology Basics (0844).

Milestone

In addition to the required General Education courses in Math and English, completion of CITS 125 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program at the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
- English Composition (second course)/Communication or Applied Communication –
Program of Study Required Courses will meet this requirement
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours

- Mathematics or Applied Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BUSN 118	Introduction to Business	3 / 3
CITA 115	Microsoft PowerPoint	3 / 3
CITA 119	Microsoft Word	3 / 3
CITA 126	Microsoft Excel	3 / 3
CITA 133	Microsoft Access Database	3 / 3
CITF 110	Intro Computer Info Systems	3 / 3
CITF 140	Information Technology Ethics	3 / 3
CITN 120	Networking Concepts	3 / 3
CITP 110	Intro to Programming-Python	4 / 4
CITS 110	Helpdesk Support Specialist	3 / 3
CITS 125	Computer Support: A+ Cert Prep	6 / 6
CITS 285	IT Professional Internship	3 / 3

Program of Study Required Courses, Limited Choice – *Select two*

Course Code	Course Title	Credit / Billing Hours
CITA 140	Microsoft Outlook	3 / 3
CITA 219	Advanced Microsoft Word	3 / 3
CITA 226	Microsoft Excel–Advanced	3 / 3
CITD 250	Database Concepts	3 / 3
CITF 260	Systems Analysis and Design	4 / 4
CITI 100	AI Foundations	3 / 3
CITS 225	Networking for PC Technicians	3 / 3
CITW 150	Internet Literacy	3 / 3
CITW 160	Web Development HTML & CSS	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

61 credits / 62 billing hours

Recommended Course Sequence

Semester I
Gen Ed – Mathematics or Applied Mathematics
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
CITA 115
CITA 126
CITF 110

Semester II
Gen Ed – English Composition or Applied English
CITA 119
CITA 133
CITN 120
CITP 110

Semester III
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
CITF 140
CITS 110
CITS 125 – Milestone course

Semester IV
BUSN 118
CITS 285
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Computer Support Technician A.A.S.

Career Community: Computer Technology and Networking

Curriculum Code: 0743

Effective: Fall 2024 – Summer 2029

Description

A computer support technician is highly knowledgeable in both computer hardware and software. This person must not only understand the operation of the computer system, but must also diagnose and repair the system when it fails, make upgrades, and perform preventive maintenance. A computer support technician also answers customers' questions relating to correct use of computers or components and may install new equipment. A successful computer support technician must understand electronics, computer hardware and software, and how they work together to make the computer operate. Computer support technicians are employed in computer sales and service shops and any place a large number of computers are found. Students completing this curriculum may also be eligible to apply for the Computer Technician Certificate of Achievement (0168). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of CITS 125 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication –
Program of Study Required Courses will fulfill this requirement
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours

- Mathematics or Applied Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITF 240	IT Project Management	3 / 3
CITI 100	AI Foundations	3 / 3
CITN 230	Linux Operating System	3 / 3
CITN 280	IT Security Foundations	3 / 3
CITO 100	Cloud Foundations with AWS	3 / 3
CITP 110	Intro to Programming-Python	4 / 4
CITS 110	Helpdesk Support Specialist	3 / 3
CITS 125	Computer Support: A+ Cert Prep	6 / 6
CITS 172	Intro to Basic Electronics	4 / 4.5
CITS 225	Networking for PC Technicians	3 / 3
CITS 285	IT Professional Internship	3 / 3

Program of Study Required Courses, Limited Choice – *Select three*

Course Code	Course Title	Credit / Billing Hours
CITC 282	Ethical Hacking	3 / 3
CITI 120	Data Analysis with Python	3 / 3
CITN 222	Wireless Networking & Security	3 / 3
CITN 250	Microsoft Network Server	3 / 3
CITO 120	Cloud Architecting with AWS	3 / 3
CITO 140	Cloud Development Ops with AWS	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

61 credits / 62.5 billing hours

Recommended Course Sequence

Semester I (Fall)
CITO 100
CITS 110
CITS 125 – Milestone course
CITS 172

Semester II (Spring)
Gen Ed – English Composition or Applied English
CITP 110
CITS 225
Limited Choice

Semester III (Fall)
Gen Ed- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed – Mathematics or Applied Mathematics
CITI 100
CITN 230
Limited Choice

Semester IV (Spring)
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
CITF 240
CITN 280
CITS 285
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Computer Technician C.A.

Career Community: Computer Technology and Networking

Curriculum Code: 0168

Effective: Fall 2024 – Summer 2029

Description

This certificate provides technical knowledge and skills to repair and service computers, test computers and computer components, and diagnose causes of malfunctions. Individuals are prepared for entry-level positions. Students completing this certificate may apply the credits toward the Computer Support Technician, Associate in Applied Science degree (0743).

Milestone

Completion of CITS 125 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITN 230	Linux Operating System	3 / 3
CITN 280	IT Security Foundations	3 / 3
CITO 100	Cloud Foundations with AWS	3 / 3
CITP 110	Intro to Programming-Python	4 / 4
CITS 110	Helpdesk Support Specialist	3 / 3
CITS 125	Computer Support: A+ Cert Prep	6 / 6
CITS 172	Intro to Basic Electronics	4 / 4.5
CITS 225	Networking for PC Technicians	3 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
ENGL 124	Technical Writing	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

32 credits / 32.5 billing hours

Recommended Course Sequence

Semester I
CITS 110
CITS 172
CITS 125 – Milestone course
Limited Choice

Semester II
CITP 110
CITN 230
CITN 280
CITO 100
CITS 225

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Computer Technology Basics C.C.

Career Community: Computer Technology and Networking

Curriculum Code: 0844

Effective: Fall 2024 – Summer 2029

Description

This certificate provides the basic classes for many Computer Information Technology Associate in Business degrees. Students will learn introductory concepts of computer usage in business. This certificate can be completed entirely online. Students completing this certificate may use the credits towards the Computer Support Specialist Associate of Business Degree (0713).

Milestone

Completion of CITF 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program at the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITF 110	Intro Computer Info Systems	3 / 3
CITF 140	Information Technology Ethics	3 / 3
CITI 100	AI Foundations	3 / 3
CITN 120	Networking Concepts	3 / 3
CITP 110	Intro to Programming-Python	4 / 4
CITS 110	Helpdesk Support Specialist	3 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
ENGL 121	Composition I	4 / 4
ENGL 124	Technical Writing	3 / 3
ENGL 127	Business Writing	3 / 3

Minimum Total Credit Hours

22 credits / 22 billing hours

Recommended Course Sequence

Semester I
CITF 110 – Milestone course
CITP 110
CITS 110
Limited Choice

Semester II
CITF 140
CITI 100
CITN 120

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Conservation and Sustainability A.S.

Career Community: Science and Mathematics

Curriculum Code: 1840

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in a Natural Resources related program. The courses outlined in this pathway are designed for students interested in pursuing degrees related to Conservation, Environmental Science, Fisheries and Wildlife Management, Natural Resources Management and/or Sustainability, as their main emphasis of study. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions and qualify for an LCC Transfer Studies Certificate of Achievement (1482)

Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution.

Milestone

In addition to the required General Education courses in Math and English, completion of GEOG 120 or GEOG 200 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

BIOL 210 is only offered during Fall semester.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department, Arts and Sciences Building, Room 3203, telephone number 517-483-1092, or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA) - Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Science and Mathematics Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Science and Mathematics Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meet this requirement.

- Mathematics
Science and Mathematics Career Community Courses meet this requirement.
- Natural Sciences
Science and Mathematics Career Community Courses meet this requirement.
- Social Sciences
Program of Study Required Courses meet this requirement.

Science and Math Career Community Courses – *These courses are required for all Science and Math programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 127 or	Cell Biology	4 / 6
GEOG 221 or	Physical Geography	4 / 4
GEOL 221 or	Physical Geology	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3
COMM 240 or	Interpersonal Communication	3 / 3
COMM 260 or	Nonverbal Communication	3 / 3
ENGL 122 or	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4
ENGL 121 or	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4
MATH 120 or	College Algebra	4 / 4
MATH 126 or	Precalculus	5 / 5
MATH 151	Calculus I	4 / 4

Notes:

Choose BIOL 127 for this degree.

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Program of Study Required Courses – *Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).*

Course Code	Course Title	Credit / Billing Hours
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
GEOG 120 or GEOG 200	Introduction to Geography World Regional Geography	3 / 3 4 / 4
GEOG 220 or GEOG 221 or GEOL 221	Weather, Forecasting & Climate Physical Geography Physical Geology	4 / 4 4 / 4 4 / 6

Note: If BIOL 127 was completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts - *Select two courses from different disciplines from [LCC General Education, Transfer Degrees \(MTA\), Humanities and Fine Arts](#).*

Program of Study Required Courses, Limited Choice – Social Sciences – *Select one course from [LCC General Education, Transfer Degrees \(MTA\), Social Sciences](#), from a discipline other than GEOG.*

Notes:

Students considering adding Secondary Education Certification in Math or Science in order to teach in Michigan Public Schools are strongly encouraged to select EDUC courses as listed to meet the Michigan Transfer Agreement (MTA) Social Science requirement.

For future transfer (Secondary Education Certification) to:

- Central Michigan University, Ferris State University, or Michigan State University choose EDUC 204.
- Eastern Michigan University, Grand Valley State University, University of Michigan Flint, or Western Michigan University choose EDUC 220.

Elective Courses, Recommended Choices – *Select courses as needed to reach the minimum 60 total credits required for this degree. For information on preferred courses for specific concentrations identified by transfer institutions, consult with an Academic or Program Advisor. (For the full list of options, see [AA and AS Degree Electives](#).)*

Course Code	Course Title	Credit / Billing Hours
BIOL 210	Natural Resource Conservation	4 / 6
BIOL 260	Botany	4 / 6
BIOL 265	Zoology	4 / 6
BIOL 270	Human Genetics	3 / 3
CHEM 152	General Chemistry Lecture II	3 / 3
CHEM 162	General Chemistry Lab II	1 / 3
CHEM 251	Organic Chemistry Lecture I	4 / 4
CHEM 252	Organic Chemistry Lecture II	4 / 4
CHEM 272	Organic Chemistry Laboratory	2 / 6
COMM 240	Interpersonal Communication	3 / 3
ECON 202	Principles of Economics-Macro	4 / 4
ENVR 121	Environmental Rules and Regs	3 / 3
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
GSCI 100	Intro to Geospatial Tech	3 / 3
MATH 141	Calculus with Applications	4 / 4
MATH 151	Calculus I	4 / 4
MATH 152	Calculus II	4 / 4
PHYS 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7
STAT 215	Intro to Probability and Stats	4 / 4

Notes:

BIOL 210 is highly recommended for this degree.

Minimum Total Credit Hours

60 credits / 66 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
MATH 120 or MATH 126 or MATH 151
Elective courses as needed for total credits (BIOL 210 is highly recommended)

Semester II
CHEM 151
CHEM 161
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
Limited Choice – Humanities and Fine Arts

Semester III
BIOL 127
GEOG 120 or GEOG 200 – Milestone course
Limited Choice – Humanities and Fine Arts
Elective courses as needed

Semester IV
BIOL 128
GEOG 220 or GEOG 221 or GEOL 221
Limited Choice – Social Sciences
Elective courses as needed

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Conservation and Sustainability C.A.

Career Community: Science and Mathematics

Curriculum Code: 1844

Effective: Fall 2024 – Summer 2029

Description

This certificate curriculum promotes entry-level technical knowledge, ethics, and rationale for a world view of sustainable practices in agriculture, alternative energy, business, construction, energy usage, natural resource management, and public policy. This certificate is for individuals seeking to enhance their employability by supplementing their existing credentials. Examples include those studying building trades or construction management seeking to implement sustainable building practices or students who hope to work in governmental and non-governmental agencies who intend to apply or advocate for sustainability.

Milestone

Completion of CHEM 151 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department, Arts and Sciences Building, Room 3203, telephone number 517-483-1092, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ARCH 113 or ARCH 275	Materials & Methods of Constr. Sustainable Building Design	4 / 6 4 / 6
BIOL 120 or BIOL 210	Environmental Science Natural Resource Conservation	4 / 6 4 / 6
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
GEOG 120 or GEOG 200	Introduction to Geography World Regional Geography	3 / 3 4 / 4
GEOL 230	Environmental Geology	4 / 6
MATH 120	College Algebra	4 / 4

Note: BIOL 210 offered Fall semester only.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

36 credits / 48 billing hours

Recommended Course Sequence

Semester I
BIOL 127
BIOL 210 (If choosing BIOL 210)
GEOG 120 or GEOG 200
MATH 120
Semester II
BIOL 120 (if choosing BIOL 120)
CHEM 151 – Milestone course
CHEM 161
ENGL 121 or ENGL 131
Semester III
ARCH 113 or ARCH 275
BIOL 128
GEOL 230

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Construction Management A.A.S.

Career Community: Building and Construction Trades

Curriculum Code: 1634

Effective: Fall 2024 – Summer 2029

Description

The Construction Management Degree is designed to prepare students to work in entry-level supervisory and management positions related to construction, including site supervisors, construction and project superintendents, field supervisors, project engineers, and estimating/scheduling assistants. Construction management professionals plan, direct, or coordinate activities related to the construction and maintenance of buildings and infrastructure. They participate as members of an integrated project team in the conceptual development of a construction project and oversee its organization, scheduling, budgeting, and implementation. This curriculum incorporates elements of the Associate Constructor Level I examination body of knowledge as established by the American Institute of Construction. The curriculum provides graduates with a broad foundation of technical and management abilities with an emphasis on job entry skill development, estimating, scheduling, project management, and specialized technical skills. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of DCTM 100 and DCTM 103 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

If students have already completed ELTE 102, HVAC 102, METS 102, TECH 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the DCTM 102 requirement. Any of these courses will fulfill the prerequisite for ARCH 113, ELTE 110, and the BLDT courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Construction Management Program, West Campus Building, Room M103, telephone number 517-483-5338 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 124, Technical Writing, 3 credits / 3 billing hours

- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
- Natural Science Lab or Applied Science and Technology Lab – *Select one*
PHYS 200, Intro to Applied Physics, 4 credits / 5 billing hours
PHYS 221, Introductory Physics I, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ACCG 101	Accounting Info for Management	3 / 3
ARCH 113	Materials & Methods of Constr.	4 / 6
BLDT 130	Building Exterior Construction	4 / 6
BLDT 150	Intro Masonry/Concrete Const	4 / 6
BLDT 160	Steel Framing	4 / 6
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 101	Drafting/Intro to CAD	3 / 4
DCTM 102	Industrial/Construction Safety	2 / 3
DCTM 103	Codes and Specifications	3 / 3
DCTM 200	Construction Management I	4 / 6
DCTM 201	Construction Management II	4 / 6
DCTM 210	MEP Equipment for Buildings	3 / 3
LEGL 215	Business Law-Basic Principles	3 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
BLDT 120	Structural Framing	4 / 6
BLDT 140	Building Interior Construction	4 / 6
CIVL 120	Surveying	4 / 6
DCTM 220	BIM for Construction	4 / 6
ELTE 110	Practical Electricity	4 / 6
HVAC 100	Fundamentals of HVAC	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

64 credits / 80 billing hours

Recommended Course Sequence

Semester I (Fall)
Gen Ed – Mathematics or Applied Mathematics
ARCH 113
DCTM 100 – Milestone course
DCTM 102
Semester II (Spring)
Gen Ed – English Composition or Applied English
ACCG 101
DCTM 103 – Milestone course
BLDT 130
Semester III (Summer)
Gen Ed - English Composition (second course)/Communication or Applied Communication
Gen Ed – Natural Sciences Lab or Applied Sciences and Technology Lab
Semester IV (Fall)
DCTM 101
DCTM 200
DCTM 210
LEGL 215
Limited Choice (Fall courses) as needed
Semester V (Spring)
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
BLDT 150
BLDT 160
DCTM 201
Limited Choice (Spring courses) as needed

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Construction Management C.A.

Career Community: Building and Construction Trades

Curriculum Code: 1635

Effective: Fall 2024 – Summer 2029

Description

The Construction Management Certificate of Achievement is designed to prepare students to work in entry-level supervisory and management positions related to construction, including site supervisors, construction and project superintendents, field supervisors, project engineers, and estimating/scheduling assistants. Construction management professionals plan, direct, or coordinate activities related to the construction and maintenance of buildings and infrastructure. They participate as members of an integrated project team in the conceptual development of a construction project and oversee its organization, scheduling, budgeting, and implementation. This curriculum provides students with the opportunity to add construction management competencies to another trade-or technical related certificate or degree (ARCH, BLDT, CIVL, ELTE, HVAC) or to work toward completion of the Construction Management Associate in Applied Science degree. This curriculum provides graduates with a broad foundation of technical and management abilities with an emphasis on job entry skill development, estimating, scheduling, project management, and specialized technical skills. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

Completion of DCTM 100 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed ELTE 102, HVAC 102, METS 102, TECH 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the DCTM 102 requirement. Any of these courses will fulfill the prerequisite for ARCH 113, ELTE 110, and the BLDT courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Construction Management Program, West Campus Building, Room M103, telephone number 517-483-5338 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ACCG 101	Accounting Info for Management	3 / 3
ARCH 113	Materials & Methods of Constr.	4 / 6
BLDT 160	Steel Framing	4 / 6
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 102	Industrial/Construction Safety	2 / 3
DCTM 103	Codes and Specifications	3 / 3
DCTM 200	Construction Management I	4 / 6
DCTM 201	Construction Management II	4 / 6
DCTM 210	MEP Equipment for Buildings	3 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
BLDT 120	Structural Framing	4 / 6
BLDT 130	Building Exterior Construction	4 / 6
BLDT 150	Intro Masonry/Concrete Const	4 / 6
CIVIL 120	Surveying	4 / 6
DCTM 220	BIM for Construction	4 / 6
ELTE 110	Practical Electricity	4 / 6
HVAC 100	Fundamentals of HVAC	3 / 3
MGMT 234	Diversity in the Workplace	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

33 credits / 43 billing hours

Recommended Course Sequence

Semester I (Fall)
ARCH 113
DCTM 100 – Milestone course
DCTM 102
DCTM 200

Semester II (Spring)
DCTM 103
DCTM 201
DCTM 210
Limited Choice

Semester III (Fall)
ACCG 101
BLDT 160

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Control Panel Wiring C.C.

Career Community: Electrical and Manufacturing

Curriculum Code: 1471

Effective: Fall 2024 – Summer 2029

Description

This certificate is designed to provide students with entry level skills in reading relay ladder logic diagrams and in the layout, mounting and terminating of equipment in control panels used in industry. The program builds a basic foundation in electrical theory, the operating characteristics of electrical controls and the connection and troubleshooting of electric motors. This curriculum would be an excellent choice for students wishing to enter the job market in the panel shop of a system or controls design firm or prepare for an industrial electrical apprenticeship. Most of the course work may be applied toward a Certificate of Achievement and/or an Associate in Applied Science Degree in Electrical Technology.

Milestone

Completion of ELTE 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
ELTE 111	Intro to Industrial Automation	4 / 6
ELTE 131	Machine Controls I	4 / 5
ELTE 132	Control Panel Assembly	2 / 3
ELTE 150	Electric Motor Maintenance	2 / 3
TECH 102	General Industry Safety	2 / 3

Minimum Total Credit Hours

18 credits / 26 billing hours

Recommended Course Sequence

Semester I
ELTE 110 – Milestone course
ELTE 111
TECH 102

Semester II
ELTE 131
ELTE 132
ELTE 150

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Correctional Officer C.C.

Career Community: Public Service Careers

Curriculum Code: 0840

Effective: Fall 2024 – Summer 2029

Description

This certificate option is designed to provide entry level skills for the person who wishes to enter the job market as a State Correctional Officer at a correctional facility. This curriculum meets the State of Michigan Corrections Officer Vocational Certificate requirements. Students completing this certificate may use the credits towards the Criminal Justice, Corrections Associate in Applied Science Degree (1209).

Milestone

Completion of CJUS 131 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Public Service Careers Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CJUS 131	Introduction to Corrections	3 / 3
CJUS 135	Legal Issues in Corrections	3 / 3
CJUS 250	Correctional Institutions	3 / 3
CJUS 251	Correctional Clients	3 / 3
CJUS 255	Human Relations/Crim Justice	3 / 3

Minimum Total Credit Hours

15 credits / 15 billing hours

Required Course Sequence

Semester I
CJUS 131 – Milestone course
CJUS 135
CJUS 250

Semester II
CJUS 251
CJUS 255

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Creative Writing A.A.

Career Community: History, Humanities, and English

Curriculum Code: 1623

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of ENGL 261 and ENGL 271 with a 2.0 or higher are key components for success in completing this program. Knowledge obtained in these courses may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the English Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education - Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course) or Communication
Program of Study Required Courses will meet this requirement
- Humanities and Fine Arts – *Select one from a discipline other than ENGL*
HIST 211, U.S. History to 1877, 4 credits / 4 billing hours
HUMS 160, Mythology, 4 credits / 4 billing hours
PHIL 101, Introduction to Philosophy, 3 credits / 3 billing hours
RELG 150, Intro to World Religions, 4 credits / 4 billing hours

- Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 120, Environmental Science, 4 credits / 6 billing hours
BIOL 125, Introductory Biology, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
GEOG 221, Physical Geography, 4 credits / 4 billing hours
GEOL 221, Physical Geology, 4 credits / 6 billing hours
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours
- Social Sciences – *Select two, each from a different discipline*
ANTH 270, Cultural Anthropology, 3 credits / 3 billing hours
PSYC 200, Introduction to Psychology, 4 credits / 4 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ENGL 200	Introduction to Literature	3 / 3
ENGL 261	Creative Writing I	3 / 3
ENGL 271	Creative Writing II	3 / 3
ENGL 278	Writing the Novel	3 / 3
ENGL 279	Prose Style	3 / 3

Program of Study Required Course, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
ENGL 122	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4

Elective Courses, Recommended Choices – *Select courses to reach the minimum 60 total credits required for this degree. (For the full list of options see [AA and AS Degree Electives.](#))*

Course Code	Course Title	Credit / Billing Hours
ENGL 208	Children's Literature	4 / 4
ENGL 211	World Literature I	4 / 4
ENGL 212	World Literature II	4 / 4
ENGL 220	Science Fiction	4 / 4
ENGL 240	The Film as Art	4 / 4
ENGL 255	American Lit to 1865	4 / 4
ENGL 256	American Lit 1865 to Present	4 / 4
ENGL 260	African-American Literature	4 / 4
ENGL 266	British Lit to 1800	4 / 4

Course Code	Course Title	Credit / Billing Hours
ENGL 267	British Lit 1800 to Present	4 / 4
ENGL 270	Gender and Literature	4 / 4
ENGL 290	Shakespeare	4 / 4

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Mathematics
MTA Natural Sciences
ENGL 261 – Milestone course

Semester II
MTA Humanities and Fine Arts
MTA Natural Sciences
ENGL 271 – Milestone course
Limited Choice

Semester III
MTA Social Sciences
ENGL 200
ENGL 278
Electives as needed for total credits

Semester IV
MTA Social Sciences
ENGL 279
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Criminal Justice A.A.

Career Community: Public Service Careers

Curriculum Code: 0146

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of CJUS 101 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Public Service Careers Program, West Campus Building, Room M127, telephone number 517-483-1570, or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
Career Community Courses meet this requirement.
- English Composition (second course) or Communication – *Select one*
Career Community Courses meet this requirement.
- Humanities and Fine Arts – *Select two from different disciplines*
Program of Study Required Courses meet this requirement.
- Mathematics – *Select one*
Career Community Courses meet this requirement.
- Natural Sciences – *Select two from different disciplines, one must be a lab course*
Program of Study Required Courses meet this requirement.
- Social Sciences – *Select two from different disciplines*
Career Community and Program of Study Required Courses meet this requirement.

Career Community Courses

These courses are required for all Public Service Career programs (Criminal Justice, Fire, and Legal Studies). They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
CJUS 101 or CJUS 131 or FIRE 100	Intro to Criminal Justice Introduction to Corrections Principles Emergency Services	3 / 3 3 / 3 4 / 4
COMM 120 or COMM 130 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4
MGMT 234 or PSYC 200 or SOCL 120	Diversity in the Workplace Introduction to Psychology Introduction to Sociology	3 / 3 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Choose CJUS 101, COMM 130, and SOCL 120 for this degree.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CJUS 101	Intro to Criminal Justice	3 / 3
CJUS 102	Crime Causes and Conditions	3 / 3
CJUS 103	Criminal Law	3 / 3
CJUS 106	Intro to Juvenile Justice	3 / 3
CJUS 131	Introduction to Corrections	3 / 3
CJUS 201	Criminal Justice Org/Admin	3 / 3

Course Code	Course Title	Credit / Billing Hours
CJUS 204	Criminal Investigation	4 / 4
CJUS 205	Policing into the 21 st Cent.	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
SOCL 120	Introduction to Sociology	4 / 4
SOCL 260	Race and Ethnicity	3 / 3

Note: Students who already took CJUS 101, COMM 130, and SOCL 120 as part of the Career Community, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts –

Select two courses from different disciplines as indicated for each major and/or transfer institution. If specific courses are not indicated in the notes below, choose any recommended course or choose from [General Education Transfer \(MTA\): Humanities and Fine Arts](#)

Course Code	Course Title	Credit / Billing Hours
HIST 212	U.S. History: 1877 to Present	4 / 4
PHIL 152	Introduction to Ethics	4 / 4

Program of Study Required Courses, Limited Choice – Natural Science –

Select two courses from different disciplines, one must be a lab course, as indicated for each major and/or transfer institution. If specific courses are not indicated in the notes below, choose any recommended course or choose from [General Education Transfer \(MTA\): Natural Science.](#)

Course Code	Course Title	Credit / Billing Hours
ANTH 280	Forensic Anthropology	3 / 3
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6
PFHW 123	Human Nutrition	3 / 3

Note: BIOL 120 is recommended. Students can take PFHW 123 for one of their Science courses, the other course must be a lab course.

Program of Study Required Courses, Limited Choice – Social Sciences –

Select one course from a discipline other than SOCL, as indicated for each major and/or transfer institution. If a specific course is not indicated in the notes below, choose the recommended course or choose from [General Education Transfer \(MTA\): Social Sciences](#)

Course Code	Course Title	Credit / Billing Hours
PYSC 200	Introduction to Psychology	4 / 4

Note: Students considering transfer, choose PSYC 200.

Elective Courses

Complete courses as needed from the list of [AA and AS Elective Courses](#) to reach the 60-credit minimum for this degree. Courses used to fulfill the requirements above cannot be used as Elective courses. For course selections, speak with an advisor or consult the program website(s) at the institution(s) you are considering for transfer.

Minimum Total Credit Hours

61 credits / 61 billing hours

Recommended Course Sequence

Semester I
ACAD 100
CJUS 101 – Milestone course
CJUS 102
CJUS 103
ENGL 121 or ENGL 131

Semester II
CJUS 106
CJUS 201
COMM 130
MATH 119 or MATH 120 or STAT 170
Limited Choice – Humanities and Fine Arts

Semester III
CJUS 204
SOCL 120
Limited Choice – Humanities and Fine Arts
Limited Choice - Natural Science

Semester IV
CJUS 131
CJUS 205
COMM 130
SOCL 260
Limited Choice - Social Science
Limited Choice - Natural Science

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Criminal Justice - Corrections A.A.S.

Career Community: Public Service Careers

Curriculum Code: 1209

Effective: Fall 2024 – Summer 2029

Description

This degree program prepares an individual for a career as a probation or parole officer, corrections officer, halfway house administrator, or jail corrections officer. This degree curriculum meets Michigan Corrections Officers Training Council standards. Students completing this curriculum may also be eligible to apply for the Corrections Office Certificate of Completion (0840). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of CJUS 131 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Public Service Careers Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication – *Select one*
Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics – *Select one*
Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
Program of Study Required Courses meet this requirement.

Career Community Courses

These courses are required for all Public Service Career programs (Criminal Justice, Fire, and Legal Studies). They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
CJUS 101 or CJUS 131 or FIRE 100	Intro to Criminal Justice Introduction to Corrections Principles Emergency Services	3 / 3 3 / 3 4 / 4
COMM 120 or COMM 130 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4
MGMT 234 or PSYC 200 or SOCL 120	Diversity in the Workplace Introduction to Psychology Introduction to Sociology	3 / 3 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Choose CJUS 131 and PYSC 200 for this degree.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITF 110	Intro Computer Info Systems	3 / 3
CJUS 101	Intro to Criminal Justice	3 / 3
CJUS 106	Intro to Juvenile Justice	3 / 3
CJUS 131	Introduction to Corrections	3 / 3
CJUS 134	Probation and Parole	3 / 3
CJUS 135	Legal Issues in Corrections	3 / 3
CJUS 250	Correctional Institutions	3 / 3
CJUS 251	Correctional Clients	3 / 3
CJUS 255	Human Relations/Crim Justice	3 / 3
LEGL 160	Critical Thinking in Law	3 / 3
PSYC 200	Introduction to Psychology	4 / 4

Notes: Students who completed CJUS 131 and PSYC 200 for the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Natural Science or Applied Science and Technology Lab – *Select one as indicated for each major and/or transfer institution. If a specific course is not indicated in the notes below, choose any recommended course or choose from [General Education Applied Degrees: Natural Science or Applied Science and Technology Lab](#)*

Course Code	Course Title	Credit / Billing Hours
ANTH 280	Forensic Anthropology	3 / 3
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6

Note: BIOL 120 is recommended. Students not transferring can take ANTH 280 or BIOL 121 as their Science course.

Program of Study Required Courses, Limited Choice – *Select six credits*

Course Code	Course Title	Credit / Billing Hours
CJUS 102	Crime Causes and Conditions	3 / 3
CJUS 103	Criminal Law	3 / 3
CJUS 126	Juvenile Offenders/Families	3 / 3
CJUS 204	Criminal Investigation	4 / 4
CJUS 245	Report Writing/Crim Justice	3 / 3
CJUS 272	Local Corrections Academy I	5 / 5
CJUS 273	Local Corrections Academy II	3 / 5
PSYC 250	Abnormal Psychology	3 / 3
SOCL 120	Introduction to Sociology	4 / 4
SOCL 255	Contemporary Social Problems	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
ACAD 100
CJUS 101
CJUS 131 – Milestone course
CJUS 135
ENGL 121 or ENGL 131
Semester II
CJUS 106
CJUS 251
CJUS 255
MATH 119 or MATH 120 or STAT 170
Semester III
CITF 110
CJUS 134
CJUS 250
LEGL 160
Limited Choice
Semester IV
COMM 120 or COMM 130 or ENGL 122 or ENGL 132
PSYC 200
Limited Choice – Natural Science or Applied Science and Technology Lab
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Criminal Justice - Digital Evidence Specialist A.A.S.

Career Community: Public Service Careers

Curriculum Code: 1803

Effective: Fall 2024 – Summer 2029

Description

We live in a technology driven society whereby computers aid in many if not all of our daily activities. Today's modern-day criminal uses technology to support criminal activity such as cell phones, tablets, GPS and computers. Police Officers are responsible for keeping the peace within a community using all the tools available to them. This career is perfectly suited for individuals that seek adventure and the satisfaction of helping the community using digital technology to solve crimes. Police Officers are problem solvers, emergency responders and natural investigators. This degree program prepares individuals for a career as a Digital Evidence Specialist, Law Enforcement Officer, and other criminal justice related careers such as in probation and parole. It also prepares students for possible entry into the Police Academy Program. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of CJUS 207 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Public Service Careers Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication – *Select one*
Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics – *Select one*
Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
Program of Study Required Courses meet this requirement.

Career Community Courses

These courses are required for all Public Service Career programs (Criminal Justice, Fire, and Legal Studies). They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
CJUS 101 or CJUS 131 or FIRE 100	Intro to Criminal Justice Introduction to Corrections Principles Emergency Services	3 / 3 3 / 3 4 / 4
COMM 120 or COMM 130 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4
MGMT 234 or PSYC 200 or SOCL 120	Diversity in the Workplace Introduction to Psychology Introduction to Sociology	3 / 3 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Choose CJUS 101 and MGMT 234 for this degree.

Students considering transfer, choose PSYC 200 or SOCL 120.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITC 287	Cybersecurity Incident Respons	3 / 3
CITF 110	Intro Computer Info Systems	3 / 3
CITF 120	Operating Systems Concepts	3 / 3
CITN 280	IT Security Foundations	3 / 3
CITS 225	Networking for PC Technicians	3 / 3
CJUS 101	Intro to Criminal Justice	3 / 3
CJUS 102	Crime Causes and Conditions	3 / 3
CJUS 103	Criminal Law	3 / 3
CJUS 104	Theory of Patrol	3 / 3
CJUS 203	Criminal Procedure	3 / 3
CJUS 204	Criminal Investigation	4 / 4
CJUS 207	Digital Evidence/1 st Responder	3 / 3
CJUS 210	Intro to Forensic Science	3 / 3
CJUS 245	Report Writing/Crim Justice	3 / 3
MGMT 234	Diversity in the Workplace	3 / 3

Note: Students who completed CJUS 101 and MGMT 234 as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Natural Science or Applied Science and Technology Lab – *Select one as indicated for each major and/or transfer institution. If a specific course is not indicated in the notes below, choose any recommended course or choose from [General Education Applied Degrees: Natural Science or Applied Science and Technology Lab](#)*

Course Code	Course Title	Credit / Billing Hours
ANTH 280	Forensic Anthropology	3 / 3
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6

Note: BIOL 120 is recommended. Students not transferring can take ANTH 280 as their Science course.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
ACAD 100
CITF 110
CJUS 101
ENGL 121 or ENGL 131
MATH 119 or MATH 120 or STAT 170

Semester II
CITF 120
CJUS 102
CJUS 207 – Milestone course
COMM 120 or COMM 130 or ENGL 122 or ENGL 132
MGMT 234

Semester III
CITC 287
CITN 280
CJUS 103
CJUS 104
CJUS 203

Semester IV
CITS 225
CJUS 204
CJUS 210
CJUS 245
Limited Choice, Natural Science or Applied Science and Technology Lab

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Criminal Justice - Digital Evidence Specialist C.C.

Career Community: Public Service Careers

Curriculum Code: 1802

Effective: Fall 2024 – Summer 2029

Description

We live in a technology driven society whereby computers aid in many if not all of our daily activities. Today's modern-day criminal uses technology to support criminal activity with the use of cell phones, tablets, GPS, and computers. Police Officers are responsible for keeping the peace within a community using all the tools available to them as well. This career is perfectly suited for individuals that seek adventure and the satisfaction of helping the community by utilizing digital technology to solve crimes. This Certificate of Completion is preparation on the road toward a future career as a Digital Forensic Analyst working with Law Enforcement Officers and other criminal justice related careers. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

Completion of CJUS 207 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Public Service Careers Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITC 287	Cybersecurity Incident Respons	3 / 3
CITF 110	Intro Computer Info Systems	3 / 3
CITF 120	Operating Systems Concepts	3 / 3
CITN 280	IT Security Foundations	3 / 3
CITS 225	Networking for PC Technicians	3 / 3
CJUS 207	Digital Evidence/1 st Responder	3 / 3
CJUS 210	Intro to Forensic Science	3 / 3

Minimum Total Credit Hours

21 credits / 21 billing hours

Recommended Course Sequence

Semester I
CITF 110
Semester II
CITF 120
CJUS 207 – Milestone course
Semester III
CITC 287
CITN 280
Semester IV
CITS 225
CJUS 210

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Criminal Justice - Juvenile Specialization A.A.S.

Career Community: Public Service Careers

Curriculum Code: 1475

Effective: Fall 2024 – Summer 2029

Description

This degree program prepares an individual for a career as a probation officer, juvenile detention, residential or community site worker/professional. To fulfill requirements for this degree, students may choose to also complete the Juvenile Care Worker Certificate of Achievement option. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of CJUS 106 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Public Service Careers Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication – *Select one*
Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics – *Select one*
Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
Program of Study Required Courses meet this requirement.

Career Community Courses

These courses are required for all Public Service Career programs (Criminal Justice, Fire, and Legal Studies). They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
CJUS 101 or CJUS 131 or FIRE 100	Intro to Criminal Justice Introduction to Corrections Principles Emergency Services	3 / 3 3 / 3 4 / 4
COMM 120 or COMM 130 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4
MGMT 234 or PSYC 200 or SOCL 120	Diversity in the Workplace Introduction to Psychology Introduction to Sociology	3 / 3 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Choose CJUS 101 and PSYC 200 for this degree.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CJUS 101	Intro to Criminal Justice	3 / 3
CJUS 102	Crime Causes and Conditions	3 / 3
CJUS 106	Intro to Juvenile Justice	3 / 3
CJUS 126	Juvenile Offenders/Families	3 / 3
CJUS 133	Juvenile Residential Services	3 / 3
CJUS 134	Probation and Parole	3 / 3
CJUS 135	Legal Issues in Corrections	3 / 3
CJUS 245	Report Writing/Crim Justice	3 / 3
CJUS 255	Human Relations/Crim Justice	3 / 3
CJUS 286	Juvenile Internship I	3 / 3
PSYC 200	Introduction to Psychology	4 / 4
SOWK 101	Introduction to Social Work	3 / 3

Note: Students who completed CJUS 101 and PSYC 200 as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Natural Science or Applied Science and Technology Lab – *Select one as indicated for each major and/or transfer institution. If a specific course is not indicated in the notes below, choose any recommended course or choose from [General Education Applied Degrees: Natural Science or Applied Science and Technology Lab](#)*

Course Code	Course Title	Credit / Billing Hours
ANTH 280	Forensic Anthropology	3 / 3
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6

Program of Study Required Courses, Limited Choice – Select three

Course Code	Course Title	Credit / Billing Hours
CJUS 103	Criminal Law	3 / 3
HUSE 110	Child Abuse and Neglect	3 / 3
HUSE 242	The Family: Addiction/Violence	3 / 3
PSYC 202	Psychology of Personality	3 / 3
PSYC 221	Child Psychology	3 / 3
PSYC 222	Adolescent Psychology	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

61 credits / 63 billing hours

Recommended Course Sequence

Semester I
ACAD 100
CJUS 106 – Milestone course
CJUS 126
ENGL 121 or ENGL 131
MATH 119 or MATH 120 or STAT 170
PSYC 200

Semester II
CJUS 101
CJUS 102
CJUS 133
COMM 120 or COMM 130 or ENGL 122 or ENGL 132
Limited Choice – Natural Science or Applied Science and Technology Lab

Semester III
CJUS 135
CJUS 255
CJUS 286
SOWK 101
Limited Choice

Semester IV
CJUS 134
CJUS 245
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Criminal Justice - Law Enforcement A.A.S.

Career Community: Public Service Careers

Curriculum Code: 1210

Effective: Fall 2024 – Summer 2029

Description

This degree program prepares individuals for a career as a law enforcement officer. It also prepares students for possible entry into the Police Academy Program. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of CJUS 101 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students who successfully complete LCC's Mid-Michigan Police Academy may substitute the Academy courses; CJUS 270, CJUS 271, PFFT 114 and PFHW 100; for the entire fourth semester of this guided pathway. Please see an advisor in the Public Service Careers Department office for more information.

Contact Information

For further information, including about career options, course substitutions and waivers, and current Mid-Michigan Police Academy admission and/or program requirements, contact the Public Service Careers Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication – *Select one*
Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences–
Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics – *Select one*
Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
Program of Study Required Courses meet this requirement.

Career Community Courses

These courses are required for all Public Service Career programs (Criminal Justice, Fire, and Legal Studies). They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
CJUS 101 or CJUS 131 or FIRE 100	Intro to Criminal Justice Introduction to Corrections Principles Emergency Services	3 / 3 3 / 3 4 / 4
COMM 120 or COMM 130 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4
MGMT 234 or PSYC 200 or SOCL 120	Diversity in the Workplace Introduction to Psychology Introduction to Sociology	3 / 3 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Choose CJUS 101 or CJUS 131, and MGMT 234 for this degree.

Students considering transfer, choose PSYC 200 or SOCL 120.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITF 110	Intro Computer Info Systems	3 / 3
CJUS 101	Intro to Criminal Justice	3 / 3
CJUS 102	Crime Causes and Conditions	3 / 3
CJUS 103	Criminal Law	3 / 3
CJUS 104	Theory of Patrol	3 / 3
CJUS 106	Intro to Juvenile Justice	3 / 3
CJUS 131	Introduction to Corrections	3 / 3
CJUS 201	Criminal Justice Org/Admin	3 / 3
CJUS 203	Criminal Procedure	3 / 3
CJUS 204	Criminal Investigation	4 / 4
CJUS 205	Policing into the 21 st Century	3 / 3
CJUS 207	Digital Evidence/1 st Responder	3 / 3
CJUS 210	Intro to Forensic Science	3 / 3
CJUS 245	Report Writing/Crim Justice	3 / 3
MGMT 234	Diversity in the Workplace	3 / 3

Note: Students that have already completed CJUS 101 or CJUS 131, and MGMT 234 for the Career Community, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Natural Science or Applied Science and Technology Lab – *Select one as indicated for each major and/or transfer institution. If a specific course is not indicated in the notes below, choose any recommended course or choose from [General Education Applied Degrees: Natural Science or Applied Science and Technology Lab](#)*

Course Code	Course Title	Credit / Billing Hours
ANTH 280	Forensic Anthropology	3 / 3
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6

Note: BIOL 120 is recommended. Students not transferring can take ANTH 280 as their Science course.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
ACAD 100
CITF 110
CJUS 101 – Milestone course
CJUS 102
ENGL 121 or ENGL 131
MATH 119 or MATH 120 or STAT 170

Semester II
CJUS 103
CJUS 106
CJUS 205
COMM 120 or COMM 130 or ENGL 122 or ENGL 132
MGMT 234

Semester III
CJUS 104
CJUS 203
CJUS 210
CJUS 245
Limited Choice – Natural Science or Applied Science and Technology Lab

Semester IV
CJUS 131
CJUS 201
CJUS 204
CJUS 207

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Customer Energy Specialist A.A.S.

Career Community: Electrical and Manufacturing

Curriculum Code: 1022

Effective: Fall 2024 – Summer 2029

Description

This curriculum is designed to give students the technical knowledge and customer relations skills to determine customer energy needs in the negotiation, design, installation, and application of utility facilities. They negotiate barriers in order to supply energy from the road or nearest energy supply center to the outside of a building under construction. Customer energy specialists are employed by utility companies, governmental agencies, heating and cooling contractors, the construction industry, and engineering and architectural firms. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of BUSN 118 and ELTE 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these classes will fulfill the prerequisite for ELTE 110 and ELTE 111.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours

- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours
PHYS 200, Intro to Applied Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ACCG 101	Accounting Info for Management	3 / 3
BUSN 118	Introduction to Business	3 / 3
CITA 110	Intro to Microsoft Office	3 / 3
DCTM 101	Drafting/Intro to CAD	3 / 4
ELTE 110	Practical Electricity	4 / 6
ENGL 121	Composition I	4 / 4
LEGL 215	Business Law-Basic Principles	3 / 3
MGMT 150	Managing Customer Relations	3 / 3
MKTG 200	Principles of Marketing	3 / 3
TECH 102	General Industry Safety	2 / 3

Program of Study Required Courses, Limited Choice - *Select 3 or 4 courses, minimum of twelve credits*

Course Code	Course Title	Credit / Billing Hours
CIVL 120	Surveying	4 / 6
ELTE 111	Intro to Industrial Automation	4 / 6
ELTE 141	National Electrical Code I	4 / 4
GSCI 100	Intro to Geospatial Tech	3 / 3
GSCI 210	Global Positioning Systems	3 / 4
METD 100	Basic Mechanical Drafting	3 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 68 billing hours

Recommended Course Sequence

Semester I
Gen Ed – English Composition or Applied English
BUSN 118 – Milestone course
CITA 110
TECH 102
Limited Choice

Semester II
Gen Ed – Mathematics or Applied Mathematics
ACCG 101
ELTE 110 – Milestone course
ENGL 121

Semester III
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
DCTM 101
LEGL 215
MGMT 150
MKTG 200

Semester IV
Gen Ed – English Composition (second course)/ Communication or Applied Communication
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Customer Energy Specialist C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 0893

Effective: Fall 2024 – Summer 2029

Description

This certificate curriculum provides entry-level technical knowledge and customer relations skills to determine customer energy needs in the negotiation, design, installation, and application of utility facilities. Course work will apply toward completion of the Customer Energy Specialist Associate Degree.

Milestone

Completion of BUSN 118 and MGMT 150 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these classes will fulfill the prerequisite for ELTE 110.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ACCG 101	Accounting Info for Management	3 / 3
BUSN 118	Introduction to Business	3 / 3
CITA 110	Intro to Microsoft Office	3 / 3
DCTM 101	Drafting/Intro to CAD	3 / 4
ELTE 110	Practical Electricity	4 / 6
ENGL 124	Technical Writing	3 / 3
LEGL 215	Business Law-Basic Principles	3 / 3
MGMT 150	Managing Customer Relations	3 / 3
MKTG 200	Principles of Marketing	3 / 3
TECH 102	General Industry Safety	2 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

34 credits / 39 billing hours

Recommended Course Sequence

Semester I
BUSN 118 – Milestone course
ELTE 110
TECH 102

Semester II
ACCG 101
CITA 110
ENGL 124
MGMT 150 – Milestone course

Semester III
DCTM 101
LEGL 215
MKTG 200
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Cybersecurity A.A.S.

Career Community: Computer Technology and Networking

Curriculum Code: 1832

Effective: Fall 2024 – Summer 2029

Description

This program is designed to provide the knowledge and skills needed to analyze security vulnerabilities, create a comprehensive incident-response plan, and implement the equipment, policies and procedures that protect a network and its related resources from unauthorized intrusion, information damage, or theft. Behaving ethically, writing policies and procedures, security operating systems, installing, and administering contemporary intrusion detection systems, and firewalls, implementing network defenses and countermeasures, responding to intrusions, and utilizing system-wide, multi-layered, compliance-based approaches are emphasized. Students completing this curriculum may also be eligible to apply for certificates of completion in Cybersecurity Foundations Certificate (1833). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of CITN 280 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

To be awarded this degree, students must earn a minimum grade of 2.0 in each course.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 127, Business Writing, 3 credits / 3 billing hours

- English Composition (second course)/Communication or Applied Communication – *Select one*
CITS 110, Help Desk Support Specialist, 3 credits / 3 billing hours
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITC 282	Ethical Hacking	3 / 3
CITC 285	System Defense	3 / 3
CITC 287	Cybersecurity Incident Response	3 / 3
CITC 290	Cybersecurity Risk Management	4 / 4
CITF 140	Information Technology Ethics	3 / 3
CITF 240	IT Project Management	3 / 3
CITN 230	Linux Operating System	3 / 3
CITN 250	Microsoft Network Server	3 / 3
CITN 280	IT Security Foundations	3 / 3
CITO 100	Cloud Foundations with AWS	3 / 3
CITP 110	Intro to Programming – Python	4 / 4
CITS 125	Computer Support: A+ Cert Prep	6 / 6
CITS 225	Networking for PC Technicians	3 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
CITI 100	AI Foundations	3 / 3
CITN 222	Wireless Networking & Security	3 / 3
CITO 120	Cloud Architecting with AWS	3 / 3
CITS 285	IT Professional Internship	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

64 credits / 66 billing hours

Recommended Course Sequence

Semester I
Gen Ed – English Composition or Applied English
Gen Ed – Mathematics or Applied Mathematics
CITP 110
CITS 125
Semester II
Gen Ed – English Composition (second course)/Communication or Applied Communication
CITF 140
CITN 250
CITO 100
CITS 225
Semester III
Gen Ed - Natural Sciences Lab or Applied Science and Technology Lab
CITF 240
CITN 230
CITN 280 – Milestone course
Limited Choice
Semester IV
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
CITC 282
CITC 285
CITC 287
CITC 290

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Cybersecurity Advanced C.C.

Career Community: Computer Technology and Networking

Curriculum Code: 1845

Effective: Fall 2024–Summer 2029

Description

This Certificate of Completion (C.C.) is tailored for working professionals in the IT industry who possess a relevant IT degree or have accrued two years of on-the-job experience. Its primary objective is to equip students with advanced knowledge and skills essential for practical applications in the field of Cybersecurity.

Within this program, students delve into fundamental concepts related to security vulnerability analysis, the creation of comprehensive incident response plans, and the implementation of equipment, policies, and procedures aimed at safeguarding networks and their associated resources from unauthorized intrusion, information compromise, or theft. The curriculum also places a strong emphasis on ethical behavior, policy and procedure development, security operating systems, as well as the installation and administration of modern intrusion detection systems and firewalls. In addition, students are trained in the implementation of network defenses and countermeasures, responding effectively to intrusions, and employing system-wide, multi-layered, compliance-based approaches.

The Cybersecurity Advanced C.C. focuses on preparing students for internationally recognized IT certifications and meeting the substantial demands of the business, industry, and government sectors.

Milestone

Completion of CITC 282 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

This Cybersecurity Advanced C.C. is intended for students who have completed Cybersecurity Foundations C.C. (1833), Cybersecurity A.A.S. (1832), or another comparable degree. For detailed admissions requirements, contact the Computer Information Technology Program at 517-267-6406 for assistance.

To be awarded the certificate, a student must earn a minimum grade of 2.0 in each course.

Students may petition, on a course-by-course basis with proper documentation, to waive prerequisite(s) based on equivalent experience or course(s) taken elsewhere. Contact a Computer Information Technology program advisor if you have questions or would like to submit a petition.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program, West Campus, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITC 282	Ethical Hacking	3 / 3
CITC 285	System Defense	3 / 3
CITC 287	Cybersecurity Incident Respons	3 / 3
CITC 290	Cybersecurity Risk Management	4 / 4

Program of Study Required Courses, Limited Choice – *Select one course*

Course Code	Course Title	Credit / Billing Hours
CITI 120	Data Analysis with Python	3 / 3
CITO 120	Cloud Architecting with AWS	3 / 3

Minimum Total Credit Hours

16 credits / 16 billing hours

Recommended Course Sequence

Semester I
CITC 282
Limited Choice

Semester II
CITC 285
CITC 287
CITC 290

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Cybersecurity Foundations C.C.

Career Community: Computer Technology and Networking

Curriculum Code: 1833

Effective: Fall 2024 – Summer 2029

Description

The Certificate of Completion (CC) in Cybersecurity Foundations focuses on the necessary skills required to secure, protect, and identify vulnerabilities in a network, including various operating systems and network devices. Emphasis is placed on developing the theoretical, legal, ethical, and practical skills needed to maintain security on mission-critical networking and server systems. The program is designed to provide applied skills necessary for government and industry employees. The program covers a variety of information security technologies and structured languages. The Cybersecurity program also focuses on the high-demand skills needed in business, industry, and government, as well as for internationally recognized IT certifications.

Milestone

Completion of CITN 280 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

To be awarded this Cybersecurity Foundations Certificate of Completion, a student must earn a minimum grade of 2.0 in each course. This certificate also aligns with and is stackable under the Computer Networking and Cybersecurity A.B. (1453) program of study.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program in the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITN 230	Linux Operating System	3 / 3
CITN 280	IT Security Foundations	3 / 3
CITP 110	Intro to Programming - Python	4 / 4
CITS 125	Computer Support: A+ Cert Prep	6 / 6
CITS 225	Networking for PC Technicians	3 / 3

Minimum Total Credit Hours

19 credits / 19 billing hours

Recommended Course Sequence

Semester I
CITP 110
CITS 125

Semester II
CITS 225

Semester III
CITN 230
CITN 280 – Milestone course

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Dental Hygiene A.A.S.

Career Community: Health and Human Service Careers

Curriculum Code: 0279

Effective: Fall 2024 – Summer 2026

Description

Dental hygienists are licensed preventive oral health care professionals. They provide educational, clinical, and therapeutic services to patients in dental offices, schools, hospitals, long-term care facilities, and other public health programs. Clinical skills include performing patient assessments; taking health histories; examining head, neck, and oral tissues for disease; checking blood pressures; exposing and processing dental x-ray pictures; applying decay-preventing agents to the teeth; polishing fillings; periodontal debridement; and polishing teeth. Upon graduation from this program which is accredited by the Commission on Dental Accreditation of the American Dental Association (CODA), 211 East Chicago Avenue, Suite 1900 Chicago, Illinois 60611, students are eligible to take the written and clinical exams necessary for licensure. In addition, students are eligible to take the Commission on Dental Competency Assessments (CDCA) exams for local anesthesia and nitrous oxide administration. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of BIOL 145, or BIOL 201 and 202, BIOL 203, and CHEM 120 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

This is a selective admission program. In order to be considered as a candidate for this program, students must meet basic admission requirements beyond those required for admission to the college. Courses listed below in Semesters I, II and III must be completed or in progress by the May 1st Dental Hygiene Program admission application deadline for a Fall start date. Once admitted, a student may not begin a new semester until they have successfully completed all DENT courses listed in the previous semester with a minimum grade of 2.5.

Contact Information

The admission and/or graduation requirements for this program may change each academic year. The program requirements below apply only to those students who have been admitted to the program for the 2024/2025 academic year. For further information, including career options, admission requirements, course substitutions and waivers, etc., contact the Dental Hygiene Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Applied Degrees Courses

- English Composition or Applied English
Program of Study Required Courses for Admission will meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Program of Study Required Courses for Admission will meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Program of Study Required Courses for Admission will meet this requirement.
- Mathematics or Applied Mathematics
Program of Study Required Courses for Admission will meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses for Admission will meet this requirement.

Program of Study Required Courses for Admission, Limited Choice – *Select BIOL 145 or, BIOL 201 and BIOL 202. Minimum 2.5 grade required. This selection also satisfies the General Education Natural Sciences Lab or Applied Science and Technology Lab requirement.*

Course Code	Course Title	Credit / Billing Hours
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201 and 202	Human Anatomy and Human Physiology	8 / 11 (total)

Program of Study Required Courses for Admission, Limited Choice – *Select one. Minimum 2.0 grade required. ENGL 121 or 122 recommended for transferability. This selection also satisfies the General Education English Composition requirement. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
ENGL 121	Composition I	4 / 4
ENGL 122	Composition II	4 / 4
ENGL 131	Honors Composition I	4 / 4
ENGL 132	Honors Composition II	4 / 4

Program of Study Required Courses for Admission, Limited Choice – *Select one. Minimum 2.0 grade required. This selection also satisfies the General Education English Composition (second course)/Communications or Applied Communications requirement. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
COMM 240	Interpersonal Communication	3 / 3

Program of Study Required Courses for Admission – *Minimum 2.5 grade required for BIOL 203 and CHEM 120. Minimum 2.0 grade required for PSYC 200, SOCL 120 and the MATH course. MATH 119 (or any course from the General Education Mathematics College Algebra category) also satisfies the General Education Mathematics or Applied Mathematics requirement. SOCL 120 also satisfies the General Education Humanities and Fine Arts or Social Sciences or Applied Social Sciences requirement.*

Course Code	Course Title	Credit / Billing Hours
BIOL 203	Microbiology	3 / 3
CHEM 120	Gen Organic & Biological Chem	4 / 4
MATH 119	Math - Applications for Living	4 / 4
PSYC 200	Introduction to Psychology	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Recommended Courses for Admission – *If taken, a minimum 2.0 grade is needed. STAT 170 or STAT 215 is recommended. Neither STAT 170 nor STAT 215 will fulfill the Dental Hygiene Program requirement of MATH 119 or higher.*

Course Code	Course Title	Credit / Billing Hours
BIOL 204	Microbiology Laboratory	1 / 3
STAT 170	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Minimum Total Credit Hours for Admission

30 credits / 32 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
DENT 140	Oral Histology & Embryology	1.5 / 1.5
DENT 142	PreClinical Dental Hygiene	3 / 3
DENT 144	PreClinic Dental Hyg Practice	2 / 8
DENT 146	Head, Neck & Oral Anatomy	3.5 / 5.5
DENT 148	Dental Radiography	3 / 5
DENT 152	Dental Hygiene I	2 / 2
DENT 154	Clinical Dental Hygiene I	2 / 8
DENT 156	Nutrition	2 / 2
DENT 158	Dental Pharmacology	3 / 3
DENT 161	Principles of Periodontics	3 / 3
DENT 174	Clinical Dental Hygiene II	1 / 4
DENT 176	Dental Materials & Methods	3 / 5
DENT 240	Anxiety & Pain Control Mgmt	2.5 / 4
DENT 242	Dental Hygiene III	2 / 2
DENT 244	Clinical Dental Hygiene III	3 / 12
DENT 247	Oral Pathology	3 / 3
DENT 248	Dental Public Health & Educ	3 / 3
DENT 252	Dental Hygiene IV	2 / 2

Course Code	Course Title	Credit / Billing Hours
DENT 254	Clinical Dental Hygiene IV	3 / 12
DENT 256	Community Oral Health	1.5 / 1.5

Program of Study Recommended Course

Course Code	Course Title	Credit / Billing Hours
DENT 270	Dental Hygiene Board Review	2 / 2

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

79 credits / 121.5 billing hours

Recommended Course Sequence

Semester I
BIOL 145 or (BIOL 201 and 202) – Milestone course(s)
ENGL 121, 122, 131, or 132
PSYC 200

Semester II
BIOL 203 – Milestone course
CHEM 120 – Milestone course
COMM 110, 120, 130, or 240
MATH 119 (or any General Education Mathematics College Algebra course)
SOCL 120

Semester III
BIOL 204 (Recommended)
STAT 170 or 215 (Recommended)

Semester IV (Fall)
DENT 140
DENT 142
DENT 144
DENT 146
DENT 148

Semester V (Spring)
DENT 152
DENT 154
DENT 156
DENT 158
DENT 161

Semester VI (Summer)
DENT 174
DENT 176

Semester VII (Fall)
DENT 240
DENT 242
DENT 244
DENT 247
DENT 248

Semester VIII (Spring)
DENT 252
DENT 254
DENT 256
DENT 270 (Recommended)

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Digital Media: Cinematography C.C.

Career Community: Art, Design, and Media

Curriculum Code: 1450

Effective: Fall 2024 – Summer 2029

Description

Cinematography is a focused course of study in the Digital, Media, Audio and Cinema program that prepares students for professional careers in digital/cinema production, particularly as it relates to the duties and skills of a cinematographer. All courses in this curriculum may be applied to the Digital Media Specialist Associate in Applied Science degree.

Milestone

Completion of DMAC 120, DMAC 130, and DMAC 140 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
DMAC 120	Intro to Audio Production	4 / 4
DMAC 130	Intro to Video Production	4 / 4
DMAC 131	Digital Cinematography I	4 / 4
DMAC 140	Pre-Production Design	3 / 3
DMAC 231	Digital Cinematography II	4 / 4
DMAC 234	Studio Production Techniques	4 / 4
DMAC 246	Workshop: Video	2 / 2

Minimum Total Credit Hours

25 credits / 25 billing hours

Recommended Course Sequence

Semester I
DMAC 120 – Milestone course
DMAC 130 – Milestone course
DMAC 140 – Milestone course
Semester II
DMAC 131
DMAC 234
Semester III - Summer
DMAC 231
Semester IV
DMAC 246

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Digital Media and Design A.A.S.

Career Community: Art, Design, and Media

Curriculum Code: 1846

Effective: Fall 2024 – Summer 2029

Description

The Digital Media and Design curriculum prepares learners to work in the expanding multimedia and media design arena, creating digital content for multiple platforms including websites, social media, print, videos, digital signage, and collateral materials. The curriculum fuses coursework from the areas of Graphic Communications, Video, Photography, and Digital Signage to provide the students with a diverse, adaptable skill set to meet the challenges in the evolving digital media landscape. Not all courses in this program transfer to all colleges. Students planning to transfer should see a program advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of ARTS 171 and DMAC 132 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Communication, Media, and the Arts department, GB 1222, telephone number 517-483-1546, or Student Services, (location), telephone number 517-483.1200.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences– *Select one*
Program of Study Required Courses meets this requirement
- Mathematics or Applied Mathematics – *Select one*
MATH 119, Math – Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
ISCI 121, Physical Science Concepts, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ARTS 102	2-D Design	3 / 4
ARTS 162	Type Communications	3 / 4
ARTS 171	Adobe Photoshop	3 / 4
ARTS 173	Web Design I	3 / 4
ARTS 175	Creative Design and Publishing	3 / 4
ARTS 269	The Portfolio	2 / 2
DMAC 130	Intro to Video Production	4 / 4
DMAC 132	Video Post-Production I	4 / 4
DMAC 232	Video Post-Production II	4 / 4
DMAC 255	Digital Presentation & Signage	3 / 3
PHOT 113	Lighting Concepts and Applic	3 / 3
PHOT 120	Still/Motion Capture & Editing	3 / 3
PHOT 200	Content on the Go	3 / 3

Program of Study Required Courses, Limited Choice – *Select two*

Course Code	Course Title	Credit / Billing Hours
ARTS 179	Web Design II	3 / 4
ARTS 251	Graphic Design Communications	3 / 4
DMAC 120	Intro to Audio Production	4 / 4
DMAC 234	Studio Production Techniques	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

62 credits / 70 billing hours

Recommended Course Sequence

Semester I – Fall
ARTS 102
ARTS 162
ARTS 171 – Milestone course
DMAC 130
PHOT 120
Semester II - Spring
Gen Ed - English Composition or Applied English
ARTS 173

Semester II - Spring
ARTS 175
DMAC 132 – Milestone course
PHOT 113

Semester III – Fall
Gen Ed - Mathematics or Applied Mathematics
DMAC 232
PHOT 200
Limited Choice

Semester IV - Spring
Gen Ed - English (second course)/Communication or Applied Communication
Gen Ed - Natural Sciences Lab or Applied Science and Technology Lab
ARTS 269
DMAC 255
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Digital Media Specialist A.A.S.

Career Community: Art, Design, and Media

Curriculum Code: 1458

Effective: Fall 2024 – Summer 2029

Description

This degree is an integrated curriculum that prepares individuals for careers in the fields of digital media, video production and audio production. Students will apply technical knowledge and skills to all facets of production including pre-production, production, and post-production. This curriculum prepares students to function as camera operators, video and sound editors, lighting technicians, and grips. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of DMAC 120, DMAC 130, and DMAC 140 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Program of Study Required Courses meets this requirement
- Mathematics or Applied Mathematics – *Select one*
MATH 119, Math – Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours

- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
ISCI 121, Physical Science Concepts, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
DMAC 120	Intro to Audio Production	4 / 4
DMAC 130	Intro to Video Production	4 / 4
DMAC 140	Pre-Production Design	3 / 3
DMAC 141	Ethics and Impact of the Media	3 / 3
DMAC 234	Studio Production Techniques	4 / 4
DMAC 240	Employment Issues in Media	2 / 2
DMAC 246*	Workshop: Video	2 / 2
DMAC 260	World Cinema	4 / 4
DMAC 295	Media/Cinema Portfolio	2 / 2
DMAC 296	Media/Cinema Internship	3 / 3

*DMAC 246 must be repeated for a total of 4 credits toward this degree.

Program of Study Required Courses, Limited Choice – *Select a minimum of three courses and 12 credits*

Course Code	Course Title	Credit / Billing Hours
DMAC 131	Digital Cinematography I	4 / 4
DMAC 132	Video Post-Production I	4 / 4
DMAC 231	Digital Cinematography II (Summer only)	4 / 4
DMAC 232	Video Post-Production II	4 / 4
DMAC 255	Digital Presentation & Signage	4 / 4
MUSC 171	Sound Design and Production	4 / 4
MUSC 172	Studio Recording	4 / 4
MUSC 197	Electronic Music Production	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I
Gen Ed - English Composition or Applied English
Gen Ed - English (second course) / Communication or Applied Communication
DMAC 120 – Milestone course
DMAC 130 – Milestone course
DMAC 140 – Milestone course

Semester II
Gen Ed - Mathematics or Applied Mathematics
DMAC 234
DMAC 240
DMAC 246
Limited Choice
Limited Choice

Semester III (Summer)
Limited Choice if choosing DMAC 231

Semester III (or IV if attended Summer)
Gen Ed - Natural Sciences Lab or Applied Science and Technology Lab
DMAC 141
DMAC 246
Limited Choice

Semester IV (or V if attended Summer)
DMAC 260
DMAC 295
DMAC 296

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Digital Media: Transfer A.A.S.

Career Community: Art, Design, and Media

Curriculum Code: 1452

Effective: Fall 2024 – Summer 2029

Description

This degree focuses on providing individuals with the foundational knowledge needed to obtain advanced training in digital media, audio, and video. The curriculum provides graduates with a broad foundation of technical abilities with an emphasis on job entry skill development in audio production, video production, and post production, as well as media distribution. This curriculum is also designed for students wishing to transfer into a four-year program. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of DMAC 120, DMAC 130, and DMAC 140 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course) or Communication – *Select one*
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours

- Humanities and Fine Arts – *Select one from a discipline other than DMAC*
 ARTS 102, 2D Design, 3 credits / 4 billing hours
 HUMS 160, Mythology, 4 credits / 4 billing hours
 MUSC 241, Musical Cultures 1750-Present, 4 credits / 4 billing hours
 PHIL 151, Intro to Logic & Critical Think, 4 credits / 4 billing hours
 PHIL 152, Introduction to Ethics, 4 credits / 4 billing hours
- Mathematics – *Select one*
 MATH 120, College Algebra, 4 credits / 4 billing hours
- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
 ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
 BIOL 120, Environmental Science, 4 credits / 6 billing hours
 BIOL 125, Introductory Biology, 4 credits / 6 billing hours
 CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
 GEOG 221, Physical Geography, 4 credits / 4 billing hours
 GEOL 230, Environmental Geology, 4 credits / 6 billing hours
 ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
 PFHW 123, Human Nutrition, 3 credits / 3 billing hours
- Social Sciences – *Select two, each from a different discipline*
 PSYC 200, Introduction to Psychology, 4 credits / 4 billing hours
 SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
DMAC 120	Intro to Audio Production	4 / 4
DMAC 130	Intro to Video Production	4 / 4
DMAC 140	Pre-Production Design	3 / 3
DMAC 141	Ethics and Impact of the Media	3 / 3
DMAC 260	World Cinema	4 / 4

Program of Study Required Courses, Limited Choice – *Select three*

Course Code	Course Title	Credit / Billing Hours
DMAC 131	Digital Cinematography I	4 / 4
DMAC 132	Video Post-Production I	4 / 4
DMAC 231	Digital Cinematography II	4 / 4
DMAC 232	Video Post-Production II	4 / 4
DMAC 234	Studio Production Techniques	4 / 4
MUSC 171	Sound Design and Production	4 / 4
MUSC 172	Studio Recording	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Social Sciences
DMAC 120 – Milestone course
DMAC 130 – Milestone course
Semester II
MTA English Composition (second course) or Communication
MTA Mathematics
DMAC 140 – Milestone course
DMAC 260
Semester III
MTA Humanities and Fine Arts
MTA Natural Sciences
DMAC 141
Limited Choice
Semester IV
MTA Natural Sciences
MTA Social Sciences
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Digital Media: Video/Cinema C.A.

Career Community: Art, Design, and Media

Curriculum Code: 1454

Effective: Fall 2024 – Summer 2029

Description

Video/Cinema is a focused course of study in the Digital, Media, Audio and Cinema program that prepares students for professional careers in digital video/cinema production and post-production industries. All courses in this curriculum can be applied to the Digital Media Specialist Associate in Applied Science degree.

Milestone

Completion of DMAC 120, DMAC 130, and DMAC 140 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517- 483-1546, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517- 483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
DMAC 120	Intro to Audio Production	4 / 4
DMAC 130	Intro to Video Production	4 / 4
DMAC 131	Digital Cinematography I	4 / 4
DMAC 132	Video Post-Production I	4 / 4
DMAC 140	Pre-Production Design	3 / 3
DMAC 234	Studio Production Techniques	4 / 4
DMAC 240	Employment Issues in Media	2 / 2
DMAC 246	Workshop: Video	2 / 2

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
DMAC 231	Digital Cinematography II	4 / 4
DMAC 232	Video Post-Production II	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

31 credits / 31 billing hours

Recommended Course Sequence

Semester I
DMAC 120 – Milestone course
DMAC 130 – Milestone course
DMAC 140 – Milestone course
Semester II
DMAC 131
DMAC 132
DMAC 240
Semester III
DMAC 234
DMAC 246
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Drone Pilot and Maintenance C.C.

Career Community: Computer Technology and Networking

Curriculum Code: 1825

Effective: Fall 2024 – Summer 2029

Description

This certificate prepares students for positions in industries utilizing Unmanned Aerial Systems (UAS) by providing foundational knowledge and skills in UAS mission planning, safe flight operations, software and image applications, UAS maintenance, laws and regulations, data analytics, project management, and site inspection using UAS platforms. In addition, students will prepare for and conduct unmanned flights similar to those commonly performed in the industry, observing Federal Aviation Administrations (FAA) regulations that govern UAS operations. Students completing this certificate may use the credits towards the Geospatial Science Technician Associate in Applied Science degree (0224).

Milestone

Completion of AVAU 100 and AVAU 200 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Geospatial Science Program, West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AVAU 100	Drone Flight Orient.-FAA Exam	2 / 2.5
AVAU 150	Drone Maintenance	2 / 3
AVAU 200	Advanced Drone Flight-Capstone	2 / 3
GSCI 100	Intro to Geospatial Tech	3 / 3
GSCI 110	Beginning ArcGIS	3 / 5
GSCI 150	Drone Flight for Industry	3 / 4
GSCI 241	Remote Sens/AirPhoto Interpret	3 / 4
GSCI 250	Drone Map Analysis	3 / 4

Minimum Total Credit Hours

21 credits / 28.5 billing hours

Recommended Course Sequence

Semester I
AVAU 100 – Milestone course
GSCI 100
GSCI 110
GSCI 150

Semester II
AVAU 150
AVAU 200 – Milestone course
GSCI 241
GSCI 250

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



E-Business A.B.

Career Community: Computer Technology and Networking

Curriculum Code: 0839

Effective: Fall 2024 – Summer 2029

Description

E-business is the use of Internet technology to conduct business transactions. Students will learn to apply technical and behavioral skills to the various progressive possibilities of e-business as it relates to current business practices. This degree can be completed entirely online. Graduates are prepared to work in a variety of manufacturing, wholesaling, retailing, or government environment. Students completing this curriculum may also be eligible to apply for a certificate in E-Business (0845). Not all courses in the program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of CITW 160 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program at the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
ARTS 102, 2D Design, 3 credits / 4 billing hours
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 117, Math for Business, 4 credits / 4 billing hours
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours

- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
 BIOL 120, Environmental Science, 4 credits / 6 billing hours
 CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
 PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BUSN 118	Introduction to Business	3 / 3
CITP 110	Intro to Programming-Python	4 / 4
CITW 150	Internet Literacy	3 / 3
CITW 160	Web Development HTML & CSS	3 / 3
CITW 175	Web Site Management	3 / 3
CITW 185	Web Development PHP & MySQL	4 / 4
MKTG 119	Mktg/Manage Your Profess Image	3 / 3
MKTG 200	Principles of Marketing	3 / 3
MKTG 210	Intro to Digital Marketing	3 / 3

Program of Study Required Courses, Limited Choice – *Select two or three courses, 8 credits minimum*

Course Code	Course Title	Credit / Billing Hours
ACCG 210	Principles of Financial Accg	4 / 4
BUSN 260	Starting a Business	4 / 4
ECON 201	Principles of Economics-Micro	4 / 4
MGMT 150	Managing Customer Relations	3 / 3
MGMT 200	Creative Thinking for Business	3 / 3
MKTG 120	Sales	3 / 3
MKTG 140	Principles of Advertising	3 / 3
MKTG 204	Marketing Research	3 / 3

Program of Study Required Courses, Limited Choice – *Select three courses, 9 credits minimum*

Course Code	Course Title	Credit / Billing Hours
CITD 120	SQL Concepts	3 / 3
CITF 140	Information Technology Ethics	3 / 3
CITP 130	Intro to Mobile App Devel	3 / 3
CITP 180	Intro to C#.NET Programming	4 / 4
CITP 190	Intro to Programming in JAVA	4 / 4
CITW 165	Web Development JavaScript	3 / 3
CITW 180	Web Development ASP.NET	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

63 credits / 64 billing hours

Recommended Course Sequence

Semester I
Gen Ed – English Composition or Applied English
BUSN 118
CITP 110
CITW 150
CITW 160 – Milestone course
Semester II
Gen Ed – Mathematics or Applied Mathematics
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
CITW 175
MKTG 200
MKTG 210
Semester III
Gen Ed – English Composition (second course)/Communication or Applied Communication
CITW 185
MKTG 119
Limited Choice
Limited Choice
Semester IV
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Limited Choice
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



E-Business C.A.

Career Community: Computer Technology and Networking

Curriculum Code: 0845

Effective: Fall 2024 – Summer 2029

Description

This certificate provides students with the opportunity to develop technical and marketing knowledge necessary to use the Internet as a business tool. Students will learn how to use business, marketing, and web related resources. This certificate can be completed entirely online. All of the course work in this certificate may be applied toward the E-Business Associate of Business Degree (0839).

Milestone

Completion of CITW 160 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program at the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BUSN 118	Introduction to Business	3 / 3
CITW 150	Internet Literacy	3 / 3
CITW 160	Web Development HTML & CSS	3 / 3
CITW 175	Web Site Management	3 / 3
MKTG 120	Sales	3 / 3
MKTG 200	Principles of Marketing	3 / 3
MKTG 210	Intro to Digital Marketing	3 / 3

Program of Study Required Courses, Limited Choice – *Select two courses, minimum of 6 credits*

Course Code	Course Title	Credit / Billing Hours
ARTS 102	2D Design	3 / 4
CITF 140	Information Technology Ethics	3 / 3
CITP 110	Intro to Programming-Python	4 / 4
CITP 130	Intro to Mobile App Devel	3 / 3
CITP 180	Intro to C#.NET Programming	4 / 4
CITW 165	Web Development JavaScript	3 / 3
CITW 185	Web Development PHP & MySQL	4 / 4

Program of Study Required Courses, Limited Choice– *Select two courses, minimum of 6 credits*

Course Code	Course Title	Credit / Billing Hours
BUSN 260	Starting a Business	4 / 4
ENGL 124	Technical Writing	3 / 3
MGMT 200	Creative Thinking for Business	3 / 3
MKTG 119	Mktg/Manage Your Profess Image	3 / 3
MKTG 120	Sales	3 / 3
MKTG 140	Principles of Advertising	3 / 3
MKTG 204	Marketing Research	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

33 credits / 33 billing hours

Recommended Course Sequence

Semester I
BUSN 118
CITW 150
CITW 160 – Milestone course
MKTG 200
Limited Choice
Limited Choice

Semester II
CITW 175
MKTG 120
MKTG 210
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Economics A.A.

Career Community: Business

Curriculum Code: 0230

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of ECON 201 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course) or Communication – *Select one*
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
- Humanities and Fine Arts – *Select two, each from a different discipline*
HIST 211, U.S. History to 1877, 4 credits / 4 billing hours
HIST 212, U.S. History: 1877 to Present, 4 credits / 4 billing hours
PHIL 151, Intro to Logic & Critical Think, 4 credits / 4 billing hours
PHIL 152, Introduction to Ethics, 4 credits / 4 billing hours

- Mathematics
Program of Study Required Courses will fulfill this requirement
- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
 ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
 BIOL 120, Environmental Science, 4 credits / 6 billing hours
 CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
 GEOG 221, Physical Geography, 4 credits / 4 billing hours
 GEOL 230, Environmental Geology, 4 credits / 6 billing hours
 ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
 PFHW 123, Human Nutrition, 3 credits / 3 billing hours
 PHYS 120, The Art of Physics, 4 credits / 5 billing hours
- Social Sciences – *Select one from a discipline other than ECON*
 POLS 120, American Political System, 4 credits / 4 billing hours
 PSYC 200, Introduction to Psychology, 4 credits / 4 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ACCG 210	Principles of Financial Accg	4 / 4
ECON 120	Power, Authority and Exchange	4 / 4
ECON 201	Principles of Economics-Micro	4 / 4
ECON 202	Principles of Economics-Macro	4 / 4
ECON 213	U.S. Economic/Business History	3 / 3
ECON 260	Comparative Economic Systems	3 / 3
MATH 120	College Algebra	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
MATH 126	Precalculus	5 / 5
MATH 141	Calculus with Applications	4 / 4

Electives Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for this degree. (For the full list of options, see [AA and AS Degree Electives.](#))*

Course Code	Course Title	Credit / Billing Hours
POLS 201	Intro to Political Science	3 / 3
POLS 240	Introduction to Public Policy	3 / 3

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Social Sciences
ACCG 210
ECON 120
Semester II
MTA English Comp (second course) or Communication
MTA Humanities and Fine Arts
MTA Natural Sciences
MATH 120
Semester III
MTA Humanities and Fine Arts
MTA Natural Sciences
ECON 201 – Milestone course
ECON 213
MATH 126 or 141
Semester IV
ECON 202
ECON 260
STAT 215
Electives as needed

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Education A.A.

Career Community: Education

Curriculum Code: 1624

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of CHDV 101 with a 2.5, and, EDUC 204 or EDUC 220, with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

CHDV courses need a 2.5 exit grade, all other courses require a 2.0. Some transfer universities require a 3.0 or higher in EDUC courses.

A criminal background check is required for employment in this field. EDUC 280 requires 70 additional hours of practical experience in K-12 classrooms at two different grade levels. All public schools are required to ask for a background check for anyone who regularly visits a K-12 school building. Students in EDUC 280, Teacher Education Practicum, should be prepared to present a completed ICHAT (online State background check) to their practicum site at the beginning of the assignment.

This pathway represents a standardized selection of classes. See Education Advisor for possible amendments to the sequence of courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education - Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Education Career Community Courses meet this requirement.

- English Composition (second course) or Communication Education Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meet this requirement.
- Mathematics
Education Career Community Courses meet this requirement.
- Natural Sciences
Program of Study Required Courses meet this requirement.
- Social Science
Education Career Community Courses meet this requirement.

Education Career Community Courses – These courses are required for all Education (Early Childhood Development and Education). Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
CHDV 101	Child Growth/Develop: 0-12 Yrs	4 / 4
EDUC 204 or EDUC 220	Educational Psychology Introduction to Education	3 / 3 3 / 3
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Central Michigan University (Pre-K-3, Pre-K-6, or 3-6) choose EDUC 220, ENGL 122 or 132, and MATH 120.
- Eastern Michigan University (Elementary Comprehensive or Early Childhood Comprehensive) choose EDUC 204 or EDUC 220, ENGL 122 or 132, and MATH 120.
- Ferris State University choose EDUC 220, ENGL 122 or 132, and MATH 120.
- Michigan State University (all Elementary) choose COMM 130, EDUC 204, and MATH 120.
- Grand Valley State University (all Elementary) choose EDUC 204, ENGL 122 or 132, and MATH 120.
- Western Michigan University choose EDUC 220, COMM 130, and MATH 119.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
EDUC 230	Intro to Special Education	3 / 3
EDUC 280	Teacher Education Practicum	3 / 3
ENGL 208	Children's Literature	4 / 4
HIST 211 or HIST 212 or HIST 220	U.S. History to 1877 U.S. History: 1877 to Present Michigan History	4 / 4 4 / 4 4 / 4
MATH 201	Math for Elementary Teachers I	4 / 4

For future transfer to:

- Central Michigan University choose HIST 212.
- Eastern Michigan University choose HIST 220.
- Ferris State University choose HIST 220.
- Grand Valley State University choose HIST 211.
- Michigan State University consult an MSU Education Advisor.

Program of Study Required Courses, Limited Choice - Natural Sciences - *Select two from two different disciplines to include one lab course, as indicated for each transfer institution and major. If specific courses are not indicated, choose any two courses from two different disciplines. One must be a lab course.*

Course Code	Course Title	Credit / Billing Hours
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6
ISCI 121	Physical Science Concepts	4 / 6
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Central Michigan University (Pre-K-3, Pre-K-6, or 3-6) choose BIOL 125 and ISCI 121.
- Eastern Michigan University (Elementary Comprehensive or Early Childhood Comprehensive) choose BIOL 125 and ISCI 121.
- Ferris State University (Pre-K – 6) choose BIOL 125 and ISCI 121.
- Grand Valley State University (Pre-K – 6) choose BIOL 125 and ISCI 121.
- Grand Valley State University (Pre-K - 6) choose ISCI 121 and any non-ISCI course.
- Michigan State University choose BIOL 120 and PHYS 120.
- Saginaw Valley State University choose BIOL 121 and ISCI 121.
- Western Michigan University choose BIOL 120 and PHYS 120.

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 total credits required for this degree, as indicated for each transfer institution and major. (For the full list of options, see [AA and AS Degree Electives](#).)*

Course Code	Course Title	Credit / Billing Hours
CHDV 111	Child Guidance/Communication	4 / 4
CHDV 215	Infant Toddler Program Dev	4 / 4
EDUC 226	Reading in Elementary School	3 / 3
COMM 120 or COMM 130	Dynamics of Communication Fundamentals Public Speaking	3 / 3 3 / 3
GEOG 120	Introduction to Geography	3 / 3
GEOG 200	World Regional Geography	4 / 4
HIST 211	U.S. History to 1877	4 / 4
HIST 220	Michigan History	4 / 4
LING 230	Introduction to Linguistics	3 / 3

Notes:

EDUC 226 is not highly transferrable and should only be taken as noted below.

For future transfer to:

- Central Michigan University (Pre-K-3, Pre-K-6, or 3-6) choose COMM 120 or 130, EDUC 226, and HIST 211 and 220.
- Eastern Michigan University (Early Childhood Comprehensive or Elementary Comprehensive) choose COMM 120 or 130, and GEOG 200;
- Ferris State University (pre-K-6) choose COMM 130, EDUC 226, and GEOG 200.
- Grand Valley State University (Pre-K – 6) choose GEOG 200.
- Michigan State University:
 - (B-K) choose CHDV 111 and 215.
 - (Pre-K - 3) choose CHDV 111, HIST 220, and LING 230;
 - (3-6) choose HIST 220 and LING 230;
- Western Michigan University choose HIST 220.

Minimum Total Credit Hours

60 credits / 63 billing hours

Recommended Course Sequence

Semester I
ACAD 100
CHDV 101 – Milestone course
EDUC 204 or EDUC 220 – Milestone course
EDUC 280
ENGL 121 or ENGL 131
Semester II
COMM 120 or COMM 130 or ENGL 122 or ENGL 132
EDUC 230
MATH 119 or MATH 120 or STAT 170
Limited Choice - Natural Sciences
Semester III
HIST 211 or HIST 212 or HIST 220
MATH 201
Limited Choice - Natural Sciences
Electives courses as needed for total credits
Semester IV
ENGL 208
Electives courses as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Education G.A.

Career Community: Education

Curriculum Code: 1843

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree is designed for students interested in pursuing a career in education, either through employment as a teacher paraprofessional or a preschool teacher/administrator in a daycare setting, or through transfer to a four-year institution to pursue a Bachelor's degree in Education leading to teacher certification in the state of Michigan. This Career Community includes the following pathways: Child Development and Early Education, Education, and Teacher Paraprofessional. This degree includes a set of courses common to all majors under this umbrella and to the majority of transfer institutions. Students beginning college in this degree program are encouraged to work with academic and program advisors throughout their first few semesters of study to determine their specific major area and transfer institution (if transfer is a goal).

Not all courses in this pathway transfer to all colleges.

Milestone

In addition to the required General Education courses in Math and English, completion of CHDV 101 with a 2.5, and EDUC 204 or EDUC 220 with a 2.0 or higher, is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

All CHDV courses must be completed with a minimum 2.5 grade and all non-CHDV courses in the Career Community block must be completed with a 2.0 grade to receive this degree.

Criminal background checks are required for employment in this field. For students in CHDV 111, CHDV 215, CHDV 220, and CHDV 284, criminal background checks and DHHS Central Registry Clearance are required to meet State of Michigan Child Care Licensing regulations. In addition, students may also be required to show proof of vaccinations, including COVID, prior to beginning field placement. Students enrolled in CHDV 284 may be required to complete a TB test for field placement.

Students taking EDUC 280 should be prepared to present a completed ICHAT (online State background check) to their practicum site at the beginning of the assignment.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Child Development department, Health and Human Services Building, Room 108, telephone number 517-483-1410 for information related to the Child Development and Early

Education program or the Social Sciences and Humanities department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061 for information related to the Education or Teacher Paraprofessional program, or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degrees

Select courses as indicated for specific transfer institutions and majors. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Education Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Education Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Education Career Community Courses meet this requirement
- Mathematics or Applied Mathematics
Education Career Community Courses meets meet this requirement.
- Natural Sciences Lab or Applied Sciences and Technology Lab
Program of Study Required Courses meet this requirement.

Education Career Community Courses – *These courses are required for all Education programs. They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
CHDV 101	Child Growth/Develop: 0-12 Yrs	4 / 4
COMM 120 or COMM 130 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
EDUC 204 or EDUC 220	Educational Psychology Introduction to Education	3 / 3 3 / 3
ENGL 121 or ENGL 131	Composition I or Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math - Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Central Michigan University (Pre-K-3, Pre-K-6, or 3-6) choose EDUC 220, ENGL 122 or 132, and MATH 120.
- Eastern Michigan University (Elementary Comprehensive or Early Childhood Comprehensive) choose ENGL 122 or 132, and MATH 120.
- Ferris State University choose EDUC 220, ENGL 122 or 132, and MATH 120.
- Michigan State University (all Elementary) choose COMM 130, EDUC 204, and MATH 120.
- Grand Valley State University (all Elementary) choose EDUC 204.
- Saginaw Valley State University (Education) choose EDUC 220.
- University of Michigan Flint (Child Development) choose ENGL 122.
- Western Michigan University choose COMM 130, EDUC 220, and MATH 119.

Program of Study Required Courses, Limited Choice – Natural Sciences – *Select one as indicated for each transfer institution and major. If a specific course is not indicated for your transfer institution or major, select any course.*

Course Code	Course Title	Credit / Billing Hours
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
ISCI 121	Physical Science Concepts	4 / 6
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Central Michigan University, Eastern Michigan University, Ferris State University, and Grand Valley State University (Child Development or Education) choose BIOL 125.
- Michigan State University and Western Michigan University (Child Development or Education) choose BIOL 120.
- Saginaw Valley State University (Education) and University of Michigan Flint (Child Development) choose BIOL 121.

Program of Study Required Courses, Limited Choice -Select 36 credits. Work with an Academic Advisor or Program Advisor to select the most appropriate courses or to select a field-specific major or transfer major that meets your educational and career goals. Some courses meet General Education requirements for the Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
ARTS 240	Art for Elementary Teachers	3 / 4
CHDV 100	Foundations Early Childhood Ed	3 / 3
CHDV 111	Child Guidance/Communication	4 / 4
CHDV 122	Creativity and Play	1 / 1
CHDV 123	Literacy and Play	1 / 1
CHDV 124	Young Investigators: Math/Sci	1 / 1
CHDV 129	Caring for Youngest Learners	2 / 2
CHDV 132	Leadership Early Childhood Ed	2 / 2
CHDV 135	Inclusion for Every Learner	3 / 3
CHDV 215	Infant Toddler Program Dev	4 / 4
CHDV 220	Preschool Curriculum Approach	4 / 4
CHDV 222	Caring for School-Age Children	2 / 2
CHDV 230	Early Childhood Program Admin	3 / 3
CHDV 284	Early Childhood Practicum	5 / 5
COMM 120 or COMM 130	Dynamics of Communication Fundamentals Public Speaking	3 / 3 3 / 3
EDUC 226	Reading in Elementary School	3 / 3
EDUC 228	Technology in Education	3 / 3
EDUC 230	Intro to Special Education	3 / 3
EDUC 280	Teacher Education Practicum	3 / 3
ENGL 208	Children's Literature	4 / 4
GEOG 120	Introduction to Geography	3 / 3
GEOG 200	World Regional Geography	4 / 4
HIST 211	U.S. History to 1877	4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4
HIST 214	African History	4 / 4
HIST 215	World History to 1500	4 / 4
HIST 216	World History since 1500	4 / 4
HIST 220	Michigan History	4 / 4
HUSE 110	Child Abuse and Neglect	3 / 3
ISCI 121	Physical Science Concepts	4 / 6
LING 230	Introduction to Linguistics	3 / 3
MATH 201	Math for Elementary Teachers I	4 / 4
MATH 202	Math for Elementary Teachers II	4 / 4
MUSC 199	Music Appreciation	3 / 3
PFHW 123	Human Nutrition	3 / 3
PFKN 260	Growth and Motor Behavior	3 / 3

Course Code	Course Title	Credit / Billing Hours
POLS 120	American Political System	4 / 4
PSYC 200	Introduction to Psychology	4 / 4
PSYC 205	Human Growth and Development	3 / 3
PSYC 221	Child Psychology	3 / 3
RELG 150	Intro to World Religions	4 / 4
RELG 210	Comparative Religions	3 / 3
SIGN 160	Intro to the Deaf Community	3 / 3
SIGN 161	American Sign Language I	3 / 3
SPAN 121	Elementary Spanish I	4 / 4
STAT 170	Introduction to Statistics	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I
ACAD 100
CHDV 101 – Milestone course
EDUC 204 or EDUC 220 – Milestone course
ENGL 121 or 131

Semester II
COMM 120 or COMM 130 or ENGL 122 or ENGL 132
MATH 119 or MATH 120 or STAT 170
Limited Choice - Natural Sciences
Students who have decided on an academic program within the Education Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.
Limited Choice courses for students completing the Education GA.

Semester III
Limited Choice courses for students completing the Education GA.

Semester IV
Limited Choice courses for students completing the Education GA.

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



EKG Technician C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1442

Effective: Fall 2024 – Summer 2025

Description

This certificate is designed to prepare an individual to safely and skillfully work as an EKG technician, also known as a cardiology technician at certain facilities. An EKG technician works primarily in a hospital but could also work in an outpatient clinic or cardiology practice. Completers of this curriculum meet the requirements to take any one of the various exams for EKG certification.

Additional Information

Students must complete all courses with a minimum grade of 2.5 to receive this certificate.

Students wishing to pursue an associate degree, should declare the Allied Health A.A.S. major. Courses in this program of study may be applied toward that degree.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Community Health Services Education Programs, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHSE 120	Medical Terminology	4 / 4
CHSE 136	EKG Technician	3.5 / 4

Minimum Total Credit Hours

7.5 credits / 8 billing hours

Required Course Sequence

Students have the option to take the courses in one semester or two semesters.

One-Semester Option

Semester I
CHSE 120
CHSE 136

Two-Semester Option

Semester I
CHSE 120

Semester II
CHSE 136

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Electrical Apprenticeship C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 1570

Effective: Fall 2024 – Summer 2029

Description

This curriculum must be taken while working for an electrical contractor or other licensed employer as a registered apprentice. It is designed to provide electrical apprentices with a background in applied electrical theory and the basic skills necessary to a practicing electrician. This certificate fulfills all related trade instruction required for a United States Department of Labor, Office of Apprenticeship registered apprenticeship program in compliance with State of Michigan requirements for apprentice electricians.

Milestone

Completion of ELTE 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in the course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Students interested in pursuing an Associate in Applied Science Degree in Electrical Technology should see a program advisor for course substitutions that would more readily transfer to that degree. Students who have previously taken electrical courses should also see an advisor for possible course substitutions.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these classes will fulfill the prerequisite for ELTE 110.

Students who plan to pursue the Electrical Technology, Associate in Applied Science Degree (0134) should substitute ELTE 121 for ELTA 106 and ELTA 120; and ELTE 123 for ELTA 155 and ELTE 150.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTA 105	Elect. Industry Orientation	.5 / .5
ELTA 106	Basic Electrical Calculations	2 / 2
ELTA 120	AC Fundamentals - Electrician	2 / 3
ELTA 155	Transformer Fundamentals	2 / 3
ELTA 160	PLC Overview for Electricians	1 / 2
ELTA 180	Introduction to Fire Alarms	1 / 1
ELTE 110	Practical Electricity	4 / 6
ELTE 131	Machine Controls I	4 / 5
ELTE 141	National Electrical Code I	4 / 4
ELTE 145	Electrical Prints for Building	4 / 5
ELTE 150	Electric Motor Maintenance	2 / 3
TECH 102	General Industry Safety	2 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
ELTE 112	Basic Wiring Installation	2 / 3
ELTE 132	Control Panel Assembly	2 / 3
ELTE 142	National Electrical Code II	4 / 4
ELTE 232	Machine Controls II	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

30.5 credits / 40.5 billing hours

Recommended Course Sequence

Semester I (Fall)
ELTE 110 – Milestone course
TECH 102
Semester II (Spring)
ELTA 105
ELTE 141

Semester III (Fall)
ELTA 106
ELTE 150
Semester IV (Spring)
ELTA 120 (First 8 weeks)
ELTA 155 (Second 8 weeks)
Semester V (Fall)
ELTE 145
Semester VI (Spring)
ELTE 131
Semester VII (Fall)
ELTA 160
ELTA 180
Semester VIII (Spring)
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Electrical Machine Controls C.C.

Career Community: Electrical and Manufacturing

Curriculum Code: 0966

Effective: Fall 2024 – Summer 2029

Description

This certificate is designed to provide students with entry level skills in the understanding of basic electrical theory, basic electrical operating characteristics of industrial machinery, and basic operation of programmable logic controllers. This curriculum would be an excellent choice for students wishing to enter an industrial electrical apprenticeship or for students in other industrial trades who wish to have a basic understanding of electrical control of industrial machines. All of the course work may be applied toward the Electrical Technology, Associate in Applied Science Degree.

Milestone

Completion of ELTE 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for ELTE 110.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
ELTE 111	Intro to Industrial Automation	4 / 6
ELTE 131	Machine Controls I	4 / 5
ELTE 132	Control Panel Assembly	2 / 3
ELTE 232	Machine Controls II	4 / 6
ELTE 260	Programmable Controllers I	4 / 6
METS 160	Introduction to Robotics	3 / 4.5
TECH 102	General Industry Safety	2 / 3

Minimum Total Credit Hours

27 credits / 39.5 billing hours

Recommended Course Sequence

Semester I
ELTE 110 – Milestone course
ELTE 111
METS 160
TECH 102

Semester II
ELTE 131
ELTE 132

Semester III
ELTE 232
ELTE 260

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Electrical Technology A.A.S.

Career Community: Electrical and Manufacturing

Curriculum Code: 0134

Effective: Fall 2024 – Summer 2029

Description

Students in this program select one of three subspecialties; Construction, Automation and Control, or Power Generation. Construction electricians install electrical wiring and systems in homes, offices, stores or industrial plants. Automation and machine control designers are responsible for designing control systems that operate automated work cells in manufacturing facilities. Industrial electricians work in industry maintaining and troubleshooting power and control circuits on machinery. Power Generation technicians operate and maintain engine or turbine-driven generators in stand-alone or integrated facilities. All subspecialties require mechanical aptitude, logical thinking and problem-solving skills. Employment opportunities vary with each specialty.

Milestone

In addition to the required General Education courses in Math and English, completion of ELTE 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

- Students in this program choose one subspecialty pathway: 1) Construction, 2) Automation and Control, or 3) Power Generation, to determine the courses to take each semester.
- Upon completion of a subspecialty, any additional subspecialty courses will not count toward the student's enrollment level for determining financial aid eligibility.
- If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for ELTE 110, ELTE 111 and ELTE 121.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 124, Technical Writing, 3 credits / 3 billing hours
ENGL 127, Business Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences– *Select one*
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*
Program of Study Required Courses will fulfill this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours
CHEM 151 and CHEM 161, General Chemistry I and Lab I, total 5 credits / 7 billing hours
METM 190, Metallurgy and Heat Treatment, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Construction Subspecialty Pathway

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BLDT 120	Structural Framing	4 / 6
CITN 115	IoT & Automation Fundamentals	5 / 6
DCTM 101	Drafting/Intro to CAD	3 / 4
ELTA 105	Elect. Industry Orientation	.5 / .5
ELTA 160	PLC Overview for Electricians	1 / 2
ELTA 180	Introduction to Fire Alarms	1 / 1
ELTE 110	Practical Electricity	4 / 6
ELTE 111	Intro to Industrial Automation	4 / 6
ELTE 112	Basic Wiring Installation	2 / 3
ELTE 121	Electrical Mathematics	5 / 6
ELTE 123	Motors and Transformers	5 / 7
ELTE 131	Machine Controls I	4 / 5

Course Code	Course Title	Credit / Billing Hours
ELTE 141	National Electrical Code I	4 / 4
ELTE 142	National Electrical Code II	4 / 4
ELTE 145	Electrical Prints for Building	4 / 5
ELTE 150	Electric Motor Maintenance	2 / 3
TECH 102	General Industry Safety	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

67.5 credits / 85.5 billing hours

Recommended Course Sequence

Semester I
Gen Ed – English Composition or Applied English
CITN 115
ELTE 110
ELTE 111
TECH 102

Semester II
DCTM 101
ELTA 105
ELTE 112
ELTE 121
ELTE 131
ELTE 141

Semester III
BLDT 120
ELTA 160
ELTA 180
ELTE 123
ELTE 145

Semester IV
Gen Ed – English Composition (second course)/ Communication or Applied Communication
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
ELTE 142
ELTE 150

Automation and Control Subspecialty Pathway

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
ELTE 111	Intro to Industrial Automation	4 / 6
ELTE 121	Electrical Mathematics	5 / 6
ELTE 122	Industrial Control Electronics	5 / 7
ELTE 123	Motors and Transformers	5 / 7
ELTE 131	Machine Controls I	4 / 5
ELTE 132	Control Panel Assembly	2 / 3
ELTE 232	Machine Controls II	4 / 6
ELTE 260	Programmable Controllers I	4 / 6
ELTE 261	Programmable Controllers II	6 / 8
METS 115	Intro to Mechanical Systems	4 / 6
METS 160	Introduction to Robotics	3 / 4.5
TECH 102	General Industry Safety	2 / 3

Program of Study Required Courses, Limited Choice – *Select one or two for a minimum of 5 credits*

Course Code	Course Title	Credit / Billing Hours
ELTE 141	National Electrical Code I	4 / 4
ELTE 150	Electric Motor Maintenance	2 / 3
ELTE 262	Programmable Controllers III	5 / 8

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

70 credits / 95.5 billing hours

Recommended Course Sequence

Semester I
Gen Ed – English Composition or Applied English
ELTE 110 – Milestone course
ELTE 111
METS 160
TECH 102

Semester II
ELTE 121
ELTE 131
ELTE 132
Limited Choice

Semester III
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
ELTE 123
ELTE 232
ELTE 260
METS 115

Semester IV
Gen Ed – English Composition (second course)/ Communication or Applied Communication
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
ELTE 122
ELTE 261
Limited Choice

Power Generation Subspecialty Pathway

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
ELTE 111	Intro to Industrial Automation	4 / 6
ELTE 121	Electrical Mathematics	5 / 6
ELTE 123	Motors and Transformers	5 / 7
ELTE 131	Machine Controls I	4 / 5
ELTE 132	Control Panel Assembly	2 / 3
ELTE 136	Digital Basics	2 / 3
ELTE 150	Electric Motor Maintenance	2 / 3
ELTE 154	Utility Prints and Diagrams	3 / 3
ELTE 173	Energy Industry Fundamentals I	2 / 2
ELTE 174	Energy Industry Fundamentals II	2 / 2

Course Code	Course Title	Credit / Billing Hours
ELTE 251	Energy Generation & Control I	4 / 5
ELTE 252	Energy Generation & Control II	4 / 5
ELTE 255	Power Instrumentation	4 / 5
ELTE 260	Programmable Controllers I	4 / 6
ELTE 261	Programmable Controllers II	6 / 8
TECH 102	General Industry Safety	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

72 credits / 92 billing hours

Recommended Course Sequence

Semester I
Gen Ed – English Composition or Applied English
ELTE 110 – Milestone course
ELTE 111
ELTE 173 (First 8 weeks)
ELTE 174 (Second 8 weeks)
TECH 102

Semester II
Gen Ed – English Composition (second course)/ Communication or Applied Communication
ELTE 121
ELTE 131
ELTE 132
ELTE 150
ELTE 154

Semester III
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
ELTE 123
ELTE 136
ELTE 251
ELTE 260

Semester IV
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
ELTE 252
ELTE 255
ELTE 261

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Electrical Technology - Construction C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 0759

Effective: Fall 2024 – Summer 2029

Description

This certificate is designed to provide students with a background in applied electrical theory and the basic mechanical skills necessary to the practicing construction electrician.

Milestone

Completion of ELTE 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for BLDT 120, ELTE 110, and ELTE 121.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITN 115	IoT & Automation Fundamentals	5 / 6
ELTA 105	Elect. Industry Orientation	.5 / .5
ELTA 180	Introduction to Fire Alarms	1 / 1
ELTE 110	Practical Electricity	4 / 6
ELTE 112	Basic Wiring Installation	2 / 3
ELTE 121	Electrical Mathematics	5 / 6
ELTE 131	Machine Controls I	4 / 5
ELTE 141	National Electrical Code I	4 / 4
ELTE 142	National Electrical Code II	4 / 4
ELTE 145	Electrical Prints for Building	4 / 5
ELTE 150	Electric Motor Maintenance	2 / 3
TECH 102	General Industry Safety	2 / 3

Program of Study Required Courses, Limited Choice – Select one

Course Code	Course Title	Credit / Billing Hours
BLDT 120	Structural Framing	4 / 6
DCTM 101	Drafting/Intro to CAD	3 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

40.5 credits / 50.5 billing hours

Recommended Course Sequence

Semester I (Fall)
CITN 115
ELTE 110 – Milestone course
Limited Choice
TECH 102

Semester II (Spring)
ELTA 105
ELTE 112
ELTE 121
ELTE 131
ELTE 141

Semester III (Fall)
ELTA 180
ELTE 145

Semester IV (Spring)
ELTE 142
ELTE 150

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Electrical Technology - Control Maintenance C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 0760

Effective: Fall 2024 – Summer 2029

Description

This certificate is designed to provide students with a background in applied electrical theory and the basic mechanical skills necessary to the practicing electrician in the machine control field.

Milestone

Completion of ELTE 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for ELTE 110 and ELTE 111.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
ELTE 111	Intro to Industrial Automation	4 / 6
ELTE 122	Industrial Control Electronics	5 / 7
ELTE 131	Machine Controls I	4 / 5
ELTE 132	Control Panel Assembly	2 / 3
ELTE 150	Electric Motor Maintenance	2 / 3
ELTE 232	Machine Controls II	4 / 6
ELTE 260	Programmable Controllers I	4 / 6
ELTE 261	Programmable Controllers II	6 / 8
METS 160	Introduction to Robotics	3 / 4.5
TECH 102	General Industry Safety	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

40 credits / 57.5 billing hours

Recommended Course Sequence

Semester I (Fall)
ELTE 110 – Milestone course
ELTE 111
TECH 102
Semester II (Spring)
ELTE 131
ELTE 132
METS 160
Semester III (Fall)
ELTE 150
ELTE 232
ELTE 260
Semester IV (Spring)
ELTE 122
ELTE 261

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Electrical Utility/Lineworker A.A.S.

Career Community: Electrical and Manufacturing

Curriculum Code: 1783

Effective: Fall 2024 – Summer 2029

Description

This program of study prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair local, long-distance, and rural electric power cables; erect and construct pole lines; and install underground lines and cables. Includes instruction in line installation and repair, trenching, mobile equipment and crane operation, high-voltage installations, maintenance and inspection, safety, and applicable codes and standards. Department approval is required to enroll in a significant number of the courses required for this degree. Interested students should contact an Electrical Program advisor before beginning this program for information regarding admission requirements.

Milestone

In addition to the required General Education courses in Math and English, completion of ELTE 110 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

ELTE 272, ELTE 274 and ELTE 276 are scheduled in a ten-week block typically offered during Summer Semester. Enrollment is restricted to students who have received department approval and who have completed all other courses on the curriculum with a minimum 2.5 grade except PFFT 182, PFFT 183 and ELTE 182 which must be passed with a minimum 3.0 grade. Students must receive a 3.0 in ELTE 272, ELTE 274 and ELTE 276 in order to successfully complete the program.

Students may substitute ELTE 121 for ELTA 106 and ELTA 120; and ELTE 123 for ELTA 155. ELTE 121 also fulfills the General Education Applied Mathematics requirement.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 124, Technical Writing, 3 credits / 3 billing hours
ENGL 127, Business Writing, 3 credits / 3 billing hours

- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*
ELTE 121, Electrical Mathematics, 5 credits / 6 billing hours
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
MATH 117, Math for Business, 4 credits / 4 billing hours
MATH 119, Math – Applications for Living, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours
CHEM 151 and CHEM 161, General Chemistry Lecture and Lab I, 5 credits / 7 billing hours
METM 190, Metallurgy and Heat Treatment, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTA 106	Basic Electrical Calculations	2 / 2
ELTA 120	AC Fundamentals - Electrician	2 / 3
ELTA 155	Transformer Fundamentals	2 / 3
ELTE 104	Employee Worksite Basics	1 / 1
ELTE 110	Practical Electricity	4 / 6
ELTE 154	Utility Prints and Diagrams	3 / 3
ELTE 173	Energy Industry Fundamentals I	2 / 2
ELTE 174	Energy Industry Fundamentals II	2 / 2
ELTE 181	Pole Climbing I	.5 / 1
ELTE 182	Pole Climbing II	.5 / 1
ELTE 185	Pole Climbing Practice I	.25 / .5
ELTE 186	Pole Climbing Practice II	.25 / .5
ELTE 272	Electric Basic Line Climbing	4 / 6
ELTE 274	Ground/Utility Worker	6 / 9
ELTE 276	Energized Secondary Worker	5 / 8
PFFT 183	Lineworker Fitness C	2 / 4
TECH 102	General Industry Safety	2 / 3

Program of Study Required Courses, Limited Choice, Rigging – Select one

Course Code	Course Title	Credit / Billing Hours
ELTE 156	Lineworker/Utility Rigging	3 / 4
METS 140	Rigging	3 / 4.5

Program of Study Required Courses, Limited Choice, Fitness/Climbing - Select a minimum of 1.5 credits

Course Code	Course Title	Credit / Billing Hours
ELTE 131	Machine Controls I	4 / 5
ELTE 187	Pole Climbing Practice III	.25 / .5
ELTE 188	Pole Climbing Practice IV	.25 / .5
ELTE 270	Lineworker Fundamentals	1 / 1.5
PFFT 182	Lineworker Fitness B	1 / 2

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 79.5 billing hours

Recommended Course Sequence

Semester I (Summer)
Gen Ed – English Composition or Applied English
ELTE 181
Semester II (Fall)
ELTA 106
ELTE 104
ELTE 110 – Milestone course
ELTE 173 (first 8 weeks)
ELTE 174 (second 8 weeks)
ELTE 182
ELTE 185
TECH 102
Limited Choice, Rigging
Limited Choice, Fitness/Climbing

Semester III (Spring)
Gen Ed – Mathematics or Applied Mathematics
ELTA 120 (first 8 weeks)
ELTA 155 (second 8 weeks)
ELTE 154
ELTE 186
PFFT 183
Limited Choice, Fitness/Climbing

Semester IV (Summer)
ELTE 272
ELTE 274
ELTE 276

Semester V (Fall)
Gen Ed – English Composition (second course)/Communication or Applied Communication
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Electrical Utility/Lineworker C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 1468

Effective: Fall 2024 – Summer 2029

Description

Lineworkers install and service power lines and power line connections between electrical power plants and the customers using the electricity. These lines may be above ground on utility poles or underground. This curriculum prepares students to enter the Electric Lines Apprenticeship Program with Consumers Energy or another utility/contractor. Department approval is required to enroll in ELTE 270, ELTE 272, ELTE 274 and ELTE 276 which are held onsite at the Consumers Energy Training Facility in Marshall, Michigan or at LCC's West Campus. Interested students should contact the Utility and Energy Systems program at Lansing Community College for information.

Milestone

Completion of ELTE 110 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

ELTE 272, ELTE 274 and ELTE 276 are scheduled in a ten-week block typically offered during Summer Semester. Enrollment is restricted to students who have received department approval and who have completed all other courses on the curriculum with a minimum 2.5 grade except for PFFT 182, PFFT 183 and ELTE 182 which must be passed with a minimum 3.0 grade. Students must receive a 3.0 in ELTE 272, ELTE 274 and ELTE 276 in order to successfully complete the program.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTA 106	Basic Electrical Calculations	2 / 2
ELTE 104	Employee Worksite Basics	1 / 1
ELTE 110	Practical Electricity	4 / 6
ELTE 154	Utility Prints and Diagrams	3 / 3
ELTE 173	Energy Industry Fundamentals I	2 / 2
ELTE 174	Energy Industry Fundamentals II	2 / 2
ELTE 181	Pole Climbing I	.5 / 1

Course Code	Course Title	Credit / Billing Hours
ELTE 182	Pole Climbing II	.5 / 1
ELTE 185	Pole Climbing Practice I	.25 / .5
ELTE 186	Pole Climbing Practice II	.25 / .5
ELTE 270	Lineworker Fundamentals	1 / 1.5
ELTE 272	Electric Basic Line Climbing	4 / 6
ELTE 274	Ground/Utility Worker	6 / 9
ELTE 276	Energized Secondary Worker	5 / 8
PFFT 182	Lineworker Fitness B	1 / 2
PFFT 183	Lineworker Fitness C	2 / 4
TECH 102	General Industry Safety	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

36.5 credits / 52.5 billing hours

Recommended Course Sequence

Semester I (Summer)
ELTE 181

Semester II (Fall)
ELTA 106 (Second 8 weeks)
ELTE 104 (First 8 weeks)
ELTE 110 – Milestone course
ELTE 173
ELTE 182
ELTE 185
PFFT 182
TECH 102

Semester III (Spring)
ELTE 154
ELTE 174 (Second 8 weeks)
ELTE 186
ELTE 270
PFFT 183

Semester IV (Summer)
ELTE 272
ELTE 274
ELTE 276

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Electrical Wiring C.C.

Career Community: Electrical and Manufacturing

Curriculum Code: 0964

Effective: Fall 2024 – Summer 2029

Description

This certificate is designed to provide students with entry level skills in basic electrical theory, fundamental wiring installation techniques, smart-house technologies, and an understanding of the National Electrical Code. This curriculum would be an excellent choice for students wishing to apply for a construction electrical apprenticeship. All of the course work may be applied toward the Electrical Technology, Associate in Applied Science Degree.

Milestone

Completion of ELTE 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for ELTE 110.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITN 115	IoT & Automation Fundamentals	5 / 6
ELTA 105	Elect. Industry Orientation	.5 / .5
ELTA 180	Introduction to Fire Alarms	1 / 1
ELTE 110	Practical Electricity	4 / 6
ELTE 112	Basic Wiring Installation	2 / 3
ELTE 141	National Electrical Code I	4 / 4
TECH 102	General Industry Safety	2 / 3

Minimum Total Credit Hours

18.5 credits / 23.5 billing hours

Recommended Course Sequence

Semester I
CITN 115
ELTA 180
ELTE 110 – Milestone course
TECH 102

Semester II
ELTA 105
ELTE 112
ELTE 141

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Emergency Medical Services A.A.S.

Career Community: Health and Human Service Careers

Curriculum Code: 0276

Effective: Fall 2024 – Summer 2029

Description

Basic Emergency Medical Technicians are members of the health care team in the pre-hospital emergency care setting. EMT personnel staff ambulances and are employed in hospitals, industry, and other public service agencies. They are expected to respond rapidly and effectively to many forms of trauma and medical emergencies and work in close contact with emergency physicians. Paramedics are employed by advanced life support ambulances and in emergency departments and critical care units of hospitals. The job is often fast-paced and always challenging. State licensing is required at both levels.

Milestone

In addition to the required General Education courses in Math and English, completion of EMTA 121 and EMTA 122 with a 3.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

All Emergency Medical Services courses are approved by the Michigan Department of Health and Human Services. The Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs, 25400 US Highway 19 North, Suite 158, Clearwater, FL 33756, in conjunction with the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions.

Students completing this degree are also eligible for the Basic Emergency Medical Technician Certificate of Completion, refer to the Basic Emergency Medical Technician C.C. pathway, Curriculum Code 1853; and, the Paramedic Certificate of Achievement, refer to the Paramedic C.A. pathway, Curriculum Code 0272. Advising guides and current information regarding Basic Emergency Medical Technician and Paramedic program requirements are available through the [LCC EMS webpage](#).

The Paramedic program approval and/or graduation requirements may change each academic year. The program requirements below apply only to those students who begin the program during the 2024/2025 academic year. For the most current information, interested students should contact the Emergency Medical Services program in the Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

To graduate from this program, students must complete the BIOL course(s) and PARA 221, 231, 241, 251, and 261 with a minimum grade of 2.5, and all other PARA courses and all EMTA courses with a minimum grade of 3.0. A minimum grade of 2.0 is required in all other courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Emergency Medical Services program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 124, Technical Writing, 3 credits / 3 billing hours
ENGL 127, Business Writing, 3 credits / 3 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select One*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
ENGL 122, Composition II, 4 credits / 4 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
COMM 280, Intercultural Communication, 3 credits / 3 billing hours
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
PSYC 200, Introduction to Psychology, 4 credits / 4 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 119, Math – Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
MATH 126, Precalculus, 5 credits / 5 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses for Admission will meet this requirement

Program of Study Required Courses for Admission, Limited Choice – *Select BIOL 145 or, BIOL 201 and BIOL 202. This course will satisfy the General Education Natural Sciences Lab or Applied Science and Technology Lab requirement.*

Course Code	Course Title	Credit / Billing Hours
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201 and 202	Human Anatomy and Human Physiology	8 / 11

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
EMTA 121	EMT Medical Trauma	5 / 5
EMTA 122	EMT Skills	2.75 / 5.5
EMTA 125	EMT Clinical	2.25 / 2.25
PARA 221	Paramedic Medical Trauma I	3.75 / 3.75
PARA 222	Paramedic Medical Trauma II	4 / 4
PARA 231	Paramedic Cardiology I	2.5 / 2.5
PARA 232	Paramedic Cardiology II	2.5 / 2.5
PARA 241	Paramedic Pharmacology I	2.5 / 2.5
PARA 242	Paramedic Pharmacology II	2.5 / 2.5
PARA 251	Paramedic Skills I	2.5 / 7.5
PARA 252	Paramedic Skills II	2.5 / 7.5
PARA 261	Paramedic Clinical I	2.5 / 4
PARA 262	Paramedic Clinical II	2.75 / 4
PARA 263	Paramedic Internship	4 / 4
PFHW 163	Healthy Lifestyles	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

61 credits / 79.5 billing hours

Recommended Course Sequence

Semester I
Gen Ed – English Composition or Applied English
Gen Ed – Mathematics or Applied Mathematics
BIOL 145 or (BIOL 201 and 202)
Semester II
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed – English Comp (second course)/ Communication or Applied Communication
PFHW 163
Semester III (Spring)
EMTA 121 – Milestone course
EMTA 122 – Milestone course
EMTA 125

Semester IV (Fall)
PARA 221
PARA 231
PARA 241
PARA 251
PARA 261

Semester V (Spring)
PARA 222
PARA 232
PARA 242
PARA 252
PARA 262

Semester VI (Summer)
PARA 263

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



EMS Instructor-Coordinator C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1638

Effective: Fall 2024 – Summer 2025

Description

The EMS Instructor-Coordinator (IC) course is intended for licensed EMS practitioners who have an interest in teaching EMS initial or continuing education courses. The LCC IC course meets all State of Michigan curriculum and content requirements. The curriculum provides the opportunity for building and developing teaching skills that will lead to instructional and administrative expertise in accordance with applicable state requirements for EMS educators. Students who successfully complete this course are eligible to sit for the State of Michigan EMS Instructor-Coordinator licensure exam. Additionally, the State of Michigan also requires that EMS Instructor-Coordinator licensure candidates provide proof of a minimum of three years of service with a life support agency prior to sitting for the exam.

Milestone

Completion of EMTA 222 with a 3.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

Students must complete all courses with a minimum grade of 3.0 to receive this certificate.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Emergency Medical Services Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
EMTA 222	EMS Instructor-Coordinator	9 / 9
EMTA 224	EMS Instr-Coord Student Teach	2 / 2

Minimum Total Credit Hours

11 credits / 11 billing hours

Required Course Sequence – Two-Semester Option

Semester I (Fall 2024)
EMTA 222 – Milestone course

Semester II (Spring 2025)
EMTA 224

Required Course Sequence – One-Semester Option

Semester I (Spring 2025)
EMTA 222 – Milestone course
EMTA 224

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Energy Auditor C.C.

Career Community: Building and Construction Trades

Curriculum Code: 1813

Effective: Fall 2024 - Summer 2029

Description

Professional Energy Efficiency Technicians are involved in the inventory and evaluation of a wide variety of energy producing systems. Technicians will deal with the integration of building, electrical and HVAC systems along with those in alternative energy systems. The Technician will need a working knowledge of “green” building concepts and energy efficient design principles. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

Completion of DCTM 100 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Energy Management Program, West Campus Building, Room M103, telephone number (517) 483- 5338 or Student Services West Campus, West Campus Building, Room M106, telephone number (517) 267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITN 115	IoT & Automation Fundamentals	5 / 6
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 101	Drafting/Intro to CAD	3 / 4
DCTM 103	Codes and Specifications	3 / 3
HVAC 100	Fundamentals of HVAC	3 / 3
HVAC 110	Applied Electricity I	3 / 4
HVAC 130	Air Conditioning I	3 / 4
HVAC 140	Residential Energy	3 / 4
TECH 102	General Industry Safety	2 / 3

Minimum Total Credit Hours

28 credits / 35 billing hours

Recommended Course Sequence

Semester I
DCTM 100 – Milestone course
DCTM 101
HVAC 100
HVAC 110
TECH 102

Semester II
CITN 115
DCTM 103
HVAC 130
HVAC 140

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Energy Industry Fundamentals C.C.

Career Community: Electrical and Manufacturing

Curriculum Code: 1777

Effective: Fall 2024 – Summer 2029

Description

This Certificate provides a foundational understanding of the structure of the United States energy industry and the opportunity to study for and earn pre-employment certifications developed for the industry. Competencies addressed include employment skills, industrial safety, mathematics, electrical theory, problem solving, blueprint reading, rigging and troubleshooting.

Milestone

Completion of ELTE 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for ELTE 110, ELTE 156 and METS 140.

Students must complete all courses on this pathway with a minimum 2.5 grade to receive this certificate.

Students who plan to pursue the Electrical Technology, Associate in Applied Science Degree (0134) should choose ELTE 121 and ELTE 123. ELTE 121 will also fulfill the General Education Applied Mathematics requirement.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTE 104	Employee Worksite Basics	1 / 1
ELTE 110	Practical Electricity	4 / 6
ELTE 154	Utility Prints and Diagrams	3 / 3
ELTE 173	Energy Industry Fundamentals I	2 / 2
ELTE 174	Energy Industry Fundamental II	2 / 2
TECH 102	General Industry Safety	2 / 3

Program of Study Required Courses, Limited Choice – *Select either ELTA 106 and ELTA 120, or ELTE 121*

Course Code	Course Title	Credit / Billing Hours
ELTA 106	Basic Electrical Calculations	2 / 2
ELTA 120	AC Fundamentals - Electrician	2 / 3
ELTE 121	Electrical Mathematics	5 / 6

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
ELTA 155	Transformer Fundamentals	2 / 3
ELTE 123	Motors and Transformers	5 / 7

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
ELTE 131	Machine Controls I	4 / 5
ELTE 156	Lineworker/Utility Rigging	3 / 4
METS 140	Rigging	3 / 4.5

Minimum Total Credit Hours

23 credits / 29 billing hours

Recommended Course Sequence

Semester I
ELTA 106 (Second 8 weeks) if selected
ELTE 104 (First 8 weeks)
ELTE 110 – Milestone course
TECH 102

Semester II (Spring)
ELTA 120 (First 8 weeks) or ELTE 121 depending on selection
ELTA 155 (Second 8 weeks) if selected
ELTE 154
ELTE 173 (First 8 weeks)
ELTE 174 (Second 8 weeks)
Limited Choice

Semester III (Fall)
ELTE 123 if selected

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Energy Management Specialist A.A.S.

Career Community: Building Construction Trades

Curriculum Code: 1606

Effective: Fall 2024 – Summer 2029

Description

Energy Management Specialists are involved in the commissioning, evaluation, planning, design, installation, and maintenance of a wide variety of energy systems in the built environment. The energy efficiency specialist will need a working knowledge of energy efficient building concepts and energy efficient design principles. Students completing this curriculum may also be eligible to apply for the Certificate of Completion in Alternative Energy Engineering Technology (1486). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of HVAC 100 and HVAC 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

If students have already completed ELTE 102, HVAC 102, METS 102, TECH 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the DCTM 102 requirement. Any of these classes will fulfill the prerequisite for HVAC 110.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Energy Management Program at the West Campus Building, Room M103, telephone number 517-483-5338 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
PHYS 200, Intro to Applied Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 101	Drafting/Intro to CAD	3 / 4
DCTM 102	Industrial/Construction Safety	2 / 3
DCTM 103	Codes and Specifications	3 / 3
HVAC 100	Fundamentals of HVAC	3 / 3
HVAC 110	Applied Electricity I	3 / 4
HVAC 111	Applied Electricity II	3 / 4
HVAC 120	Heating I	3 / 4
HVAC 130	Air Conditioning I	3 / 4
HVAC 140	Residential Energy	3 / 4
HVAC 220	Heating II	3 / 4
HVAC 230	Air Conditioning II	3 / 4
HVAC 231	Heat Pump	3 / 4
HVAC 240	Refrigeration I	3 / 4
HVAC 251	Fund of Direct Digital Control	3 / 4

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
AEET 280	Alternative Energy Practicum	4 / 4
HVAC 210	Solar Energy Technologies	3 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

65 credits / 79 billing hours

Recommended Course Sequence

Semester I
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed – Mathematics or Applied Mathematics
DCTM 100
DCTM 102
HVAC 100 – Milestone course
HVAC 110 – Milestone course

Semester II
Gen Ed – English Composition or Applied English
HVAC 111
HVAC 120
HVAC 130
HVAC 140

Semester III
Gen Ed – English Composition (second course)/Communication or Applied Communication
DCTM 101
DCTM 103
HVAC 230
HVAC 240

Semester IV
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
HVAC 220
HVAC 231
HVAC 251
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Engineering-Physics A.S.

Career Community: Science and Mathematics

Curriculum Code: 1619

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree is designed for students who plan to transfer to a four-year university to pursue a Bachelor's of Science degree in Engineering or Physics with a variety of concentrations. Students completing this curriculum will also satisfy Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482). This degree includes a set of courses common to all Science and Mathematics majors and many transfer institutions. Students are encouraged to work with an academic advisor and program advisor to explore transfer opportunities.

Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution.

Milestone

In addition to the required General Education courses in Math and English, completion of PHYS 251 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department, Arts and Sciences Building, Room 3203, telephone number 517-483-1092, or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA) - Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Science and Mathematics Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Science and Mathematics Career Community Courses meet this requirement.
- Humanities or Fine Arts
Program of Study Required Courses meets this requirement.
- Mathematics
Science and Mathematics Career Community Courses meet this requirement.

- Natural Sciences
Science and Mathematics Career Community Courses and Program of Study Required Courses meet this requirement.
- Social Sciences
Program of Study Required Courses meet this requirement.

Science and Mathematics Career Community Courses – *These courses are required for all Science and Mathematics programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 127 or	Cell Biology	4 / 6
GEOG 221 or	Physical Geography	4 / 4
GEOL 221 or	Physical Geology	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3
COMM 240 or	Interpersonal Communication	3 / 3
COMM 260 or	Nonverbal Communication	3 / 3
ENGL 122 or	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4
ENGL 121 or	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4
MATH 120 or	College Algebra	4 / 4
MATH 126 or	Precalculus	5 / 5
MATH 151	Calculus I	4 / 4

Notes:

Choose MATH 151 and PHYS 251 for this degree.

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
MATH 151	Calculus I	4 / 4
MATH 152	Calculus II	4 / 4
MATH 253	Calculus III	4 / 4
MATH 254	Intro to Differential Equation	4 / 4
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7

Note: If MATH 151 and PHYS 251 were completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses – Limited Choices – Humanities and Fine Arts - Select two from [LCC General Education Transfer Degrees \(MTA\) - Humanities and Fine Arts](#). Courses must be from different disciplines.

Program of Study Required Courses – Limited Choices – Social Sciences - Select two from [LCC General Education Transfer Degrees \(MTA\) - Social Sciences](#). Courses must be from different disciplines.

Notes:

Students considering adding Secondary Education Certification in Math or Science in order to teach in Michigan Public Schools are strongly encouraged to select PSYC 200 and EDUC courses as listed to meet the Michigan Transfer Agreement (MTA) Social Science requirement.

For future transfer (Secondary Education Certification) choose PSYC 200.

For future transfer (Secondary Education Certification) to:

- Central Michigan University, Ferris State University, or Michigan State University choose EDUC 204.
- Eastern Michigan University or Grand Valley State University choose EDUC 220.

Elective Courses, Recommended Choices – Select a minimum of two courses to meet the 60-credit minimum required for this degree. For information on preferred courses for specific concentrations identified by transfer institutions, consult with a Program Advisor. (For the full list of options, see [AA and AS Degree Electives](#).)

Course Code	Course Title	Credit / Billing Hours
BIOL 127	Cell Biology	4 / 6
CPSC 131	Numerical Methods and MATLAB	3 / 4
CPSC 230	Algorithms and Computing w/C++	4 / 4
MATH 260	Linear Algebra	4 / 4
PHYS 260	Statics for Engineers	3 / 3
STAT 215	Intro to Probability and Stats	4 / 4

Minimum Total Credit Hours

60 credits / 66 billing hours

Recommended Course Sequence

Semester I
ACAD 100
CHEM 151
CHEM 161
ENGL 121 or ENGL 131
MATH 151

Semester II
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
MATH 152
Limited Choice – Humanities and Fine Arts
Limited Choice – Social Sciences

Semester III
MATH 253
PHYS 251 – Milestone course
Limited Choice – Social Sciences
Electives as needed to meet 60 credit degree requirements

Semester IV
MATH 254
PHYS 252
Limited Choice – Humanities and Fine Arts
Electives as needed to meet 60 credit degree requirements

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Field Survey Methods and Analysis CA

Career Community: Social Sciences

Curriculum Code: 1837

Effective: Fall 2024 – Summer 2029

Description

The Field Methods and Analysis certificate is an interdisciplinary course of study in the Anthropology, Geography, and Geospatial Technologies programs that provides individuals with the skills and knowledge necessary to work professionally in field surveys, site evaluations, and data recoveries. Students will learn commonly used field methods, as well as current advances in field technology. Courses may be applied to the AA degree in Anthropology, the AS degree in Geography, the Geospatial Science Technician AAS, or the Social Science GA.

Milestone

Completion of ANTH 276 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, A&S 2203, telephone number 517-483-1061, or Student Services, (location), telephone number 517-.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ANTH 276	Introduction to Archeology	3 / 3
ANTH 300*	Applied Field Survey Methods	8 / 8
GEOG 221	Physical Geography	4 / 4
GSCI 100	Intro to Geospatial Tech	3 / 3

Program of Study Required Courses, Limited Choice – *Select 12 credits*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
ANTH 275	Biological Anthropology	4 / 4
ANTH 280	Forensic Anthropology	3 / 3
GEOG 200	World Regional Geography	4 / 4
GEOG 202	Geography of North America	3 / 3
GEOL 230	Environmental Geology	4 / 6
GSCI 110	Beginning ArcGIS	3 / 5
GSCI 120	Advanced ArcGIS	3 / 5
GSCI 240	Cartography in GIS	3 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

30 credits / 31 billing hours

Recommended Course Sequence

Semester I
ANTH 276 – Milestone course
GEOG 221
Limited Choice as needed for minimum credits

Semester II
ANTH 300*
GSCI 100
Limited Choice as needed for minimum credits

*8 credits required for completion

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Financial Institutions A.B.

Career Community: Business

Curriculum Code: 0103

Effective: Fall 2024 – Summer 2029

Purpose of Major

This major is designed for students wishing to work in the field of Financial Institutions on completion of the Associate of Business degree. Individuals who work in financial institutions are responsible for the effective and efficient operation of the organization, which includes both operations and customer relations. The program includes instruction in general finance, business law and regulations, quantitative methods, communication skills, management, and professional standards. Not all courses in this program transfer to all colleges. Students who also wish to transfer to a four-year institution should select coursework indicated for that institution and may also complete the coursework for a Business, Enhanced AB degree. The Business, Enhanced AB option allows students to transfer additional credits (depending on institution) toward the Bachelor's degree. This allows completion of credits required for employment and of additional requirements for the Bachelor's. Institutions accepting coursework for the Business Enhanced AB, Financial Institutions track include Eastern Michigan University, Ferris State University, Northwood University, Oakland University, and Siena Heights University.

Milestone

In addition to the required General Education courses in Math and English, completion of MGMT 225 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Business Career Community courses meet this requirement.

- English Composition (second course) or Communication or Applied Communication
Business Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Science or Applied Social Science
Business Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Business Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Business Career Community Required Courses – *These courses are required for all Business programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ACCG 210	Principles of Financial Accg	4 / 4
BUSN 118	Introduction to Business	3 / 3
COMM 110 or COMM 130	Communication in the Workplace Fundamentals Public Speaking	3 / 3 3 / 3
ECON 201	Principles of Economics - Micro	4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LEGL 215	Business Law – Basic Principles	3 / 3
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4
MGMT 225	Principles of Mgmt/Leadership	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For students not considering transfer as an option, MGMT 234, Diversity in the Workplace, may be substituted for ECON 201 using the Course Substitution process. MGMT 234 meets LCC General Education requirements for Applied Degrees – Humanities or Social Science or Applied Social Science. MGMT 234 does not meet Michigan Transfer Agreement (MTA) Social Science requirements for transfer as a General Education course.

For future transfer to:

- Davenport University choose COMM 110 and STAT 170.
- Eastern Michigan University choose STAT 170.
- Ferris State University choose COMM 130 and STAT 170.
- Northwood University and Oakland University choose MATH 120.
- Siena Heights University choose STAT 170.

Program of Study Required Courses - A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
BUSN 250	Personal Finance	3 / 3
MGMT 150	Managing Customer Relations	3 / 3
MGMT 200	Creative Thinking for Business	3 / 3
MGMT 224	Human Resource Management	3 / 3

Program of Study Required Courses, Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab - Select 1 course as indicated for each transfer institution. One must be a lab course. If a specific course is not indicated for the institution you are considering, or if transfer is not your goal, select any recommended course or choose from [LCC General Education, Applied Degrees, Natural Sciences Lab or Applied Sciences and Technology Lab](#).

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Central Michigan University choose BIOL 120.
- Eastern Michigan University choose ASTR 201 or BIOL 120 or 125 or CHEM 135 or GEOG 221 or ISCI 131.
- Northwood University choose BIOL 120.
- Siena Heights University choose BIOL 120 or CHEM 135 or PHYS 120.

Program of Study Required Courses, Limited Choice – Select one

Course Code	Course Title	Credit / Billing Hours
MGMT 228	Organization Behavior	3 / 3
MGMT 304	Organization Development	3 / 3

For future transfer to Northwood University, choose MGMT 304.

Program of Study Required Courses, Limited Choice – Select MGMT 201 and 202, or MGMT 237

Course Code	Course Title	Credit / Billing Hours
MGMT 201 and MGMT 202	Time Management for Business Managing Difficult People	1 / 1 1 / 1
MGMT 237	Managing/Continual Improvement	3 / 3

Program of Study Required Courses, Limited Choice – Business/Insurance/Entrepreneurship – Select two, minimum of six credits. A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
BUSN 201	International Business	3 / 3
BUSN 251	Understanding Investments	3 / 3
INSU 105	Prin of Managing Evolving Risk	3 / 3
INSU 110	Personal Insurance	3 / 3
MKTG 119	Mktg/Manage Your Profess Image	3 / 3
MKTG 120	Sales	3 / 3
MKTG 229	Public Relations	3 / 3

For future transfer to:

- Ferris State University, choose BUSN 201.
- Siena Heights University, choose MKTG 119 and MKTG 229.

Program of Study Required Courses, Limited Choice – Computer – Select one. A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
CITA 110	Intro to Microsoft Office	3 / 3
CITF 110	Intro Computer Info Systems	3 / 3

For future transfer to:

- Eastern Michigan University or Ferris State University, choose CITF 110.
- Northwood University or Oakland University, choose CITA 110.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

61 credits / 61 billing hours

Recommended Course Sequence

Semester I
ACAD 100
BUSN 118
ENGL 121 or ENGL 131
MGMT 150
MGMT 225 – Milestone course
MKTG 200
Semester II
COMM 110 or 130
MATH 120 or STAT 170
MGMT 228 or MGMT 304
Limited Choice – Natural Science Lab or Applied Science and Technology Lab
Semester III
BUSN 250
CITA 110 or CITF 110
ECON 201
LEGL 215
Limited Choice – Business/Insurance/ Entrepreneurship

Semester IV
ACCG 210
MGMT 200
MGMT 201 and MGMT 202, or MGMT 237
MGMT 224
Limited Choice – Business/Insurance/ Entrepreneurship

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Financial Institutions C.C.

Career Community: Business

Curriculum Code: 0151

Effective: Fall 2024 – Summer 2029

Purpose

Certificate holders may improve their opportunities for advancement in this or a related area. Additional education enhances an individual's employment opportunities. Students may complete this certificate as part of the Financial Institutions Associate of Business degree.

Milestone

Completion of MGMT 225 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Business and Economics Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BUSN 118	Introduction to Business	3 / 3
MGMT 150	Managing Customer Relations	3 / 3
MGMT 200	Creative Thinking for Business	3 / 3
MGMT 225	Principles of Mgmt/Leadership	3 / 3

Program of Study Required Courses, Limited Choice – Communication and Composition – *Select one*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
ENGL 121	Composition I	4 / 4
ENGL 127	Business Writing	3 / 3
ENGL 131	Honors Composition I	4 / 4

Note: Students considering completing the Financial Institutions Associate of Business degree should choose ENGL 121 or ENGL 131.

Program of Study Required Courses, Limited Choice – Select 8 credits

Course Code	Course Title	Credit / Billing Hours
ACCG 210	Principles of Financial Accg	4 / 4
ACCG 211	Principles of Managerial Accg	4 / 4
BUSN 251	Understanding Investments	3 / 3
LEGL 215	Business Law – Basic Principles	3 / 3
MGMT 201	Time Management for Business	1 / 1
MGMT 228	Organization Behavior	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Note: Students considering completing the Financial Institutions Associate of Business degree should choose ACCG 210 and ACCG 211.

Minimum Total Credit Hours

23 credits / 23 billing hours

Recommended Course Sequence

Semester I
BUSN 118
MGMT 150
MGMT 225 – Milestone course
Semester II
MGMT 200
Limited Choice – Communication and Composition
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Fire Science Technology A.A.S.

Career Community: Public Service Careers

Curriculum Code: 0123

Effective: Fall 2024 – Summer 2029

Description

This degree program provides students with the option to pursue a fire service career. This option follows a general fire service career path and has two options: Firefighter, which meets the state standards of the Michigan Fire Fighter Training Council's Fire Fighter I and II certification process, and Fire Service for students who do not wish to become a Fire Fighter.

Milestone

In addition to the required General Education courses in Math and English, completion of FIRE 100 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students who successfully complete LCC's Fire Science Academy may substitute the Academy courses; FIRE 101, FIRE 102, and PFFT 119, for the entire fourth semester of this guided pathway. Please see an advisor in the Public Service Careers Department office for more information.

Not all courses in this program transfer to all colleges. Students planning to transfer should see a Fire Science advisor before enrolling in any course.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Public Service Careers Program via website, or in person at West Campus Building, Room M127, telephone number 517-483-1570.

General Education Applied Degree, Recommended Choices

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication – *Select one*
Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences– *Select one*
Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics – *Select one*
Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
Program of Study Required Courses meet this requirement.

Career Community Courses

These courses are required for all Public Service Career programs (Criminal Justice and Fire). They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
CJUS 101 or CJUS 131 or FIRE 100	Intro to Criminal Justice Introduction to Corrections Principles Emergency Services	3 / 3 3 / 3 4 / 4
COMM 120 or COMM 130 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4
MGMT 234 or PSYC 200 or SOCL 120	Diversity in the Workplace Introduction to Psychology Introduction to Sociology	3 / 3 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For this Fire Science Technology major, choose FIRE 100.

Students considering future transfer, choose PSYC 200 or SOCL 120.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
FIRE 100	Principles of Emergency Services	4 / 4
FIRE 104	Fire Behavior & Combustion	3 / 3
FIRE 105	Fire/Hydraulics/Water Supply	4 / 4
FIRE 110	Fire Prevention	3 / 3

Course Code	Course Title	Credit / Billing Hours
FIRE 100	Principles of Emergency Services	4 / 4
FIRE 112	Occup Health & Safety/Fire Svc	4 / 4
FIRE 115	Bldg Construction/Fire Protect	4 / 4
FIRE 125	Fire Protection Systems	4 / 4
FIRE 150	Strategy and Tactics	4 / 4
FIRE 210	Fire Investigation I	4 / 4
FIRE 220	Hazardous Materials/Fire Svc	4 / 5
FIRE 250	Fire Administration I	4 / 4
FIRE 270	Fire Service Career Developmnt	3 / 3

Note: If FIRE 100 was completed for the Career Community, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Natural Science or Applied Science and Technology Lab – *Select one as indicated for each major and/or transfer institution. If a specific course is not indicated in the notes below, choose any recommended course or choose from [General Education Applied Degrees: Natural Science or Applied Science and Technology Lab](#).*

Course Code	Course Title	Credit / Billing Hours
ANTH 280	Forensic Anthropology	3 / 3
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6

Note: For this Fire Science Technology major, BIOL 145 is recommended.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

62 credits / 63 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
FIRE 100 – Milestone course
FIRE 104
FIRE 105
MATH 119 or MATH 120 or STAT 170

Semester II
FIRE 110
FIRE 112
Limited Choice, Natural Science or Applied Science and Technology Lab

Semester III
COMM 120, COMM 130, ENGL 122, or ENGL 132
FIRE 115
FIRE 125
FIRE 150
MGMT 234 or PSYC 200 or SOCL 120

Semester IV
FIRE 210
FIRE 220
FIRE 250
FIRE 270

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Fire Science/Basic EMT A.A.S.

Career Community: Public Service Careers

Curriculum Code: 1057

Effective: Fall 2024 – Summer 2029

Description

This degree curriculum is accredited through the International Fire Service Accreditation Congress and is for students who wish to combine fire service and emergency medical service education and training into a single degree program. This degree choice will expedite the career path of those students interested in a career within public or private agencies that require credentials in both the fire and emergency medical services fields. Students will complete certifications for Fire Fighter I & II, Basic Emergency Medical Technician, Hazardous Materials Operations, Wildland Fire Fighter II, NIMS 100 and 200, Vehicle Extrication, and Advanced Vehicle Stabilization. The fire science segment meets the state standards of the Michigan Fire Fighter Training Council's Fire Fighter I and II certification process and requires department approval to enroll in the Regional Fire Training Center at Lansing Community College. Basic EMT courses are approved by the Michigan Department of Consumer and Industry Services. An EMT Academy option is available to students. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of FIRE 100 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Public Service Careers Program at the West Campus Building, Room M127, telephone number 517-483-1570.

General Education - Applied Degree, Recommended Choices

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours

- Mathematics or Applied Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 145, Intro Anatomy and Physiology, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
EMTA 121	EMT Medical Trauma	5 / 5
EMTA 122	EMT Skills	2.75 / 5.5
EMTA 125	EMT Clinical	2.25 / 2.25
FIRE 100	Principles Emergency Services	4 / 4
FIRE 101	MI F.F.T.C. Basic Fire Level I	10 / 14
FIRE 102	MI F.F.T.C. Basic Fire Lev II	6 / 8
FIRE 104	Fire Behavior & Combustion	3 / 3
FIRE 112	Occup Health & Safety/Fire Svc	4 / 4
FIRE 270	Fire Service Career Developmnt	3 / 3
PFFT 119	Fire Academy Fitness Training	3 / 4

Minimum Total Credit Hours

60 credits / 71.75 billing hours

Recommended Course Sequence

Semester I
FIRE 101
FIRE 102
PFFT 119

Semester II
EMTA 121
EMTA 122
EMTA 125

Semester III
Gen Ed – English Composition or Applied English
Gen Ed – Mathematics or Applied Mathematics
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
FIRE 100 – Milestone course
FIRE 112

Semester IV
Gen Ed – English Composition (second course)/Communication or Applied Communication
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
FIRE 104
FIRE 270

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



General Associate Degree

Curriculum Code: 0863

Effective: Fall 2024 - Summer 2029

Description

This degree is a customized program of study that should be approved by an academic advisor. A minimum of 60 credits is required and includes the LCC General Education-Applied Degree requirements. Students must complete one of two options: either 40-45 credits in an area of study of their own choosing (Option A) or the credits required for admission to a selective admission program and, if necessary, other courses selected by the student (Option B). Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

Completion of the required General Education Math and English courses with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students should meet with an academic advisor prior to selecting courses for customized options. Courses may not be counted more than once for those options.

The following cannot be used for degree requirements:

- a) courses numbered below 100;
- b) courses in Mathematics or Statistics that are not listed on the Transfer Degrees (MTA) tab or Applied Degrees tab of the LCC [General Education webpage](#);
- c) courses in English or Writing numbered below 118;
- d) courses in English as a Second Language;
- e) courses in Reading;
- f) courses in non-technical Vocabulary;
- g) courses in Academic Experience (ACAD) numbered other than 100;
- h) courses in Student Development (SDEV) numbered other than 101.

Contact Information

Prior to beginning this program, students should meet with an academic advisor in the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Applied Degrees

For the list of options, see [General Education](#) for Applied Degrees.

- English Composition or Applied English – *Select one course, three to four credits*
- English Composition (second course)/Communication or Applied Communication – *Select one course, three to four credits*

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one course, three to four credits*
- Mathematics or Applied Mathematics – *Select one course, three to five credits*
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one or two courses, three to five credits*

Program of Study Required Courses – Option A

Courses	Credits
Courses selected by the student	40-45

Program of Study Required Courses – Option B

Courses	Credits
Credits required for admission to selective admission program*	Variable
Courses selected by the student - After completing credits required for a selective admission program, students may also need additional credits to meet the 60-credit minimum required for this degree.	Variable

*Students wishing to apply for admission to one of the selective admission programs listed below should visit the Health and Human Services Selective Admissions Program webpage for more information on program admission requirements. For additional information or questions, contact the Selective Admissions Office via [email](#) or 517-483-1410.

- P001 – Pre-Dental Hygiene
- P002 – Pre-Diagnostic Medical Sonography
- P006 - Pre-Nursing, PN/RN
- P008 – Pre-Radiologic Technology
- P009 – Pre-Surgical Technology

Minimum Total Credit Hours

60 credits / 60 billing hours

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Geography A.S.

Career Community: Science and Mathematics

Curriculum Code: 1824

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree is designed for students who plan to transfer to a four-year university to pursue a Bachelor's of Science degree in Geography with a variety of concentrations. Students completing this degree will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482). This degree includes a set of courses common to all Science and Mathematics majors and many transfer institutions. Students are encouraged to work with an academic advisor and program advisor to explore transfer opportunities.

Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution.

Milestone

In addition to the required General Education courses in Math and English, completion of GEOG 120 and GEOG 200 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Students who would like to start an entry-level job with this degree, and who are not planning to transfer, should consider taking Geospatial Science (GSCI) courses. A course substitution is required, so please consult with a Program Advisor.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department, Arts and Sciences Building, Room 3203, telephone number 517-483-1092, or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA) - Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Science and Mathematics Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Science and Mathematics Career Community Courses meet this requirement.

- Humanities and Fine Arts
Program of Study Required Courses meet this requirement.
- Mathematics
Science and Mathematics Career Community Courses meet this requirement.
- Natural Sciences
Science and Mathematics Career Community Courses meet this requirement.
- Social Sciences
Science and Mathematics Career Community Courses and Program of Study Required Courses meet this requirement.

Science and Math Career Community Courses – *These courses are required for all Science and Math programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 127 or	Cell Biology	4 / 6
GEOG 221 or	Physical Geography	4 / 4
GEOL 221 or	Physical Geology	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3
COMM 240 or	Interpersonal Communication	3 / 3
COMM 260 or	Non-Verbal Communication	3 / 3
ENGL 122 or	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4
ENGL 121 or	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4
MATH 120 or	College Algebra	4 / 4
MATH 126 or	Precalculus	5 / 5
MATH 151	Calculus I	4 / 4

Notes:

Choose GEOG 221 for this degree.

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Program of Study Required Courses - Some courses meet General Education

requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
GEOG 120	Introduction to Geography	3 / 3
GEOG 200	World Regional Geography	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 230	Environmental Geology	4 / 6
GSCI 100	Intro to Geospatial Tech	3 / 3

Note: If GEOG 221 was completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -

Select two courses from [LCC General Education, Transfer Degrees \(MTA\), Humanities and Fine Arts](#). Courses must be from different disciplines.

Program of Study Required Courses, Limited Choice – Social Sciences -

Select one course, of a different discipline than GEOG, from [LCC General Education, Transfer Degrees \(MTA\), Social Sciences](#).

Notes:

Students considering adding Secondary Education Certification in Math or Science in order to teach in Michigan Public Schools are strongly encouraged to select EDUC courses as listed to meet the Michigan Transfer Agreement (MTA) Social Science requirement.

For future transfer (Secondary Education Certification) to:

- Central Michigan University, Ferris State University, or Michigan State University choose EDUC 204.
- Eastern Michigan University, Grand Valley State University, University of Michigan Flint, or Western Michigan University choose EDUC 220.

Program of Study Required Courses, Limited Choice – Select 11 credits

Course Code	Course Title	Credit / Billing Hours
GEOG 202	Geography of North America	3 / 3
GEOG 220	Weather, Forecasting & Climate	4 / 4
GSCI 240	Cartography in GIS	3 / 4
POLS 120	American Political System	4 / 4
POLS 121	State and Local Government	4 / 4
POLS 240	Introduction to Public Policy	3 / 3

Course Code	Course Title	Credit / Billing Hours
POLS 260	Comparative Political Systems	3 / 3
STAT 170	Introduction to Statistics	4 / 4

Note: GSCI 240 is not highly transferable and should only be taken if transferring to Michigan State University (Geography B.A.).

Elective Courses

Complete courses as needed from the list of [AA and AS Elective Courses](#) to reach the 60-credit minimum for this degree. Courses used to fulfill the requirements above cannot be used as Elective courses. For course selections, speak with an advisor or consult the program website(s) at the institution(s) you are considering for transfer.

Minimum Total Credit Hours

60 credits / 66 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
GEOG 120 – Milestone course
MATH 120 or MATH 126 or MATH 151

Semester II
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
GEOG 230
Limited Choices – Humanities and Fine Arts
Limited Choice – Social Sciences

Semester III
CHEM 151
CHEM 161
GEOG 200 – Milestone course
GSCI 100
Limited Choice

Semester IV
GEOG 221
Limited Choice – Humanities and Fine Arts
Limited Choice
Electives as needed for the total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Geology A.S.

Career Community: Science and Mathematics

Curriculum Code: 1841

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in a geology-related program. The courses outlined in this pathway are designed for students interested pursuing degrees related to geology, environmental geoscience, or earth science as their main emphasis of study. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions and qualify for an LCC Transfer Studies Certificate of Achievement.

Milestone

In addition to the required General Education courses in Math and English, completion of CHEM 151, CHEM 161, and GEOL 221 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

GEOL 222 is only offered during Spring semester.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department in the Arts & Sciences Building, Room 3203, telephone number 517-483-1092 or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Transfer (MTA) Courses, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Science and Mathematics Career Community Courses meet this requirement
- English Composition (second course)/Communication
Science and Mathematics Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meets this requirement.
- Mathematics
Science and Mathematics Career Community Courses meet this requirement.

- Natural Sciences
Program of Study Required Courses will meet this requirement.
- Social Sciences
Program of Study Required Courses meet this requirement.

Science and Math Career Community Courses – *These courses are required for all Science and Math programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 127 or	Cell Biology	4 / 6
GEOG 221 or	Physical Geography	4 / 4
GEOL 221 or	Physical Geology	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3
COMM 240 or	Interpersonal Communication	3 / 3
COMM 260 or	Nonverbal Communication	3 / 3
ENGL 122 or	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4
ENGL 121 or	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4
MATH 120 or	College Algebra	4 / 4
MATH 126 or	Precalculus	5 / 5
MATH 151	Calculus I	4 / 4

Notes:

Choose GEOL 221 for this degree.

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHEM 152	General Chemistry Lecture II	3 / 3
GEOG 120 or GEOG 200	Introduction to Geography World Regional Geography	3 / 3 4 / 4
GEOL 221	Physical Geology	4 / 6
PHYS 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6

Note: If GEOL 221 was completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -

Select two from different disciplines from [LCC General Education, Transfer Degrees \(MTA\), Humanities and Fine Arts](#).

Program of Study Required Courses, Limited Choice - Social Sciences - Select one course from [LCC General Education, Transfer Degrees \(MTA\), Social Sciences](#), from a discipline other than GEOG.

Elective Courses, Recommended Choices – Select courses as needed to reach the minimum 60 total credits required for this degree. For information on preferred courses for specific concentrations identified by transfer institutions, consult with an Academic or Program Advisor. (For the full list of option, see [AA and AS Degree Electives](#).)

Course Code	Course Title	Credit / Billing Hours
BIOL 210	Natural Resource Conservation	4 / 6
CHEM 162	General Chemistry Lab II	1 / 3
CHEM 251	Organic Chemistry Lecture I	4 / 4
CHEM 252	Organic Chemistry Lecture II	4 / 4
CHEM 272	Organic Chemistry Laboratory	2 / 6
ECON 202	Principles of Economics-Macro	4 / 4
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
GSCI 100	Intro to Geospatial Tech	3 / 3
MATH 151	Calculus I	4 / 4
MATH 152	Calculus II	4 / 4
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7
STAT 215	Intro to Probability and Stats	4 / 4

Note: GEOL 222 is highly recommended.

Minimum Total Credit Hours

60 credit hours / 68 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
GEOL 221 – Milestone course
MATH 120 or MATH 126 or MATH 151
Semester II
CHEM 151 – Milestone course
CHEM 161 – Milestone course
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
Limited Choice - Humanities and Fine Arts
Elective courses as needed for total credits (GEOL 222 is highly recommended)
Semester III
CHEM 152
GEOG 120 or GEOG 200
PHYS 221
Limited Choice – Social Sciences
Elective courses as needed for total credits
Semester IV
PHYS 222
Limited Choice - Humanities and Fine Arts
Elective courses as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Geospatial Science C.A.

Career Community: Computer Technology and Networking

Curriculum Code: 0834

Effective: Fall 2024 – Summer 2029

Description

This certificate program will emphasize development of components for GIS and project design based on application areas. The certificate allows beginners to become familiar with basic principles and those with some application background to become computer proficient in GIS. Students completing this certificate may use the credits towards the Geospatial Science Technician Associate in Applied Science degree (0224).

Milestone

Completion of GSCI 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Students beginning this pathway in Spring Semester may want to start with the Semester II courses as many Semester I courses are only offered in Fall Semester.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Geospatial Science Program, West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITA 133	Microsoft Access Database	3 / 3
GSCI 100	Intro to Geospatial Tech	3 / 3
GSCI 110	Beginning ArcGIS	3 / 5
GSCI 120	Advanced ArcGIS	3 / 5
GSCI 210	Global Positioning Systems	3 / 4
GSCI 240	Cartography in GIS	3 / 4
GSCI 241	Remote Sens/AirPhoto Interpret	3 / 4
GSCI 264	Web GIS	3 / 4
GSCI 271	Parcel Mapping	3 / 5
GSCI 275	GIS Proj Mgmt & Implementation	3 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

30 credits / 41 billing hours

Recommended Course Sequence

Semester I
CITA 133
GSCI 100
GSCI 210
Semester II
GSCI 110 – Milestone course
GSCI 240
Semester III
GSCI 120
GSCI 271
Semester IV
GSCI 241
GSCI 264
GSCI 275

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Geospatial Science C.C.

Career Community: Computer Technology and Networking

Curriculum Code: 1820

Effective: Fall 2024 – Summer 2029

Description

This certificate program will emphasize development of components for GIS and project design based on application areas. The certificate allows beginners to become familiar with basic principles and those with some application background to become computer proficient in GIS. Students completing this certificate may use the credits towards the Geospatial Science Technician Associate in Applied Science degree (0224).

Milestone

Completion of GSCI 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

Students must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Geospatial Science Program, West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
GSCI 100	Intro to Geospatial Tech	3 / 3
GSCI 110	Beginning ArcGIS	3 / 5
GSCI 240	Cartography in GIS	3 / 4
GSCI 264	Web GIS	3 / 4

Program of Study Required Courses, Limited Choice – *Select one or two courses for a minimum of 4 credits*

Course Code	Course Title	Credit / Billing Hours
CITA 126	Microsoft Excel	3 / 3
CITP 110	Intro to Programming-Python	4 / 4
CITP 130	Intro to Mobile App Devel	3 / 3
CITP 190	Intro to Programming in JAVA	4 / 4
CITW 160	Web Development HTML & CSS	3 / 3
CITW 165	Web Development JavaScript	3 / 3
GSCI 120	Advanced ArcGIS	3 / 5

Course Code	Course Title	Credit / Billing Hours
GSCI 150	Drone Flight for Industry	3 / 4
GSCI 210	Global Positioning Systems	3 / 4
GSCI 241	Remote Sens/AirPhoto Interpret	3 / 4
GSCI 250	Drone Map Analysis	3 / 4
GSCI 260	Automating Workflows in GIS	3 / 4
GSCI 271	Parcel Mapping	3 / 5

Minimum Total Credit Hours

16 credits / 20 billing hours

Recommended Course Sequence

Semester I
GSCI 100
GSCI 110 – Milestone course
Limited Choice
Semester II
GSCI 240
GSCI 264
Limited Choice if needed

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Geospatial Science Technician A.A.S.

Career Community: Computer Technology and Networking

Curriculum Code: 0224

Effective: Fall 2024 – Summer 2029

Description

Geospatial Science combines computer technology, mapping technologies, aerial photography, and satellite imagery with the most current environmental resource management and environmental analysis software. Geographic Information Systems (GIS) technicians work with computer drafting, design, database management, graphic design, and computer analysis. Environmental technology requirements include a working knowledge of natural systems and related regulations and their assessment, planning, restoration, and management. GIS technicians are employed with engineering and design firms, state and federal agencies, environmental firms, parks and recreation departments, and with municipalities and local government units. Students completing this curriculum may also be eligible to apply for the Certificate of Achievement in Geospatial Science (0834). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of GSCI 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students beginning this pathway in Spring Semester may want to start with the Semester II courses as many Semester I courses are only offered in Fall Semester.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Geospatial Science Program, West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours

- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
GEOL 230, Environmental Geology, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITA 133	Microsoft Access Database	3 / 3
CITP 110	Intro to Programming-Python	4 / 4
GSCI 100	Intro to Geospatial Tech	3 / 3
GSCI 110	Beginning ArcGIS	3 / 5
GSCI 120	Advanced ArcGIS	3 / 5
GSCI 210	Global Positioning Systems	3 / 4
GSCI 240	Cartography in GIS	3 / 4
GSCI 241	Remote Sens/AirPhoto Interpret	3 / 4
GSCI 260	Automating Workflows in GIS	3 / 4
GSCI 264	Web GIS	3 / 4
GSCI 271	Parcel Mapping	3 / 5
GSCI 275	GIS Proj Mgmt & Implementation	3 / 4

Program of Study Required Courses, Limited Choice – *Select two courses*

Course Code	Course Title	Credit / Billing Hours
AVAU 100	Drone Flight Orient.-FAA Exam	2 / 2.5
AVAU 150	Drone Maintenance	2 / 3
AVAU 200	Advanced Drone Flight-Capstone	2 / 3
CITA 126	Microsoft Excel	3 / 3
CITP 130	Intro to Mobile App Devel	3 / 3
CITP 190	Intro to Programming in JAVA	4 / 4
CITW 160	Web Development HTML & CSS	3 / 3
CITW 165	Web Development JavaScript	3 / 3
GSCI 150	Drone Flight for Industry	3 / 4
GSCI 250	Drone Map Analysis	3 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits /75.5 billing hours

Recommended Course Sequence

Semester I
Gen Ed – English Composition or Applied English
Gen Ed – Mathematics or Applied Mathematics
CITA 133
GSCI 100
GSCI 210

Semester II
Gen Ed – English Composition (second course)/ Communication or Applied Communication
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
GSCI 110 – Milestone course
GSCI 240
Limited Choice

Semester III
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
CITP 110
GSCI 120
GSCI 260
GSCI 271

Semester IV
GSCI 241
GSCI 264
GSCI 275
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Graphic Communication A.A.A.

Career Community: Art, Design, and Media

Curriculum Code: 1533

Effective: Fall 2024 – Summer 2029

Description

A graphic designer is an artist/communicator who creatively and effectively designs informational or promotional materials for output in print, web and/or a variety of mass media situations. Artistic skills related to producing effective visual information are essential for a graphic designer. An understanding of the principles of typography, color theory, computer graphic applications, web design, and pre-press techniques is necessary. Graphic designers are employed by design studios, advertising agencies, printing companies, publishers, newspapers, sign companies, and businesses that generate their own publications. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of ARTS 102, ARTS 162, and ARTS 175 for the Graphic Design subspecialty, and ARTS 102 and ARTS 173 for the Web Design subspecialty, with a 2.0 or higher are key components for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students in this program choose either the Graphic Design or Web Design subspecialty pathway to determine the courses to take each semester. Upon completion of a subspecialty, any additional subspecialty courses will not count toward the student's enrollment level for determining financial aid eligibility.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours

- English (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Program of Study Required Courses will fulfill this requirement
- Mathematics or Applied Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 120, Environmental Science, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ARTS 102	2-D Design	3 / 4
ARTS 131	Drawing I	3 / 4
ARTS 151	Color	3 / 4
ARTS 162	Type Communications	3 / 4
ARTS 164	Digital Illustration	3 / 4
ARTS 171	Adobe Photoshop	3 / 4
ARTS 173	Web Design I	3 / 4
ARTS 179	Web Design II	3 / 4
ARTS 195	Employ/Busn Issues for Artists	1 / 1
ARTS 229	Web Design III	3 / 4
ARTS 269	The Portfolio	2 / 2
ARTS 281	Art Internship	3 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
ARTS 132	Figure Drawing	3 / 4
ARTS 153	Drawing II	3 / 4

Program of Study Required Courses for Graphic Design Subspecialty

Course Code	Course Title	Credit / Billing Hours
ARTS 175	Creative Design and Publishing	3 / 4
ARTS 183	Design History	3 / 3
ARTS 251	Graphic Design Communications	3 / 4
ARTS 252	Graphic Design Publications	3 / 4
ARTS 253	Graphic Design Branding	3 / 4

Program of Study Required Courses for Web Design Subspecialty

Course Code	Course Title	Credit / Billing Hours
ARTS 226	Storyboards & Animatics	3 / 4
ARTS 232	Comp Graphics/2-D Animation	3 / 4
CITD 120	SQL Concepts	3 / 3
CITW 185	Web Development PHP & MySQL	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

64 credits / 77 billing hours

Recommended Course Sequence for Graphic Design Subspecialty

Semester I (Fall)
Gen Ed – English Composition or Applied English
ARTS 102 – Milestone course
ARTS 131
ARTS 162 – Milestone course
ARTS 171

Semester II (Spring)
ARTS 132 or 153
ARTS 151
ARTS 173
ARTS 175 – Milestone course
ARTS 183

Semester III (Summer)
Gen Ed – English Composition (second course)/Communication or Applied Communication
Gen Ed – Mathematics or Applied Mathematics

Semester IV (Fall)
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
ARTS 164
ARTS 179
ARTS 195
ARTS 251

Semester V (Spring)
ARTS 229
ARTS 252
ARTS 253
ARTS 269
ARTS 281

Recommended Course Sequence for Web Design Subspecialty

Semester I (Fall)
ARTS 102 – Milestone course
ARTS 131
ARTS 162
ARTS 171

Semester II (Spring)
Gen Ed – Mathematics or Applied Mathematics
ARTS 132 or 153
ARTS 151
ARTS 164
ARTS 173 – Milestone course

Semester III (Summer)
Gen Ed – English Composition or Applied English
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab

Semester IV (Fall)
Gen Ed – English Composition (second course)/ Communication or Applied Communication
ARTS 179
ARTS 195
ARTS 232
CITD 120

Semester V (Spring)
ARTS 226
ARTS 229
ARTS 269
ARTS 281
CITW 185

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Graphic Design C.A.

Career Community: Art, Design, and Media

Curriculum Code: 1020

Effective: Fall 2024 – Summer 2029

Description

This certificate is designed for students who hold a post-secondary degree (A.A., B.A., B.F.A., or M.F.A.) in the visual arts and wish to acquire or enhance their graphic design skills to prepare for employment.

Milestone

Completion of ARTS 102 and ARTS 162 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ARTS 102	2D Design	3 / 4
ARTS 162	Type Communications	3 / 4
ARTS 164	Digital Illustration	3 / 4
ARTS 171	Adobe Photoshop	3 / 4
ARTS 173	Web Design I	3 / 4
ARTS 175	Creative Design and Publishing	3 / 4
ARTS 179	Web Design II	3 / 4
ARTS 183	Design History	3 / 3
ARTS 195	Employ/Busn Issues for Artists	1 / 1
ARTS 229	Web Design III	3 / 4
ARTS 251	Graphic Design Communications	3 / 4
ARTS 252	Graphic Design Publications	3 / 4
ARTS 253	Graphic Design Branding	3 / 4
ARTS 269	The Portfolio	2 / 2

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

39 credits / 50 billing hours

Recommended Course Sequence

Semester I (Fall)
ARTS 102 – Milestone course
ARTS 162 – Milestone course
ARTS 171
ARTS 173
Semester II (Spring)
ARTS 164
ARTS 175
ARTS 183
Semester III (Fall)
ARTS 195
ARTS 179
ARTS 251
Semester IV (Spring)
ARTS 229
ARTS 252
ARTS 253
ARTS 269

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Group Fitness Instructor C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1704

Effective: Fall 2024 – Summer 2029

Description

After successful completion of this certificate individuals are prepared to take a Group Fitness Instructor Certification Exam by a National Commission for Certifying Agencies (NCCA) accrediting organization, such as American Council on Exercise® (ACE), or American College of Sports Medicine® (ACSM). Once the Group Fitness Instructor Certification is obtained, individuals are prepared for jobs as a Group Fitness Instructor and are eligible to take the Level 1 Exercise is Medicine® (EIM) credential exam through the American College of Sports Medicine (ACSM). This curriculum is the first certificate in the Kinesiology/Exercise Science Program curriculum. Courses for this certificate may be applied toward the Personal Trainer Certificate of Achievement and the Kinesiology/Exercise Science Associate in Applied Science degree.

Milestone

In addition to the required Math and English courses, completion of BIOL 145, or BIOL 201 and BIOL 202, with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

All courses must be completed with a minimum 2.0 grade to receive this certificate.

Some courses are offered only once a year. Review the recommended course sequence section of this pathway for course offering timeframes. To complete this certificate in three semesters, students should follow the recommended course sequence.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Kinesiology Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
PFFT 109	Introduction to Fitness	1 / 2
PFHW 163	Healthy Lifestyles	2 / 3
PFKN 106	Group Fitness Instructor Prep	3 / 4
PFKN 170	Foundations of Kinesiology	3 / 3
PFKN 250	Measurements in Kinesiology	3 / 4
PFKN 260	Growth and Motor Behavior	3 / 3
PFWT 112	Intro to Weight Training	1 / 2

Program of Study Required Courses, Limited Choice – Biology— *Select BIOL 145 or, BIOL 201 and BIOL 202. Students planning to transfer to a four-year institution should complete BIOL 201 and 202.*

Course Code	Course Title	Credit / Billing Hours
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201 and 202	Human Anatomy and Human Physiology	8 / 11 (total)

Program of Study Required Courses, Limited Choice – English/Communication – *Select one. Students planning to transfer to a four-year institution are encouraged to complete ENGL 122.*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
ENGL 122	Composition II	4 / 4

Program of Study Required Courses, Limited Choice – Mathematics – *Select one. Students planning to transfer to a four-year institution for Kinesiology should complete a MATH course rather than STAT 170.*

Course Code	Course Title	Credit / Billing Hours
MATH 120	College Algebra	4 / 4
MATH 126	Precalculus	5 / 5
MATH 151	Calculus I	4 / 4
STAT 170	Introduction to Statistics	4 / 4

Minimum Total Credit Hours

27 credits / 34 billing hours

Recommended Course Sequence

Semester I (Fall)
PFFT 109
PFHW 163
PFCN 170
BIOL 145 or BIOL 201 – Milestone course
Limited Choice – English/Communication
Limited Choice – Mathematics

Semester II (Spring)
BIOL 202 (if selected BIOL 201 and 202) – Milestone course
PFCN 106 (Spring offering only)
PFCN 250
PFCN 260
PFWT 112

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Heating and Air Conditioning A.A.S.

Career Community: Building and Construction Trades

Curriculum Code: 0836

Effective: Fall 2024 – Summer 2029

Description

Heating, Ventilating, Air Conditioning and Refrigeration (HVAC/R) technicians work on systems that control temperature, humidity, and air quality of enclosed spaces. They are required to design, install, service, and maintain the various types of equipment used to control human comfort, preservation of food products, critical medical supplies, and computer and mechanical processes in residential, commercial, industrial, and institutional environments. Technicians must have a strong mechanical aptitude, be self-motivated, willing to accept challenges, and have a structured approach to problem solving. They should also have good communication skills, the ability to work well with others, and understand all aspects of the construction trade. Students completing this curriculum may also be eligible to apply for a Certificate of Achievement in Heating and Air Conditioning (0832).

Milestone

In addition to the required General Education courses in Math and English, completion of HVAC 100 and HVAC 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for HVAC 110, HVAC 113, and HVAC 115.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Heating and Air Conditioning Program, West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degree, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
HVAC 100	Fundamentals of HVAC	3 / 3
HVAC 110	Applied Electricity I	3 / 4
HVAC 111	Applied Electricity II	3 / 4
HVAC 113	HVAC/R Piping	3 / 4
HVAC 115	Sheet Metal Fab & Installation	2 / 3
HVAC 120	Heating I	3 / 4
HVAC 130	Air Conditioning I	3 / 4
HVAC 201	Mechanical Code	4 / 4
HVAC 220	Heating II	3 / 4
HVAC 221	Introduction to Hydronics	3 / 4
HVAC 230	Air Conditioning II	3 / 4
HVAC 231	Heat Pump	3 / 4
HVAC 240	Refrigeration I	3 / 4
HVAC 241	Refrigeration II	3 / 4
HVAC 251	Fund of Direct Digital Control	3 / 4
TECH 102	General Industry Safety	2 / 3

Program of Study Required Courses, Limited Choice - *Select two*

Course Code	Course Title	Credit / Billing Hours
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 101	Drafting/Intro to CAD	3 / 4
ELTE 141	National Electrical Code I	4 / 4
ELTE 150	Electric Motor Maintenance	2 / 3
HVAC 140	Residential Energy	3 / 4
HVAC 210	Solar Energy Technologies	3 / 4
WELD 103	Combination Welding	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional](#)

[Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

70 credits / 87 billing hours

Recommended Course Sequence

Semester I
Gen Ed – English Composition or Applied English
HVAC 100 – Milestone course
HVAC 110 – Milestone course
HVAC 113
HVAC 115
TECH 102

Semester II
Gen Ed – Mathematics or Applied Mathematics
HVAC 111
HVAC 120
HVAC 130
Limited Choice

Semester III
Gen Ed – English Composition (second course)/Communication or Applied Communication
HVAC 220
HVAC 221
HVAC 230
HVAC 240
Limited Choice

Semester IV
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
HVAC 201
HVAC 231
HVAC 241
HVAC 251

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Heating and Air Conditioning C.A.

Career Community: Building and Construction Trades

Curriculum Code: 0832

Effective: Fall 2024 – Summer 2029

Description

Students will receive instruction on how to install, service, and maintain heating, air conditioning, and refrigeration systems, including sheet metal and electrical, to prepare for entry-level positions. Students completing this certificate may use the credits towards the Heating and Air Conditioning Associate in Applied Science Degree (0836).

Milestone

Completion of HVAC 100 and HVAC 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for HVAC 110, HVAC 113, and HVAC 115.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Heating and Air Conditioning Program, West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
HVAC 100	Fundamentals of HVAC	3 / 3
HVAC 110	Applied Electricity I	3 / 4
HVAC 111	Applied Electricity II	3 / 4
HVAC 113	HVAC/R Piping	3 / 4
HVAC 115	Sheet Metal Fab & Installation	2 / 3
HVAC 120	Heating I	3 / 4
HVAC 130	Air Conditioning I	3 / 4
HVAC 220	Heating II	3 / 4
HVAC 221	Introduction to Hydronics	3 / 4
HVAC 230	Air Conditioning II	3 / 4
HVAC 240	Refrigeration I	3 / 4
TECH 102	General Industry Safety	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

34 credits / 45 billing hours

Recommended Course Sequence

Semester I
HVAC 100 – Milestone course
HVAC 110 – Milestone course
HVAC 113
HVAC 115
TECH 102
Semester II
HVAC 111
HVAC 120
HVAC 130
Semester III
HVAC 220
HVAC 221
HVAC 230
HVAC 240

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Heavy Equipment Repair Technician A.A.S.

Career Community: Transportation

Curriculum Code: 1055

Effective: Fall 2024 – Summer 2029

Description

A heavy equipment repair technician is responsible for the efficient, timely, and proper repair on a variety of heavy-duty construction and road equipment. The technician must be knowledgeable in repair of all systems used in heavy equipment including diesel engines, fuel systems, powertrain, electronics, and hydraulics. The technician must be able to diagnose problems, plan repairs including required labor and parts, and then complete the repair. Repairs must be completed with consideration to safety, MIOSHA, and environmental guidelines. A repair technician must be able to work with a minimum of supervision as repairs may be made off site. Attention to detail and a sense of responsibility are required. Students completing this curriculum may also be eligible to apply for the Heavy Equipment Repair Certificate of Achievement (1041).

Milestone

In addition to the required General Education courses in Math and English, completion of HERT 120 and HERT 125 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

All Heavy Equipment Repair (HERT) courses are taught at AIS Construction, 3600 N. Grand River Ave. in Lansing. In addition, one of the courses may be taught by the AIS Construction staff.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Heavy Equipment Repair Program at the West Campus Building, Room M103, telephone number 517-267-6406.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
HERT 110	Equipment Introduction	5 / 5
HERT 120	Heavy Engine Rebuild	6 / 6
HERT 125	Heavy Equipment Electronics	5 / 5
HERT 130	Equipment Hydraulics	6 / 6
HERT 135	Diesel Fuel Systems	4 / 4
HERT 140	Equipment Powertrain	5 / 5
HERT 145	Equipment Service Writing	4 / 4
HERT 160	Equipment HVAC/Cab Controls	4 / 6
TECH 102	General Industry Safety	2 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
HERT 210	Heavy Equipment Internship	3 / 3
MGMT 150	Managing Customer Relations	3 / 3
WELD 103	Combination Welding	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

61 credits / 66 billing hours

Recommended Course Sequence

Semester I (Fall)
Gen Ed – English Composition or Applied English
HERT 110
HERT 120 – Milestone course
TECH 102
Semester II (Spring)
HERT 125 – Milestone course
HERT 140
HERT 160
Semester III (Summer)
HERT 135
HERT 145
Semester IV (Fall)
Gen Ed – English Composition (second course)/ Communication or Applied Communication
Gen Ed – Mathematics or Applied Mathematics
HERT 130
Semester V (Spring)
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Heavy Equipment Repair Technician C.A.

Career Community: Transportation

Curriculum Code: 1041

Effective: Fall 2024 – Summer 2029

Description

A heavy equipment repair technician is responsible for the efficient, timely, and proper repair on a variety of heavy-duty construction and road equipment. The technician must be knowledgeable in the repair of all systems used in heavy equipment. The technician must be able to diagnose problems, plan repairs including required labor and parts, and then complete the repair with consideration to safety, MIOSHA, and environmental factors. A repair technician must be able to work with a minimum of supervision as repairs may be made off-site. Attention to detail and a sense of responsibility are required. Students completing this certificate may use the credits toward the Heavy Equipment Repair Technician Associate of Applied Science Degree (1055).

Milestone

Completion of HERT 120, HERT 125, and HERT 130 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

All Heavy Equipment Repair (HERT) courses are taught at AIS Construction, 3600 N. Grand River Ave. in Lansing. In addition, one of the courses may be taught by the AIS Construction staff.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Heavy Equipment Repair Program at the West Campus Building, Room M103, telephone number 517-267-6406.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
HERT 110	Equipment Introduction	5 / 5
HERT 120	Heavy Engine Rebuild	6 / 6
HERT 125	Heavy Equipment Electronics	5 / 5
HERT 130	Equipment Hydraulics	6 / 6
HERT 135	Diesel Fuel Systems	4 / 4
HERT 140	Equipment Powertrain	5 / 5
HERT 145	Equipment Service Writing	4 / 4
HERT 160	Equipment HVAC/Cab Controls	4 / 6
TECH 102	General Industry Safety	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

41 credits / 44 billing hours

Recommended Course Sequence

Semester I (Fall)
HERT 110
HERT 120 – Milestone course
HERT 130 – Milestone course
TECH 102
Semester II (Spring)
HERT 125 – Milestone course
HERT 140
HERT 160
Semester III (Summer)
HERT 135
HERT 145

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



History A.A.

Career Community: History, Humanities, and English

Curriculum Code: 0197

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of HIST 211 and HIST 212 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course) or Communication – *Select one*
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
- Humanities and Fine Arts – *Select one from a discipline other than HIST*
ARTH 211, Art History to the Renaissance, 4 credits / 4 billing hours
ARTH 212, Art Hist from the Renaissance, 4 credits / 4 billing hours
ENGL 255, American Lit to 1865, 4 credits / 4 billing hours
ENGL 256, American Lit 1865 to Present, 4 credits / 4 billing hours
HUMS 160, Mythology, 4 credits / 4 billing hours
RELG 150, Intro to World Religions, 4 credits / 4 billing hours

- Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
STAT 215, Intro to Probability and Stats, 4 credits / 4 billing hours
- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 120, Environmental Science, 4 credits / 6 billing hours
BIOL 125, Introductory Biology, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
GEOG 221, Physical Geography, 4 credits / 4 billing hours
GEOL 221, Physical Geology, 4 credits / 6 billing hours
GEOL 222, Historical Geology, 4 credits / 6 billing hours
GEOL 230, Environmental Geology, 4 credits / 6 billing hours
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
- Social Sciences – *Select two, each from a different discipline*
ANTH 270, Cultural Anthropology, 3 credits / 3 billing hours
ECON 120, Power, Authority and Exchange, 4 credits / 4 billing hours
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
POLS 120, American Political System, 4 credits / 4 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
HIST 210*	Historical Methods and Skills	4 / 4
HIST 211	U.S. History to 1877	4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4

*Capstone course – must be taken during Semester IV

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
HIST 214	African History	4 / 4
HIST 215	World History to 1500	4 / 4
HIST 216	World History since 1500	4 / 4
HIST 235	Modern European History	4 / 4
HIST 240	Latin American History	4 / 4
HIST 250	History of Modern Asia	4 / 4

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for this degree. (For the full list of options, see [AA and AS Degree Electives](#).)*

Course Code	Course Title	Credit / Billing Hours
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
ENGL 200	Introduction to Literature	3 / 3
ENGL 255	American Lit to 1865	4 / 4
ENGL 256	American Lit 1865 to Present	4 / 4
ENGL 260	African-American Literature	4 / 4
ENGL 270	Gender and Literature	4 / 4
FREN 121	Elementary French I	4 / 4
FREN 122	Elementary French II	4 / 4
FREN 201	Intermediate French I	4 / 4
FREN 202	Intermediate French II	4 / 4
GRMN 121	Elementary German I	4 / 4
GRMN 122	Elementary German II	4 / 4
GRMN 201	Intermediate German I	4 / 4
GRMN 202	Intermediate German II	4 / 4
HIST 150	African-American History	4 / 4
HUMS 160	Mythology	4 / 4
HUMS 215	American Cultural Experience	4 / 4
JAPN 121	Elementary Japanese I	4 / 4
JAPN 122	Elementary Japanese II	4 / 4
JAPN 201	Intermediate Japanese I	4 / 4
JAPN 202	Intermediate Japanese II	4 / 4
RELG 150	Intro to World Religions	4 / 4
SOCL 260	Race and Ethnicity	3 / 3
SPAN 121	Elementary Spanish I	4 / 4
SPAN 122	Elementary Spanish II	4 / 4
SPAN 201	Intermediate Spanish I	4 / 4
SPAN 202	Intermediate Spanish II	4 / 4

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Mathematics
MTA Natural Sciences
HIST 211 – Milestone course

Semester II
MTA English Comp (second course) or Communication
MTA Natural Sciences
MTA Humanities and Fine Arts
HIST 212 – Milestone course

Semester III
MTA Social Sciences
Limited Choice
Electives as needed for total credits

Semester IV
MTA Social Sciences
HIST 210
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Humanities A.A.

Career Community: History, Humanities, and English

Curriculum Code: 0119

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of ARTH 211 or HUMS 223, and ARTH 212 or HUMS 224 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course)/Communication – *Select one*
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
- Humanities and Fine Arts
Program of Study Required Courses will meet this requirement

- Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
STAT 215, Intro to Probability and Stats, 4 credits / 4 billing hours
- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 120, Environmental Science, 4 credits / 6 billing hours
BIOL 125, Introductory Biology, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
GEOG 221, Physical Geography, 4 credits / 4 billing hours
GEOL 221, Physical Geology, 4 credits / 6 billing hours
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours
- Social Sciences – *Select two, each from a different discipline*
ANTH 270, Cultural Anthropology, 3 credits / 3 billing hours
ECON 120, Power, Authority and Exchange, 4 credits / 4 billing hours
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
POLS 120, American Political System, 4 credits / 4 billing hours
PSYC 200, Introduction to Psychology, 4 credits / 4 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
HUMS 140	Art of Being Human	4 / 4
HUMS 160	Mythology	4 / 4

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
ARTH 211	Art History to the Renaissance	4 / 4
HUMS 223	The Western World to 1500	4 / 4

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
ARTH 212	Art Hist from the Renaissance	4 / 4
HUMS 224	The Western World since 1500	4 / 4

Program of Study Required Courses, Limited Choice - Humanities and Fine Arts –
Select four courses.

Course Code	Course Title	Credit / Billing Hours
ARTH 120	Masterpieces of Art & Music	4 / 4
ARTS 102	2D Design	3 / 4
ENGL 200	Introduction to Literature	3 / 3
ENGL 240	The Film as Art	4 / 4
PHIL 101	Introduction to Philosophy	3 / 3
RELG 150	Intro to World Religions	4 / 4
RELG 210	Comparative Religions	3 / 3

Elective Courses, Recommended Choices – *Select courses as needed to reach the minimum 60 total credits required for this degree. (For the full list of options, see [AA and AS Degree Electives](#))*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
ENGL 211	World Literature I	4 / 4
ENGL 212	World Literature II	4 / 4
ENGL 290	Shakespeare	4 / 4
HIST 150	African-American History	4 / 4
HIST 211	U.S. History to 1877	4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4
HUMS 215	American Cultural Experience	4 / 4
PHIL 152	Introduction to Ethics	4 / 4
RELG 211	Asian Religions and Traditions	4 / 4

Minimum Total Credit Hours

60 credits / 62 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Mathematics
MTA Social Sciences
HUMS 140

Semester II
MTA English Comp (second course) or Communication
MTA Natural Sciences
ARTH 211 or HUMS 223 – Milestone course
HUMS 160

Semester III
MTA Natural Sciences
MTA Social Sciences
ARTH 212 or HUMS 224 – Milestone course
Limited Choice - Humanities and Fine Arts – 2 courses
Semester IV
Limited Choice - Humanities and Fine Arts – 2 courses
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Human Resource Management A.B.

Career Community: Business

Curriculum Code: 0712

Effective: Fall 2024 – Summer 2029

Purpose of Major

This major is designed for students wishing to work in the field of Human Resources Management on completion of the Associate of Business with Human Resource Management major. Human resource managers serve as a link between managers and employees. They help management make effective use of employees' skills and help employees find satisfaction in their jobs and working conditions. Graduates of this program are involved with recording and evaluating information such as job experience, education, skills, qualifications, and job performance; providing information about policies, job duties, working conditions, wages, opportunities for promotion, and employee benefits; maintaining job files on employees; administering various employee benefits; collecting and analyzing labor market data; and employee selection and training. Not all courses in this program transfer to all colleges. Students who also wish to transfer to a four-year institution should select coursework indicated for that institution and may complete the coursework for a Business, Enhanced AB degree. The Business, Enhanced AB option allows students to transfer additional credits toward the Bachelor's degree. This allows completion of credits required for employment and of additional requirements for the Bachelor's. Institutions accepting coursework for the Business, Enhanced AB, Human Resource Management track include Davenport University, Ferris State University (Business Administration – Professional Track), Oakland University, and Siena Heights University.

Milestone

In addition to the required General Education courses in Math and English, completion of MGMT 225 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Business Career Community courses meet this requirement.
- English Composition (second course) or Communication or Applied Communication
Business Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Science or Applied Social Science
Business Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Business Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Business Career Community Required Courses – *These courses are required for all Business programs. They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ACCG 210	Principles of Financial Accg	4 / 4
BUSN 118	Introduction to Business	3 / 3
COMM 110 or COMM 130	Communication in the Workplace Fundamentals Public Speaking	3 / 3 3 / 3
ECON 201	Principles of Economics - Micro	4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LEGL 215	Business Law – Basic Principles	3 / 3
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4
MGMT 225	Principles of Mgmt/Leadership	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Davenport University choose COMM 110 and STAT 170.
- Eastern Michigan University choose STAT 170.
- Ferris State University choose COMM 130 and STAT 170.
- Northwood University and Oakland University choose MATH 120.
- Siena Heights University (Business Administration) choose STAT 170.

Program of Study Required Courses - A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
LABR 200	Intro to Labor Relations	3 / 3
LABR 204	Employment Law for Managers	3 / 3
MGMT 200	Creative Thinking for Business	3 / 3
MGMT 224	Human Resource Management	3 / 3
MGMT 227	Training/Development for Busn	3 / 3
MGMT 228 or MGMT 304	Organization Behavior Organization Development	3 / 3 3 / 3
MGMT 229	Compensation Management	3 / 3
MGMT 231	Developing and Leading Teams	3 / 3
MGMT 234	Diversity in the Workplace	3 / 3
MGMT 280 or MGMT 345	Mgmt/Leadership Internship Context and Transformation	3 / 3 3 / 3
MGMT 337	Advanced Human Resource Mgmt	3 / 3

Program of Study Required Course, Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab - Select one course as indicated for each transfer institution. If a specific course is not indicated for the institution you are considering, or if transfer is not your goal, select any recommended course or choose from the list [LCC General Education Applied Degrees Natural Sciences Lab or Applied Sciences and Technology Lab](#).

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5

Course Code	Course Title	Credit / Billing Hours
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Central Michigan University choose BIOL 120.
- Eastern Michigan University choose ASTR 201 or BIOL 120 or 125 or CHEM 135 or GEOG 221 or ISCI 131.
- Northwood University choose BIOL 120.
- Siena Heights University choose BIOL 120 or CHEM 135 or PHYS 120.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

68 credits / 68 billing hours

Recommended Course Sequence

Semester I
ACAD 100
BUSN 118
ENGL 121 or ENGL 131
MGMT 225 – Milestone course
MKTG 200
Semester II
LABR 200
MATH 120, or STAT 170
MGMT 224
Limited Choice – Natural Sciences Lab or Applied Science and Technology Lab

Semester III
ECON 201
LEGL 215
MGMT 200
MGMT 228 or MGMT 304

Semester IV
COMM 110 or COMM 130
LABR 204
MGMT 227
MGMT 337
MGMT 280 or MGMT 345 (if choosing MGMT 345)

Semester V
ACCG 210
MGMT 229
MGMT 231
MGMT 234
MGMT 280 or MGMT 345 (if choosing MGMT 280)

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Human Services A.A.S.

Career Community: Health and Human Service Careers

Curriculum Code: 0915

Effective: Fall 2024 – Summer 2029

Description

The trained Human Services employee assists professional staff in social service and human services agencies. The associate degree is generalist in nature, with all students acquiring an education in addictions, aging, and family. This degree is part of an enhanced career pathway into the profession. The education provides the opportunity to learn the history of human services, the necessity for a Code of Ethics, structure of community agencies, the programs and services provided, and the populations served. Standards from the Council for Standards in Human Services Education, the generic competencies and the ethical standards from the National Organization for Human Services serve as guidelines for the course work. Select general education courses compliment this degree.

Milestone

In addition to the required General Education courses in Math and English, completion of GERO 100, HUSE 100, HUSE 105, and HUSE 242 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students completing this degree will select a Specialization in Addiction, Aging, or Children and Families. Students may follow other placement specialization options with approval by a Human Services program advisor.

For students interested in Addiction, view the [Michigan Certification Board for Addiction Professionals website](#) for current addiction credentialing.

Students must meet the criteria as described in the Human Services Advising Guide for a supervised consecutive two-semester practicum within a community agency for experiential learning. Students are required to meet with a Human Services program advisor (Room 108 HHS Building) prior to, or during, their first semester to obtain practicum information and application requirements for fall semester. Before practicum placement a criminal background check is required, and a DHHS Central Registry clearance is required for placement with children and families and in agencies providing services to children and families.

To graduate with this degree an overall 2.5 GPA or higher is required. A 2.5 grade or higher is required in all GERO, HUSE, SOWK, and Program of Study Required Courses-Limited Choice - Specialization courses. Health and Human Service Career Community Required Courses; Program of Study Required Courses, Limited Choice – MTA Humanities and Fine Arts courses; and PFHW 123 and PSYC 200 require a 2.0 grade or higher. Students are encouraged to take the required program courses with their general education courses in the first, second, third, and fourth semesters to complete the degree in a timely manner.

This degree is designed for students to enter the workforce as pre-professionals and for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree. Students completing the Health and Human Service Career Community Required Courses; Program of Study Required Courses, Limited Choice – MTA Humanities and Fine Arts courses; and PFHW 123 and PSYC 200 with a 2.0 grade or higher will satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan. In addition to this AAS degree in Human Services, students qualify for the Human Services Certificate of Achievement (1201), and the LCC Transfer Studies Certificate of Achievement (1482).

Not all courses in this curriculum transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course and should select coursework indicated for that institution. General education and subject area requirements vary from one college or university to another.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Human Services Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Health and Human Service Career Community Courses meet this requirement.
- English Composition (second course)/Communications
Health and Human Service Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses, Limited Choice – MTA Humanities and Fine Arts meet this requirement.
- Mathematics
Health and Human Service Career Community Courses meet this requirement.
- Natural Sciences
Health and Human Service Career Community Courses and Program of Study Required Courses meet this requirement.
- Social Sciences
Health and Human Service Career Community Courses and Program of Study Required Courses meet this requirement.

Health and Human Service Career Community Required Courses - *A minimum grade of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 145 or BIOL 201 and BIOL 202	Intro Anatomy and Physiology Human Anatomy and Human Physiology	4 / 6 8 / 11
COMM 110 or COMM 120 or COMM 130 or COMM 240 or ENGL 122 or ENGL 132	Communication in the Workplace Dynamics of Communication Fundamentals Public Speaking Interpersonal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or MATH 126 or MATH 151 or STAT 170 or STAT 215	Math – Applications for Living College Algebra Precalculus Calculus I Introduction to Statistics Intro to Probability and Stats	4 / 4 4 / 4 5 / 5 4 / 4 4 / 4 4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Human Services students choose BIOL 145, and ENGL 122 or ENGL 132, and MATH 119 or MATH 120 or STAT 170, or as specified below for transfer.

For future transfer to:

- Baker College choose BIOL 201 and BIOL 202, and ENGL 122 or ENGL 132, and MATH 119 or MATH 120 or STAT 170.
- Central Michigan University choose MATH 119 or MATH 120 or STAT 170.
- Spring Arbor University choose BIOL 145, and ENGL 122 or ENGL 132, and MATH 119 or MATH 120 or STAT 170.
- Western Michigan University choose ENGL 122, and MATH 119 or STAT 170.

Program of Study Required Courses – *PFHW 123 will also meet the General Education MTA Natural Sciences requirement. PSYC 200 will also meet the General Education MTA Social Sciences requirement. A 2.0 or higher grade is required in PFHW 123 and PSYC 200. A 2.5 or higher grade is required in all GERO and HUSE courses.*

Course Code	Course Title	Credit / Billing Hours
GERO 100	Introduction to Human Aging	4 / 4
HUSE 100	Introduction to Human Services	3 / 3
HUSE 105	Personal Dynamics/ Interviewing	4 / 4
HUSE 242	The Family: Addiction/Violence	3 / 3
HUSE 282	Human Services Practicum I	4 / 4
HUSE 284	Human Services Practicum II	4 / 4
PFHW 123	Human Nutrition	3 / 3
PSYC 200	Introduction to Psychology	4 / 4

Program of Study Required Courses, Limited Choice - MTA Humanities and Fine Arts – *Select one. A 2.0 or higher grade is required.*

Course Code	Course Title	Credit / Billing Hours
ARTH 120	Masterpieces of Art & Music	4 / 4
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
MUSC 240	Musical Cultures to 1750	4 / 4
MUSC 241	Musical Cultures 1750-Present	4 / 4

For future transfer to:

- Baker College choose ARTH 211 or ARTH 212 or MUSC 241.
- Central Michigan University choose ARTH 211 or ARTH 212 or MUSC 240 or MUSC 241.
- Spring Arbor University choose ARTH 120.
- Western Michigan University choose ARTH 120 or ARTH 211 or ARTH 212.

Program of Study Required Courses, Limited Choice - MTA Humanities and Fine Arts – *Select one. A 2.0 or higher grade is required.*

Course Code	Course Title	Credit / Billing Hours
ENGL 211	World Literature I	4 / 4
ENGL 212	World Literature II	4 / 4
ENGL 260	African-American Literature	4 / 4
HIST 150	African-American History	4 / 4

Course Code	Course Title	Credit / Billing Hours
HIST 211	U.S. History to 1877	4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4
HIST 214	African History	4 / 4
PHIL 151	Intro to Logic & Critical Think	4 / 4
PHIL 152	Introduction to Ethics	4 / 4
PHIL 211	Philosophy: Ancient & Medieval	4 / 4
RELG 150	Intro to World Religions	4 / 4
RELG 211	Asian Religions and Traditions	4 / 4

For future transfer to:

- Baker College choose HIST 211 or HIST 212 or PHIL 152.
- Central Michigan University choose ENGL 211 or ENGL 260 or HIST 211 or HIST 214 or PHIL 151 or PHIL 152 or RELG 150.
- Spring Arbor University choose ENGL 211 or HIST 150 or HIST 211 or HIST 212 or HIST 214 or PHIL 151 or PHIL 211.
- Western Michigan University choose ENGL 211 or ENGL 212 or ENGL 260 or HIST 150 or HIST 211 or HIST 212 or PHIL 151 or PHIL 152 or RELG 150.

Program of Study Required Courses, Limited Choice – Specialization Courses -

Select 6 credits. A 2.5 or higher grade is required. Work with an Academic Advisor or Program Advisor to select the most appropriate courses that meet your educational and career goals.

Course Code	Course Title	Credit / Billing Hours
CHSE 108	Long-Term Care Nurse Aide	4 / 6.5
CJUS 106	Intro to Juvenile Justice	3 / 3
CJUS 126	Juvenile Offenders/Families	3 / 3
ECON 120	Power, Authority and Exchange	4 / 4
ECON 201	Principles of Economics-Micro	4 / 4
GERO 164	Med & Alcohol Use/Older Adults	.5 / 0*
GERO 169	Legal Rights of Older Adults	.5 / 0*
GERO 191	Special Topics in Gerontology	.25-4 / 0*
HUSE 110	Child Abuse and Neglect	3 / 3
POLS 120	American Political System	4 / 4
PSYC 203	Social Psychology	3 / 3
PSYC 209	Cognitive Psychology	3 / 3
PSYC 210	Brain and Behavior	3 / 3
PSYC 221	Child Psychology	3 / 3
PSYC 222	Adolescent Psychology	3 / 3
PSYC 250	Abnormal Psychology	3 / 3
SOCL 254	Marriage and Family	3 / 3
SOCL 260	Race and Ethnicity	3 / 3
SOWK 101	Introduction to Social Work	3 / 3

For practicum specialization in:

- Addiction choose HUSE 110 or PSYC 209 or PSYC 210 or PSYC 250, and SOWK 101.
- Aging Studies choose GERO Seminars (GERO 164 and GERO 169 and GERO 191 - totaling 3 credits) or PSYC 209 or PSYC 210 or PSYC 250, and SOWK 101.
- Children and Families choose HUSE 110 and SOWK 101.

For future transfer to:

- Baker College (Human Services, B.S.) choose PSYC 203 or PSYC 250.
- Siena Heights University (Community and Human Services, B.S.) choose CJUS 106 or PSYC 221 or PSYC 222, and PSYC 203 or SOCL 254.
- Spring Arbor University (Social Work, B.S.W.) choose ECON 120 or ECON 201, and POLS 120 or SOCL 260.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

63 credits / 65 billing hours*

*GERO seminars are a flat fee and do not have billing hours. Contact the Program Coordinator of the Mental Health and Aging Project at 517-483-1526 for fee information.

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or 131
GERO 100 – Milestone course
HUSE 100 – Milestone course
PSYC 200

Semester II
ENGL 122 or 132
HUSE 105 – Milestone course (Spring only)
HUSE 242 – Milestone course (Spring only)
Limited Choice – Specialization courses

Semester III
HUSE 282
MATH 119, MATH 120, or STAT 170
SOCL 120
Limited Choice - MTA Humanities and Fine Arts

Semester IV
BIOL 145
HUSE 284
PFHW 123
Limited Choice - MTA Humanities and Fine Arts

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Human Services C.A.

Career Community: Health and Human Service Careers

Curriculum Code: 1201

Effective: Fall 2024 – Summer 2029

Description

This Certificate of Achievement provides the essential values, knowledge, and skills to promote client and community well-being. It is designed as the second certificate in an enhanced career pathway into human services. Standards from the Council for Standards in Human Services Education and the generic competencies and ethical standards from the National Organization for Human Services serve as guidelines for the course work.

Milestone

Completion of ENGL 121 or ENGL 131 with a 2.0 or higher, and GERO 100, HUSE 100, HUSE 105, and HUSE 242 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students completing this certificate will select a Specialization in Addiction, Aging, or Children and Families. Students may follow other placement options with approval by a Human Services program advisor.

For students interested in addiction, view the [Michigan Certification Board for Addiction Professionals website](#) for current addiction credentialing.

Upon completion of the Limited Choice – Specialization courses, any additional specialization courses will not count toward the student's enrollment level for determining financial aid eligibility.

Students must meet the criteria as described in the Human Services Advising Guide for a supervised consecutive two-semester practicum within a community agency for experiential learning. Students are required to meet with a Human Services program advisor prior to, or during, their first semester to obtain practicum information and application requirements for fall semester. Before practicum placement, a criminal background check is required, and a DHHS Central Registry check is required for placement with children and families or agencies providing services to children and families.

To earn this Certificate of Achievement a 2.5 grade or higher is required in all GERO, HUSE, SOWK, and Program of Study Required Courses, Limited Choice – Specialization courses; a 2.0 grade or higher is required in ENGL 121 or ENGL 131. An overall 2.5 GPA or higher is required. Students continuing their education are encouraged to take the required general education courses in their first, second, third and summer semesters to complete the Human Services Associate Degree on time.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Human Services Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses – A 2.5 grade or higher is required.

Course Code	Course Title	Credit / Billing Hours
GERO 100	Introduction to Human Aging	4 / 4
HUSE 100	Introduction to Human Services	3 / 3
HUSE 105	Personal Dynamics/Interviewing	4 / 4
HUSE 242	The Family: Addiction/Violence	3 / 3
HUSE 282	Human Services Practicum I	4 / 4
HUSE 284	Human Services Practicum II	4 / 4

Program of Study Required Courses, Limited Choice – Select one. A 2.0 grade or higher is required.

Course Code	Course Title	Credit / Billing Hours
ENGL 121	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4

Program of Study Required Courses, Limited Choice – Specialization Courses –

Select 6 credits. A 2.5 grade or higher is required. Work with an Academic Advisor or Program Advisor to select the most appropriate courses that meet your educational and career goals.

Course Code	Course Title	Credit / Billing Hours
CHSE 108	Long-Term Care Nurse Aide	4 / 6.5
CJUS 106	Intro to Juvenile Justice	3 / 3
CJUS 126	Juvenile Offenders/Families	3 / 3
GERO 164	Med & Alcohol Use/Older Adults	.5 / 0 *
GERO 169	Legal Rights of Older Adults	.5 / 0 *
GERO 191	Special Topics in Gerontology	.25-4 / 0*
HUSE 110	Child Abuse and Neglect	3 / 3
POLS 120	American Political System	4 / 4
PSYC 200	Introduction to Psychology	4 / 4
PSYC 203	Social Psychology	3 / 3
PSYC 209	Cognitive Psychology	3 / 3
PSYC 210	Brain and Behavior	3 / 3
PSYC 221	Child Psychology	3 / 3
PSYC 222	Adolescent Psychology	3 / 3
PSYC 250	Abnormal Psychology	3 / 3
SOCL 120	Introduction to Sociology	4 / 4
SOCL 254	Marriage and Family	3 / 3
SOCL 260	Race and Ethnicity	3 / 3
SOWK 101	Introduction to Social Work	3 / 3

For practicum specialization in:

- Addiction choose HUSE 110 and SOWK 101.
- Aging choose GERO Seminars (GERO 164 and GERO 169 and GERO 191 - totaling 3 credits) or PSYC 200, and PSYC 209 or PSYC 210 or PSYC 250 or SOWK 101.
- Children and Families choose HUSE 110 and SOWK 101.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

32 credits / 32 billing hours + Flat Fees*

* GERO seminars are a flat fee and do not have billing hours. Contact the Program Coordinator of the Mental Health and Aging Project at 517-483-1526 or 517-483-1529 for fee information.

Recommended Course Sequence

Semester I (Fall)
ENGL 121 or 131 – Milestone course
GERO 100 – Milestone course
HUSE 100 – Milestone course
Limited Choice - Specialization course(s)
Semester II (Spring)
HUSE 105 – Milestone course (Spring only)
HUSE 242 – Milestone course (Spring only)
Limited Choice - Specialization course(s)
Semester III (Fall)
HUSE 282
Semester IV (Spring)
HUSE 284

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Human Services C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1199

Effective: Fall 2024 – Summer 2029

Description

This Certificate of Completion provides the essential values, knowledge, and skills to promote client and community well-being. It is designed as the first certificate in an enhanced career pathway into human services. Standards from the Council for Standards in Human Services Education and the generic competencies and ethical standards from the National Organization for Human Services serve as guidelines for the course work.

Milestone

Completion of HUSE 100 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

Students completing this certificate will select a Specialization in Addiction, Aging, or Children and Families. Students may follow other placement options with approval by a Human Services program advisor.

For students interested in addiction, view the [Michigan Certification Board for Addiction Professionals website](#) for current addiction credentialing.

Students continuing their education for the Human Services Certificate of Achievement or Human Services Associate Degree are required to meet with a Human Services program advisor prior to, or during, their first semester of this certificate to obtain practicum information and application requirements for fall semester. Before practicum placement a criminal background check is required, and a DHHS Central Registry check is required for placement with children and families and in agencies providing services to children and families.

To earn this Certificate of Completion a 2.5 grade or higher is required in all courses. Students continuing their education are encouraged to take the required general education courses in their first, second, third and summer semesters to complete the Human Services Associate Degree on time.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Human Services Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses – Minimum 2.5 grade or higher required.

Course Code	Course Title	Credit / Billing Hours
HUSE 100	Introduction to Human Services	3 / 3
HUSE 105	Personal Dynamics/Interviewing	4 / 4

Program of Study Required Courses, Limited Choice – Specialization Courses -

Select 6 credits. Minimum 2.5 grade or higher is required. Work with an Academic Advisor or Program Advisor to select the most appropriate courses that meet your educational and career goals.

Course Code	Course Title	Credit / Billing Hours
GERO 100	Introduction to Human Aging	4 / 4
GERO 164	Med & Alcohol Use/Older Adults	.5 / 0*
GERO 169	Legal Rights of Older Adults	.5 / 0*
GERO 191	Special Topics in Gerontology	.25-1 / 0*
HUSE 110	Child Abuse and Neglect	3 / 3
HUSE 242	The Family: Addiction/Violence	3 / 3
SOWK 101	Introduction to Social Work	3 / 3

For specialization in:

- Addiction choose HUSE 110 and HUSE 242.
- Aging choose GERO 100, and GERO Seminars (GERO 164 and GERO 169 and GERO 191 - totaling 3 credits) or SOWK 101.
- Children and Families choose HUSE 110 and SOWK 101.

Minimum Total Credit Hours

13 credits / 13 billing hours + flat fees*

**GERO seminars are a flat fee and do not have billing hours. Contact the Program Coordinator of the Mental Health and Aging Project at 517-483-1526 or 517-483-1529 for fee information.*

Recommended Course Sequence

Semester I
HUSE 100 – Milestone course
Limited Choice – Specialization course(s)
Semester II
HUSE 105
Limited Choice – Specialization course(s)

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



HVAC/R-Energy Management Engineering Technology A.A.S.

Career Community: Building and Construction Trades

Curriculum Code: 1257

Effective: Fall 2024 – Summer 2029

Description

This degree is for students interested in pursuing a Bachelor of Science Degree in HVAC/R Energy Management Engineering Technology. As this is a transfer engineering degree, be aware that this pathway contains a higher math requirement and students may need additional math prerequisite classes depending upon math placement levels.

Milestone

In addition to the required General Education courses in Math and English, completion of HVAC 100 and HVAC 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for HVAC 110.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Heating and Air Conditioning Program, West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education – Applied Degrees, Recommended Courses

- English Composition or Applied English
Program of Study Required Courses will meet this requirement
- English Composition (second course)/Communication or Applied Communication
Program of Study Required Courses will meet this requirement
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Program of Study Required Courses will meet this requirement
- Mathematics or Applied Mathematics
Program of Study Required Courses will meet this requirement
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses will meet this requirement

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
COMM 130	Fundamentals Public Speaking	3 / 3
ENGL 121	Composition I	4 / 4
ENGL 124	Technical Writing	3 / 3
GEOG 200	World Regional Geography	4 / 4
HUMS 160	Mythology	4 / 4
HVAC 100	Fundamentals of HVAC	3 / 3
HVAC 110	Applied Electricity I	3 / 4
HVAC 111	Applied Electricity II	3 / 4
HVAC 120	Heating I	3 / 4
HVAC 130	Air Conditioning I	3 / 4
HVAC 201	Mechanical Code	4 / 4
HVAC 220	Heating II	3 / 4
HVAC 221	Introduction to Hydronics	3 / 4
HVAC 230	Air Conditioning II	3 / 4
HVAC 240	Refrigeration I	3 / 4
HVAC 241	Refrigeration II	3 / 4
HVAC 251	Fund of Direct Digital Control	3 / 4
MATH 126	Precalculus	5 / 5
PHYS 120	The Art of Physics	4 / 5
TECH 102	General Industry Safety	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

66 credits / 78 billing hours

Recommended Course Sequence

Semester I
ENGL 124
HUMS 160
HVAC 100 – Milestone course
HVAC 110 – Milestone course
TECH 102

Semester II
ENGL 121
HVAC 111
HVAC 120
HVAC 130
MATH 126

Semester III
COMM 130
HVAC 220
HVAC 221
HVAC 230
HVAC 240

Semester IV
GEOG 200
HVAC 201
HVAC 241
HVAC 251
PHYS 120

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Industrial Maintenance Technician C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 1484

Effective: Fall 2024 – Summer 2029

Description

This certificate is designed for an apprentice, pre-apprentice, or person interested in advancing his/her skill set in the industrial maintenance trade. Ideally, this curriculum should be taken concurrently with an industry-based work experience or apprenticeship or in preparation for an apprenticeship in industrial or machine maintenance and repair.

Milestone

Completion of WELD 103 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for the ELTE and METS courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
METD 150	Industrial Blueprint Reading	3 / 3
METS 130	Industrial Hydraulics	4 / 6
METS 140	Rigging	3 / 4.5
TECH 102	General Industry Safety	2 / 3
WELD 103	Combination Welding	4 / 6

Program of Study Required Courses, Limited Choice – *Select a minimum of four courses, sixteen credits*

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
ELTE 131	Machine Controls I	4 / 5
MATH 115	Technical Mathematics	4 / 4
METM 108	Machine Tool Operations	4 / 6
METM 112	Introduction to CNC Machining	4 / 6
METM 190	Metallurgy and Heat Treatment	4 / 6
METS 110	Mechanical Power Transmissions	4 / 6
METS 120	Industrial Pneumatics	4 / 6
METS 210	Lubrication and Bearings	4 / 6
WELD 105	Advanced ARC Welding	4 / 6
WELD 111	Gas Tungsten ARC Welding	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

32 credits / 43.5 billing hours

Recommended Course Sequence

Semester I
METD 150
TECH 102
Limited Choice

Semester II
METS 130
METS 140
WELD 103 – Milestone course

Semester III
Limited Choice
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Industrial Manufacturing Engineering Technology A.A.S.

Career Community: Electrical and Manufacturing

Curriculum Code: 0110

Effective: Fall 2024 – Summer 2029

Description

Industrial manufacturing engineering technology is the study of a variety of technologies used in today's industry. Physical and mental skills are required including mechanical skills, problem-solving abilities, and dexterity. Employment opportunities are with industries that have a variety of work processes and/or trades. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of METM 108 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English
Program of Study Required Courses will meet this requirement
- English Composition (second course) or Communication or Applied Communication
Program of Study Required Courses will meet this requirement
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
Program of Study Required Courses will meet this requirement
- Mathematics or Applied Mathematics
Program of Study Required Courses will meet this requirement
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses will meet this requirement

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
COMM 130	Fundamentals Public Speaking	3 / 3
COMM 280	Intercultural Communication	3 / 3
ELTE 110	Practical Electricity	4 / 6
ENGL 121	Composition I	4 / 4
ENGL 122	Composition II	4 / 4
MATH 126	Precalculus	5 / 5
METD 100	Basic Mechanical Drafting	3 / 4
METD 110	Mechanical CAD Drafting I	4 / 6
METD 130	Geometric Dimension/Tolerance	4 / 6
METD 220	Basic Unigraphics/NX	4 / 6
METM 108	Machine Tool Operations	4 / 6
METM 112	Introduction to CNC Machining	4 / 6
METM 190	Metallurgy and Heat Treatment	4 / 6
METM 220	Basic Mastercam	4 / 6
METS 115	Intro to Mechanical Systems	4 / 6
TECH 102	General Industry Safety	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 80 billing hours

Recommended Course Sequence

Semester I
COMM 130
ELTE 110
ENGL 121
METD 100
METD 130
TECH 102
Semester II
COMM 280
METD 110
METD 220
METM 108 - Milestone

Semester III
ENGL 122
MATH 126
METM 112
METM 190
Semester IV
METM 220
METS 115

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Information Technology Foundations C.C.

Career Community: Computer Technology and Networking

Curriculum Code: 0766

Effective: Fall 2024 – Summer 2029

Description

This certificate of completion provides the student with a broad-based introduction to the Information Technology (IT) field. The courses are selected to give the student an understanding of the use of computers in various aspects of business, some typical business applications, how computer networks function, how operating systems work, and an introduction to computer programming. Students also learn skills for basic computer repair and support, allowing them to earn the industry respected CompTIA A+ certification. This certificate is especially suited to help an undecided student select which aspect of IT to pursue, or to allow a person with a non-IT background and/or degree to add basic IT skills, or as a starting point for students seeking the Computer Networking and Cybersecurity Associate of Business degree (1453).

Milestone

Completion of CITF 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program at the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITF 110	Intro Computer Info Systems	3 / 3
CITF 120	Operating Systems Concepts	3 / 3
CITN 120	Networking Concepts	3 / 3
CITP 110	Intro to Programming-Python	4 / 4
CITS 125	Computer Support: A+ Cert Prep	6 / 6

Minimum Total Credit Hours

19 credits / 19 billing hours

Recommended Course Sequence

Semester I
CITF 110 – Milestone course
CITN 120
CITS 125
Semester II
CITF 120
CITP 110

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Inside Wireman Apprenticeship A.A.S.

Career Community: Electrical and Manufacturing

Curriculum Code: 1445

Effective: Fall 2024 – Summer 2029

Description

This curriculum is available only to individuals who have completed a formal apprenticeship program through Lansing Community College and hold JATC Inside Wireman journeyman-level status recognized by the U.S. Department of Labor, Bureau of Apprenticeship and Training. Upon completion of all the academic credit courses, the apprenticeship program will be evaluated and appropriate credit awarded. Students who have completed this apprenticeship work installing and servicing electrical wiring and systems in homes, offices, stores or industrial plants. This trade requires mechanical aptitude, logical thinking, and problem-solving skills. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of APPR 170 and APPR 171 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Electrical Technology Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 124, Technical Writing, 3 credits / 3 billing hours
ENGL 127, Business Writing, 3 credits / 3 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
COMM 280, Intercultural Communication, 3 credits / 3 billing hours
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one*
ELTE 121, Electrical Mathematics, 5 credits / 6 billing hours
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
MATH 117, Math for Business, 4 credits / 4 billing hours
MATH 119, Math – Applications for Living, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours
CHEM 151 and CHEM 161, General Chemistry Lecture/Lab I, 5 credits / 7 billing hours
METM 190, Metallurgy and Heat Treatment, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
APPR 170	Inside Wireman Apprentice 1-A	4 / 4
APPR 171	Inside Wireman Apprentice 1-B	4 / 4
APPR 172	Inside Wireman Apprentice 1-C	4 / 4
APPR 173	Inside Wireman Apprentice 2-A	4 / 4
APPR 174	Inside Wireman Apprentice 2-B	4 / 4
APPR 175	Inside Wireman Apprentice 2-C	4 / 4
APPR 176	Inside Wireman Apprentice 3-A	4 / 4
APPR 177	Inside Wireman Apprentice 3-B	4 / 4
APPR 178	Inside Wireman Apprentice 3-C	4 / 4
APPR 179	Inside Wireman Apprentice 4-A	4 / 4
APPR 180	Inside Wireman Apprentice 4-B	4 / 4
APPR 181	Inside Wireman Apprentice 4-C	4 / 4
APPR 182	Inside Wireman Apprentice 5-A	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

69 credits / 70 billing hours

Recommended Course Sequence

Semester I
APPR 170 – Milestone course
Semester II
APPR 171 – Milestone course
Semester III
APPR 172
Semester IV
APPR 173
Semester V
APPR 174
Semester VI
APPR 175
Semester VII
Gen Ed – English Composition or Applied English
APPR 176
Semester VIII
Gen Ed – Mathematics or Applied Mathematics
APPR 177
Semester IX
Gen Ed – English Composition (second course)/Communication or Applied Communication
APPR 178
Semester X
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
APPR 179
Semester XI
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
APPR 180
Semester XII
APPR 181
Semester XIII
APPR 182

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Insurance and Risk Management A.B.

Career Community: Business

Curriculum Code: 1804

Effective: Fall 2024 – Summer 2029

Purpose of Major

This major is designed for students wishing to work in the field of Insurance and Risk Management on completion of the Associate of Business degree. Graduates of this degree will be prepared to start their career. The insurance industry is experiencing a high demand for professionals, providing graduates with many career opportunities. Not all courses in this pathway transfer to all colleges. Students who also wish to transfer to a four-year institution should select coursework indicated for that institution and may complete the coursework for a Business, Enhanced AB degree. The Business, Enhanced AB option allows students to transfer additional credits toward the Bachelor's degree. This allows completion of credits required for employment and of additional requirements for the Bachelor's. Institutions accepting coursework for the Business, Enhanced AB, Insurance and Risk Management track include Davenport University, Ferris State University (Business Administration – Professional Track), and Northwood University. Students wishing to transfer to Olivet College in the Insurance and Risk Management major should choose the Business Transfer Studies Associate in Arts degree and follow instructions for transfer to Olivet College, Insurance and Risk Management major.

Milestone

In addition to the required General Education courses in Math and English, completion of INSU 105 and INSU 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degree Courses, Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition
Business Career Community courses meet this requirement.

- English Composition (second course) or Communication or Applied Communication
Business Career Community Courses meet this requirement.
- Humanities or Social Science or Applied Social Science
Business Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Business Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Business Career Community Required Courses – *These courses are required for all Business programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ACCG 210	Principles of Financial Accg	4 / 4
BUSN 118	Introduction to Business	3 / 3
COMM 110 or COMM 130	Communication in the Workplace Fundamentals Public Speaking	3 / 3 3 / 3
ECON 201	Principles of Economics-Micro	4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LEGL 215	Business Law–Basic Principles	3 / 3
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4
MGMT 225	Principles of Mgmt/Leadership	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Davenport University and Ferris State University choose COMM 110 and STAT 170.
- Northwood University choose MATH 120.

Program of Study Required Courses - A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
INSU 105	Prin of Managing Evolving Risk	3 / 3
INSU 110	Personal Insurance	3 / 3
INSU 125	Commercial Insurance	3 / 3
INSU 175	Intro to Financial Advising	3 / 3
INSU 250	Claims and Underwriting	3 / 3
INSU 285	Insurance Agency Operations	3 / 3
INSU 295	Insurance Internship	3 / 3
MGMT 234	Diversity in the Workplace	3 / 3

Note: INSU 295 may be waived on the recommendation of a Program Advisor.

Program of Study Required Courses, Limited Choice – Select 4 credits

Course Code	Course Title	Credit / Billing Hours
ACCG 211	Principles of Managerial Accg	4 / 4
INSU 260	Life/Health Insur Licensing	2 / 2
INSU 270	Property/Casualty Insur Licens	2 / 2
PSYC 200	Introduction to Psychology	4 / 4

Notes:

- Choose INSU 260 and/or INSU 270 if pursuing licensure in the state of Michigan.
- If not pursuing licensure, choose ACCG 211 for transfer.

Program of Study Required Courses, Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab - Select one course as indicated for each transfer institution. If a specific course is not indicated for the institution you are considering, or if transfer is not your goal, select any recommended course or from [LCC General Education](#), [Applied Degrees](#), [Natural Sciences Lab](#) or [Applied Sciences and Technology Lab](#).

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

Note: For future transfer to Northwood University choose BIOL 120.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s)

needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

63 credits / 63 billing hours

Recommended Course Sequence

Semester I
ACAD 100
BUSN 118
ENGL 121 or ENGL 131
INSU 105 – Milestone course
MKTG 200

Semester II
INSU 110 – Milestone course
INSU 125
LEGL 215
MATH 120 or STAT 170

Semester III (Summer)
INSU 295
MGMT 225

Semester IV
ACCG 210
COMM 110 or COMM 130
ECON 201
INSU 175
INSU 285

Semester V
INSU 250
MGMT 234
Limited Choice
Limited Choice - Natural Sciences Lab or Applied Sciences and Technology Lab

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Insurance and Risk Management CC

Career Community: Business

Curriculum Code: 1838

Effective: Fall 2024 – Summer 2029

Description

This certificate will prepare students for a career in the insurance industry while also providing needed designations.

Milestone

Completion of INSU 105 and INSU 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546, or Student Services, Gannon Building – Star Zone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
INSU 105	Prin of Managing Evolving Risk	3 / 3
INSU 110	Personal Insurance	3 / 3
INSU 125	Commercial Insurance	3 / 3
INSU 175	Intro to Financial Advising	3 / 3
INSU 250	Claims and Underwriting	3 / 3
INSU 285	Insurance Agency Operations	3 / 3

Minimum Total Credit Hours

18 credits / 18 billing hours

Recommended Course Sequence

Semester I
INSU 105 – Milestone course
INSU 125
INSU 175

Semester II
INSU 110 – Milestone course
INSU 250
INSU 285

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



International Business A.B.

Career Community: Business

Curriculum Code: 0240

Effective: Fall 2024 – Summer 2029

Purpose of Major

This major is designed for students wishing to work in the field of International Business on completion of the Associate of Business degree. International business managers plan, organize, and control projects from start to finish for organizations with international connections. They help their company achieve its goals in differing international and governmental situations. Graduates of this program may work for a variety of business and organizations, both in this hemisphere and overseas. Knowledge of a foreign language and a business or technical specialty increases one's employability. This degree can be completed entirely online. Not all courses in this program transfer to all colleges. Students who also wish to transfer to a four-year institution should select coursework indicated for that institution and may complete the coursework for a Business, Enhanced AB degree. The Business, Enhanced AB option allows students to transfer additional credits toward the Bachelor's degree. This allows completion of credits required for employment and of additional requirements for the Bachelor's. Institutions accepting coursework for the Business, Enhanced AB, International Business track include Davenport University, Ferris State University (Business Administration – Professional Track), and Siena Heights University.

Milestone

In addition to the required General Education courses in Math and English, completion of BUSN 118 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degree Courses, Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Business Career Community courses meet this requirement.

- English Composition (second course) or Communication or Applied Communication
Business Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Science or Applied Social Science
Business Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Business Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Business Career Community Required Courses – *These courses are required for all Business programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ACCG 210	Principles of Financial Accg	4 / 4
BUSN 118	Introduction to Business	3 / 3
COMM 110 or COMM 130	Communication in the Workplace Fundamentals Public Speaking	3 / 3 3 / 3
ECON 201	Principles of Economics - Micro	4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LEGL 215	Business Law – Basic Principles	3 / 3
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4
MGMT 225	Principles of Mgmt/Leadership	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For students not considering transfer as an option, MGMT 234, Diversity in the Workplace, may be substituted for ECON 201 using the Course Substitution process. MGMT 234 meets LCC General Education requirements for Applied Degrees – Humanities or Social Science or Applied Social Science. MGMT 234 does not meet Michigan Transfer Agreement (MTA) Social Science requirements for transfer as a General Education course.

For future transfer to Davenport University, Ferris State University, and Siena Heights University choose COMM 110 and STAT 170.

Program of Study Required Courses - *A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACCG 211	Principles of Managerial Accg	4 / 4
BUSN 201	International Business	3 / 3
BUSN 285 or MKTG 235	Business Admin Internship Marketing Internship	3 / 3 3 / 3
ECON 202	Principles of Economics - Macro	4 / 4
MGMT 228	Organization Behavior	3 / 3
MKTG 119	Mktg/Manage Your Profess Image	3 / 3

Note: BUSN 285 or MKTG 235 may be waived based on the recommendation of a Program Advisor.

Program of Study Required Courses, Limited Choice – Natural Sciences Lab or Applied Science and Technology Lab - *Select one course as indicated for each transfer institution. If a specific course is not indicated for the institution you are considering, or if transfer is not your goal, select any recommended course or from [LCC General Education, Applied Degrees, Natural Sciences Lab or Applied Sciences and Technology Lab](#).*

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Northwood University choose BIOL 120.
- Siena Heights University choose BIOL 120 or CHEM 135 or PHYS 120.

Program of Study Required Courses, Limited Choice— *Select 4 credits. Include up to 4 credits of the same Foreign Language based on proficiency testing. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
GRMN 121 or JAPN 121 or SPAN 121	Elementary German I Elementary Japanese I Elementary Spanish I	4 / 4 4 / 4 4 / 4
GRMN 122 or JAPN 122 or SPAN 122	Elementary German II Elementary Japanese II Elementary Spanish II	4 / 4 4 / 4 4 / 4
JAPN 201 or SPAN 201	Intermediate Japanese I Intermediate Spanish I	4 / 4 4 / 4
JAPN 202 or SPAN 202	Intermediate Japanese II Intermediate Spanish II	4 / 4 4 / 4
MGMT 200	Creative Thinking for Business	3 / 3
MGMT 224	Human Resource Management	3 / 3
MGMT 231	Developing and Leading Teams	3 / 3
MKTG 210	Intro to Digital Marketing	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
ACAD 100
BUSN 118 – Milestone course
ENGL 121 or ENGL 131
Limited Choice

Semester II
ACCG 210
MATH 120 or STAT 170
Limited Choice

Semester III
ACCG 211
BUSN 201
ECON 201
MGMT 225

Semester IV
COMM 110 or COMM 130
ECON 202
LEGL 215
MKTG 200

Semester V
BUSN 285 or MKTG 235
MGMT 228
MKTG 119
Limited Choice - Natural Sciences Lab or Applied Science and Technology Lab

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Japanese Studies C.C.

Career Community: Communication, Journalism, and Language

Curriculum Code: 1787

Effective: Fall 2024 – Summer 2029

Description

This Certificate of Completion in Japanese Studies provides the beginning and intermediate level Japanese language skills and cross-cultural information for students preparing to transfer to college or university programs, qualifying dual-enrolled high school or home school students, or those seeking to reinforce their own professional Japanese language and cultural competencies. In an increasingly international world economy, holders of this certificate may improve their employment opportunities, in particular since many Japanese companies have very strong ties to Michigan businesses. Students may apply all courses in this curriculum toward other certificates and/or degrees.

Milestone

Completion of JAPN 121 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
JAPN 121	Elementary Japanese I	4 / 4
JAPN 122	Elementary Japanese II	4 / 4
JAPN 201	Intermediate Japanese I	4 / 4
JAPN 202	Intermediate Japanese II	4 / 4

Minimum Total Credit Hours

16 credits / 16 billing hours

Recommended Course Sequence

Semester I
JAPN 121 – Milestone course
Semester II
JAPN 122
Semester III
JAPN 201
Semester IV
JAPN 202

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Journalism A.A.

Career Community: Communication, Journalism, and Language

Curriculum Code: 1628

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in Journalism with a variety of concentrations or who plan to pursue a Secondary Education Certification in Communication/Theatre Arts, which includes a Journalism focus, in order to teach in Michigan public schools. The degree also provides an option for students wishing to pursue freelance work in journalism. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of COMM 270 and JRNL 151 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the English Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Career Community courses will meet this requirement.
- English Composition (second course)/Communication
Career Community courses will meet this requirement.
- Humanities and Fine Arts – *Select two*
Career Community courses LING 230 and DMAC 260, ENGL 200, ENGL 261, JAPN 121, SPAN 121, THEA 110, will meet this requirement.
- Mathematics
Career Community courses will meet this requirement.
- Natural Sciences
Limited Choice courses will meet this requirement.

- Social Sciences
Program of Study Required Courses and Limited Choice courses will meet this requirement.

Communication, Journalism, and Language Career Community Courses – *These courses are required for all Communication, Journalism, and Language programs (Communication, Journalism, Sign Language Interpreter, and World Language). Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132 or SIGN 160	Dynamics of Communication Fundamentals Public Speaking Interpersonal Communication Nonverbal Communication Composition II Honors Composition II Intro to the Deaf Community	3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4 3 / 3
DMAC 260 or ENGL 200 or ENGL 261 or JAPN 121 or SIGN 162 or SPAN 121 or THEA 110	World Cinema Introduction to Literature Creative Writing I Elementary Japanese I American Sign Language II Elementary Spanish I Introduction to Theater	4 / 4 3 / 3 3 / 3 4 / 4 3 / 3 4 / 4 3 / 3
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LING 230 or SIGN 161	Introduction to Linguistics American Sign Language I	3 / 3 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Central Michigan University (Journalism majors) choose DMAC 260 or ENGL 200 or ENGL 261, ENGL 122 or ENGL 132, LING 230, and STAT 170.
- Eastern Michigan University (Journalism) and Ferris State University choose ENGL 122 or ENGL 132, LING 230, and MATH 119 or MATH 120.
- Eastern Michigan University (Communication and Theater Arts Secondary Education) choose ENGL 122, LING 230, MATH 120, and THEA 110.
- Grand Valley State University and Michigan State University choose DMAC 260 or ENGL 200 or ENGL 261, ENGL 122 or ENGL 132, LING 230, and MATH 120.
- Western Michigan University choose DMAC 260 or ENGL 200 or ENGL 261, ENGL 122 or ENGL 132, LING 230, and MATH 119.

Program of Study Required Courses – Some courses meet General Education

requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
COMM 270	Mass Communication	3 / 3
DMAC 141	Ethics and Impact of the Media	3 / 3
JRNL 151	Newswriting and Reporting	3 / 3
JRNL 254	Opinion Writing	3 / 3

Program of Study Required Courses, Limited Choice – Natural Sciences - *Select two from two different disciplines, as indicated for each transfer institution and major. One must be a lab course. If specific courses are not indicated, select any two courses from different disciplines from [LCC General Education: MTA, Natural Sciences](#).*

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PFHW 123	Human Nutrition	3 / 3
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Central Michigan University choose BIOL 120 and any non-BIOL course.

Program of Study Required Courses, Limited Choice – Social Sciences - *Select one course as indicated for each transfer institution and major.*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
EDUC 204	Educational Psychology	3 / 3
EDUC 220	Introduction to Education	3 / 3
POLS 201	Intro to Political Science	3 / 3
POLS 240	Introduction to Public Policy	3 / 3
PSYC 200	Introduction to Psychology	4 / 4
PSYC 205	Human Growth and Development	3 / 3
PSYC 221	Child Psychology	3 / 3
SOCL 120	Introduction to Sociology	4 / 4

For future transfer to:

- Central Michigan University (Journalism) choose PSYC 200 or SOCL 120.
- Eastern Michigan University (Journalism) choose ANTH 270 or POLS 201;
(Communication and Theater Arts Secondary Certification) choose EDUC 204.
- Ferris State University (Journalism) choose ANTH 270, or POLS 201.
- Grand Valley State University (Journalism) choose ANTH 270 or POLS 201.
- Michigan State University (Journalism) choose ANTH 270 or POLS 201.
- Western Michigan University (Journalism) choose ANTH 270, or POLS 201.

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for the degree. See the notes below for the specific courses for each transfer Institution and major. A minimum of 2.0 is required to meet degree requirements for General Education and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.) (For the full list of options, see [AA and AS Degree Electives](#))*

Course Code	Course Title	Credit / Billing Hours
ARTS 102	2D Design	3 / 4
ARTS 151	Color	3 / 4
ARTS 162	Type Communications	3 / 4
ARTS 171	Adobe Photoshop	3 / 4
ARTS 173	Web Design I	3 / 4
ARTS 175	Creative Design and Publishing	3 / 4
BUSN 118	Introduction to Business	3 / 3
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
COMM 200	Small Group Communication	3 / 3
COMM 240	Interpersonal Communication	3 / 3
COMM 260	Nonverbal Communication	3 / 3

Course Code	Course Title	Credit / Billing Hours
COMM 280	Intercultural Communication	3 / 3
DMAC 120	Intro to Audio Production	4 / 4
DMAC 130	Intro to Video Production	4 / 4
DMAC 131	Digital Cinematography I	4 / 4
DMAC 132	Video Post-Production I	4 / 4
EDUC 230	Intro to Special Education	3 / 3
ENGL 122 or ENGL 132	Composition II Honors Composition II	4 / 4 4 / 4
ENGL 124	Technical Writing	3 / 3
ENGL 127	Business Writing	3 / 3
ENGL 260	African-American Literature	4 / 4
GRMN 121 or JAPN 121 or SPAN 121	Elementary German I Elementary Japanese I Elementary Spanish I	4 / 4 4 / 4 4 / 4
GRMN 122 or JAPN 122 or SPAN 122	Elementary German II Elementary Japanese II Elementary Spanish II	4 / 4 4 / 4 4 / 4
JAPN 201 or SPAN 201	Intermediate Japanese I Intermediate Spanish I	4 / 4 4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4
MKTG 200	Principles of Marketing	3 / 3
PHOT 111	Digital Photography I	3 / 3
PSYC 202	Psychology of Personality	3 / 3
PSYC 203	Social Psychology	3 / 3
SOCL 260	Race and Ethnicity	3 / 3
STAT 170	Introduction to Statistics	4 / 4
THEA 120	Introduction to Acting	2 / 3

Notes:

Students interested in preparing for freelance work choose 12-14 credits from ARTS 102, ARTS 171, ARTS 173, ARTS 175, BUSN 118, MKTG 200, and PHOT 111.

DMAC 132 has limited transferability and should only be selected as noted below.

For future transfer to:

- Central Michigan University (Journalism BA) choose COMM 130 and 3 courses from the same foreign language: JAPN or SPAN 121, 122, and 201.
- Central Michigan University (Journalism BS) choose COMM 130, PSYC 202, PSYC 203, and SOCL 260.
- Eastern Michigan University (Journalism and Media Studies) choose ARTS 151, COMM 120 or COMM 130 and COMM 280, DMAC 130, and PHOT 111.

- Eastern Michigan University (Communication and Theater Arts Secondary Certification) choose COMM 120 or COMM 130, COMM 200, COMM 240, and COMM 280 and EDUC 230.
- Ferris State University (Journalism and Professional Communication) choose DMAC 120, DMAC 130, DMAC 131, and DMAC 132.
- Grand Valley State University (Journalism) choose COMM 120, COMM 130, HIST 212, and STAT 170.
- Michigan State University (Journalism) choose ARTS 102 and ARTS 162 and 2 courses from the same language: GRMN or JAPN or SPAN 121 and 122.
- Western Michigan University (Journalism) choose COMM 130, COMM 200, COMM 240 or COMM 260, and 2 courses from the same language: GRMN or JAPN or SPAN 121 and 122.

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I
ACAD 100
DMAC 141
ENGL 121 or ENGL 131
Limited Choice – Natural Sciences
Semester II
COMM 120 or COMM 130 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132 or SIGN 160
DMAC 260 or ENGL 200 or ENGL 261 or JAPN 121 or SIGN 162 or SPAN 121 or THEA 110
MATH 119 or MATH 120 or STAT 170
Limited Choice - Natural Sciences
Semester III
COMM 270 – Milestone course
JRNL 151 – Milestone course
Limited Choice - Social Science
Electives as needed for total credits
Semester IV
JRNL 254
LING 230 or SIGN 161
Limited Choice – Social Science
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Juvenile Justice C.A.

Career Community: Public Service Careers

Curriculum Code: 0916

Effective: Fall 2024 – Summer 2029

Description

This certificate option is designed to provide entry-level skills for the person who wishes to enter the job market as a juvenile care worker at a public or private juvenile residential facility. Students may apply these credits toward completion of the Criminal Justice, Juvenile Specialization Associate in Applied Science degree (1475).

Milestone

Completion of CJUS 106 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Public Service Careers Program at the West Campus Building, Room M127, telephone number 517-483-1570 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CJUS 101	Intro to Criminal Justice	3 / 3
CJUS 106	Intro to Juvenile Justice	3 / 3
CJUS 126	Juvenile Offenders/Families	3 / 3
CJUS 133	Juvenile Residential Services	3 / 3
CJUS 134	Probation and Parole	3 / 3
CJUS 135	Legal Issues in Corrections	3 / 3
CJUS 245	Report Writing/Crim Justice	3 / 3
CJUS 286	Juvenile Internship I	3 / 3
PSYC 200	Introduction to Psychology	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Program of Study Required Courses, Limited Choice – Select one

Course Code	Course Title	Credit / Billing Hours
HUSE 110	Child Abuse and Neglect	3 / 3
HUSE 242	The Family: Addiction/ Violence	3 / 3
SOWK 101	Introduction to Social Work	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

35 credits / 35 billing hours

Recommended Course Sequence

Semester I
CJUS 101
CJUS 106 – Milestone course
CJUS 126
CJUS 135
PSYC 200
Limited Choice

Semester II
CJUS 133
CJUS 134
CJUS 245
CJUS 286
SOCL 120

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Kinesiology/Exercise Science A.A.S.

Career Community: Health and Human Service Careers

Curriculum Code: 1639

Effective: Fall 2024 – Summer 2029

Description

This curriculum is designed to prepare individuals for a career as a Fitness Leader, such as a certified Group Fitness Instructor, a certified Personal Trainer, or to transfer to a four-year college or university to pursue a baccalaureate degree in Exercise Science/Kinesiology. Upon completion of the AAS degree, individuals are prepared to take a Group Fitness Instructor certification exam as well as a Personal Trainer certification exam given by a National Commission for Certifying Agencies (NCCA) accrediting organization such as American Council on Exercise® (ACE), or American College of Sports Medicine® (ACSM). This curriculum includes course options from the Group Fitness Instructor Certificate of Completion as well as the Personal Trainer Certificate of Achievement.

Students are also prepared to pursue entry-level employment in the areas of recreation, fitness, and health careers. Opportunities for Group Exercise certification and Personal Training certification are available.

For students who intend to transfer to a four-year college or university to pursue a baccalaureate degree, completion of this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of BIOL 145, or BIOL 201 and BIOL 202, with a 2.0 or higher is key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

All courses must be completed with a minimum 2.0 grade to receive this degree. Some courses are offered only once a year. Review the recommended course sequence section of this pathway for course offering timeframes. To complete this degree in four semesters, students should follow the recommended course sequence.

Not all courses in this curriculum transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course and should select coursework indicated for that institution. General education and subject area requirements vary from one college or university to another.

Students planning to transfer to a four-year institution are encouraged to complete BIOL 201 and 202, rather than BIOL 145.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Kinesiology Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition
Health and Human Service Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Health and Human Service Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meet this requirement.
- Mathematics
Health and Human Service Career Community Courses meet this requirement.
- Natural Sciences
Health and Human Service Career Community Courses and Program of Study Required Courses meet this requirement.
- Social Sciences
Health and Human Service Career Community Courses and Program of Study Required Courses meet this requirement.

Health and Human Service Career Community Required Courses - *A minimum grade of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 145 or BIOL 201 and BIOL 202	Intro Anatomy and Physiology Human Anatomy and Human Physiology	4 / 6 8 / 11
COMM 110 or COMM 120 or COMM 130 or COMM 240 or ENGL 122 or ENGL 132	Communication in the Workplace Dynamics of Communication Fundamentals Public Speaking Interpersonal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4

Course Code	Course Title	Credit / Billing Hours
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or MATH 126 or MATH 151 or STAT 170 or STAT 215	Math – Applications for Living College Algebra Precalculus Calculus I Introduction to Statistics Intro to Probability and Stats	4 / 4 4 / 4 5 / 5 4 / 4 4 / 4 4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Kinesiology/Exercise Science students choose:

- MATH 120 or MATH 126 or MATH 151 or STAT 170.
- Students planning to transfer choose BIOL 201 and BIOL 202, and MATH 120 or MATH 126 or MATH 151.
- Non-transfer students may choose BIOL 145 and STAT 170.

For future transfer to:

- Central Michigan University (Athletic Training) choose BIOL 201 and BIOL 202, and COMM 120 or COMM 130 or ENGL 122 or ENGL 132, and STAT 170.
- Eastern Michigan University (Exercise Science) choose BIOL 201 and BIOL 202, and ENGL 122 or ENGL 132, and MATH 126.
- Oakland University (Exercise Science) choose BIOL 201 and BIOL 202, and ENGL 122 or ENGL 132, and MATH 126.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
PFFT 109	Introduction to Fitness	1 / 2
PFHW 163	Healthy Lifestyles	2 / 3
PFKN 170	Foundations of Kinesiology	3 / 3
PFKN 200	Exercise Physiology	3 / 3
PFKN 201	Exercise Physiology Lab	1 / 2
PFKN 208	Biomechanics	3 / 3

Course Code	Course Title	Credit / Billing Hours
PFKN 250	Measurements in Kinesiology	3 / 4
PFKN 260	Growth and Motor Behavior	3 / 3
PFWT 112	Intro to Weight Training	1 / 2
PSYC 200	Introduction to Psychology	4 / 4

Program of Study Required Courses, Limited Choice – Gen Ed Humanities and Fine Arts– *Select one HUMS and one PHIL course.*

Course Code	Course Title	Credit / Billing Hours
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
PHIL 151	Intro to Logic & Critical Think	4 / 4
PHIL 152	Introduction to Ethics	4 / 4

Program of Study Required Courses, Limited Choice - Kinesiology – *Select 3 credits*

Course Code	Course Title	Credit / Billing Hours
CHSE 120	Medical Terminology	4 / 4
PFHW 123	Human Nutrition	3 / 3
PFHW 181	Stress Management	1 / 1
PFKN 106	Group Fitness Instructor Prep	3 / 4
PFKN 205	Sport & Exercise Psychology	3 / 3
PFKN 210	Athletic Training Principles	3 / 4
PFKN 270	Personal Trainer Preparation	4 / 5
PFKN 280	Kinesiology Internship	3 / 3
PHYS 221	Introductory Physics I	4 / 6

For future transfer to:

- Central Michigan University (Athletic Training) choose CHSE 120 or PFHW 123 or PFKN 210 or PHYS 221.
- Eastern Michigan University (Exercise Science) choose PFHW 123 or PHYS 221.
- Oakland University (Exercise Training) choose PFHW 123 or PHYS 221.

Minimum Total Credit Hours

60 credits / 69 billing hours

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Recommended Course Sequence

Semester I (Fall)
ACAD 100
BIOL 145 or 201 – Milestone course
PFFT 109
PFHW 163
PFKN 170
MATH 120 or MATH 126 or MATH 151 or STAT 170
Semester II (Spring)
BIOL 202 (if selected BIOL 201/202) – Milestone course
ENGL 121 or ENGL 131
PFKN 250
PFKN 260
Limited Choice – Kinesiology
Semester III (Fall)
HUMS 223 or HUMS 224
PFKN 208 (Fall offering only)
PFWT 112
PHIL 151 or PHIL 152
SOCL 120
Limited Choice – Kinesiology (if needed)
Semester IV (Spring)
CHEM 151
CHEM 161
COMM 110 or COMM 120 or COMM 130 or COMM 240 or ENGL 122 or ENGL 132
PFKN 200 (Spring offering only)
PFKN 201 (Spring offering only)
PSYC 200

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Legal Studies A.B.

Career Community: Public Service Careers

Curriculum Code: 0101

Effective: Fall 2024 – Summer 2029

Description

Pursue your path to studying law or train to be a paralegal. Paralegals generally work under the supervision of an attorney as authorized by law and adhere to recognized ethical standards and rules of professional responsibility. Paralegals investigate the facts; conduct interviews; perform legal research; analyze substantive and procedural laws; draft appropriate documents including: briefs, pleadings, and other forms. Paralegals possess strong technology and case management skills. A Legal Studies degree will prepare you for a variety of career opportunities in private law firms, governmental agencies, corporations, financial institutions, courts systems, legal aid organizations, and other industries. This program is approved by the American Bar Association (ABA). Paralegals are not authorized to engage in the unauthorized practice of law. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of LEGL 115 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Legal Studies Program Legal Specialty Courses Transfer Credit Policy*

The Lansing Community College Legal Studies Program may award transfer credit for designated, legal specialty courses on a case-by-case basis determined by the Legal Studies Program Director, subject to approval of the Dean of the Technical Careers Division. The current Legal Studies specialty courses are LEGL 115, LEGL 125, LEGL 211, LEGL 212, LEGL 218, LEGL 222, LEGL 223, LEGL 225, LEGL 228, LEGL 229 and LEGL 270. The following conditions apply to the transfer of these legal specialty courses:

1. Transfer credit may be awarded for substantially similar courses completed with a grade of "C" or higher in an ABA approved, or other post-secondary academically accredited academic Legal Studies program. To be considered "substantially similar", the course must have incorporated the same or similar topics and assignments as the LCC Legal Studies specialty course sought to be credited as evidenced by a catalog description, detailed syllabus, and course reference file.
2. No more than 9 semester credit hours of Legal Studies specialty course credit may be earned toward the Legal Studies Associate Degree or Legal Studies Post-Bachelor Certificate by transfer credit.
3. Transfer credit will not be awarded for LEGL 225 and LEGL 270.

*Notwithstanding the provisions detailed above: in no circumstance will a student be awarded a Legal Studies Associate degree or Certificate unless at least 9 hours of Legal Studies specialty course work has been completed at LCC in a synchronous class format.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Public Service Careers Program, West Campus Building, Room M127, telephone number 517-483-1570, or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#).)

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
- English Composition (second course)/Communication – *Select one*
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences– *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 119, Math – Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
BIOL 120, Environmental Science, 4 credits / 6 billing hours
BIOL 121, Biol Foundation for Physiology, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITF 110	Intro Computer Info Systems	3 / 3
LEGL 115	Introduction to Legal Studies	3 / 3
LEGL 125	Legal Research and Writing I	3 / 3
LEGL 160	Critical Thinking in Law	3 / 3
LEGL 207	eDiscovery	3 / 3
LEGL 211	Tort Law	3 / 3
LEGL 212	Litigation Procedures	3 / 3
LEGL 217	Business Organizations	3 / 3
LEGL 222	Probate Law and Procedure	3 / 3
LEGL 223	Domestic Relations	3 / 3
LEGL 225	Legal Research and Writing II	3 / 3
LEGL 228	Computer Appl for the Law Ofc	3 / 3
LEGL 270	Paralegal Certification Prep	3 / 3

Program of Study Required Courses, Limited Choice – *Select two*

Course Code	Course Title	Credit / Billing Hours
CJUS 103	Criminal Law	3 / 3
LEGL 215	Business Law–Basic Principles	3 / 3
LEGL 216	Commercial Transactions	3 / 3
LEGL 218	Litigation Specialties	3 / 3
LEGL 229	Immigration Law	3 / 3
LEGL 251	Legal Studies Independent Study	3 / 3
LEGL 280	Legal Studies Internship	3 / 3

Minimum Total Credit Hours

63 credits / 65 billing hours

Recommended Course Sequence

Semester I
Gen Ed – English Composition or Applied English
Gen Ed - Mathematics or Applied Mathematics
LEGL 115 – Milestone course
LEGL 160
LEGL 211

Semester II
Gen Ed – English Composition (second course)/ Communication or Applied English
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
CITF 110
LEGL 212
LEGL 228

Semester III
LEGL 125
LEGL 207
LEGL 217
LEGL 222
Limited Choice

Semester IV
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
LEGL 223
LEGL 225
LEGL 270
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Legal Studies Post-Bachelor C.A.

Career Community: Public Service Careers

Curriculum Code: 0744

Effective: Fall 2024 – Summer 2029

Description

Pursue your path to studying law or train to be a paralegal. Paralegals generally work under the supervision of an attorney as authorized by law and adhere to recognized ethical standards and rules of professional responsibility. Paralegals investigate the facts; conduct interviews; perform legal research; analyze substantive and procedural laws; draft appropriate documents including: briefs, pleadings, and other forms. Paralegals possess strong technology and case management skills. A Legal Studies degree will prepare you for a variety of career opportunities in private law firms, governmental agencies, corporations, financial institutions, courts systems, legal aid organizations, and other industries. This program is approved by the American Bar Association (ABA). Paralegals are not authorized to engage in the unauthorized practice of law. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

Completion of LEGL 115 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

Students following this curriculum must have proof of a bachelor's degree on file and entered on their official Lansing Community College transcript before beginning this curriculum.

A student must earn a minimum grade of 2.0 in all courses.

Legal Studies Program Legal Specialty Courses Transfer Credit Policy*

The Lansing Community College Legal Studies Program may award transfer credit for designated, legal specialty courses on a case-by-case basis determined by the Legal Studies Program Director, subject to approval of the Dean of the Technical Careers Division. The current Legal Studies specialty courses are LEGL 115, LEGL 125, LEGL 212, LEGL 211, LEGL 218, LEGL 222, LEGL 223, LEGL 225, LEGL 228, LEGL 229 and LEGL 270. The following conditions apply to the transfer of these legal specialty courses:

1. Transfer credit may be awarded for substantially similar courses completed with a grade of "C" or higher in an ABA approved, or other post-secondary academically accredited academic Legal Studies program. To be considered "substantially similar", the course must have incorporated the same or similar topics and assignments as the LCC Legal Studies specialty course sought to be credited as evidenced by a catalog description, detailed syllabus, and course reference file.

2. No more than 9 semester credit hours of Legal Studies specialty course credit may be earned toward the Legal Studies Associate Degree or Legal Studies Post-Bachelor Certificate by transfer credit.
3. Transfer credit will not be awarded for LEGL 225 and LEGL 270.

*Notwithstanding the provisions detailed above: in no circumstance will a student be awarded a Legal Studies Associate degree or Certificate unless at least 9 hours of Legal Studies specialty course work has been completed at LCC in a synchronous class format.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Public Service Careers Program, West Campus Building, Room M127, telephone number 517-483-1570, or the West Campus Student Services, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
LEGL 115	Introduction to Legal Studies	3 / 3
LEGL 125	Legal Research and Writing I	3 / 3
LEGL 211	Tort Law	3 / 3
LEGL 212	Litigation Procedures	3 / 3
LEGL 217	Business Organizations	3 / 3
LEGL 222	Probate Law and Procedure	3 / 3
LEGL 223	Domestic Relations	3 / 3
LEGL 225	Legal Research and Writing II	3 / 3
LEGL 228	Computer Appl for the Law Ofc	3 / 3
LEGL 270	Paralegal Certification Prep	3 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
LEGL 160	Critical Thinking in Law	3 / 3
LEGL 207	eDiscovery	3 / 3
LEGL 215	Business Law - Basic Principles	3 / 3
LEGL 216	Commercial Transactions	3 / 3
LEGL 218	Litigation Specialties	3 / 3
LEGL 229	Immigration Law	3 / 3
LEGL 280	Legal Studies Internship	3 / 3
CJUS 103	Criminal Law	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

33 credits / 33 billing hours

Recommended Course Sequence

Semester I
LEGL 115 – Milestone course
LEGL 125
LEGL 211
LEGL 217
LEGL 222
Semester II
LEGL 212
LEGL 223
LEGL 225
LEGL 228
LEGL 270
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Literature A.A.

Career Community: History, Humanities, and English

Curriculum Code: 0124

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of ENGL 200 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

ENGL 255, ENGL 256, ENGL 266, and ENGL 270 are only offered in Fall semester. ENGL 267, is only offered in Spring semester.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the English Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education - Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course) or Communication
Program of Study Required Courses will meet this requirement

- Humanities and Fine Arts – *Select one from a discipline other than ENGL*
HIST 211, U.S. History to 1877, 4 credits / 4 billing hours
HUMS 160, Mythology, 4 credits / 4 billing hours
PHIL 101, Introduction to Philosophy, 3 credits / 3 billing hours
RELG 150, Intro to World Religions, 4 credits / 4 billing hours
- Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 120, Environmental Science, 4 credits / 6 billing hours
BIOL 125, Introductory Biology, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
GEOG 221, Physical Geography, 4 credits / 4 billing hours
GEOL 221, Physical Geology, 4 credits / 6 billing hours
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours
- Social Science – *Select two, each from a different discipline*
ANTH 270, Cultural Anthropology, 3 credits / 3 billing hours
PSYC 200, Introduction to Psychology, 4 credits / 4 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ENGL 200	Introduction to Literature	3 / 3
ENGL 261	Creative Writing I	3 / 3

Program of Study Required Courses, Limited Choice – English Composition (Second Course) - *Select one*

Course Code	Course Title	Credit / Billing Hours
ENGL 122	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
ENGL 255	American Lit to 1865	4 / 4
ENGL 256	American Lit 1865 to Present	4 / 4
ENGL 266	British Lit to 1800	4 / 4
ENGL 267	British Lit 1800 to Present	4 / 4

Program of Study Required Courses, Limited Choice – Select one

Course Code	Course Title	Credit / Billing Hours
ENGL 260	African-American Literature	4 / 4
ENGL 270	Gender and Literature	4 / 4

Elective Courses, Recommended Choices – *Select courses as needed to reach the minimum 60 total credits required for this degree. (For the full list of options see [AA and AS Degree Electives](#).)*

Course Code	Course Title	Credit / Billing Hours
ENGL 208	Children's Literature	4 / 4
ENGL 211	World Literature I	4 / 4
ENGL 212	World Literature II	4 / 4
ENGL 220	Science Fiction	4 / 4
ENGL 240	The Film as Art	4 / 4
ENGL 255	American Lit to 1865	4 / 4
ENGL 256	American Lit 1865 to Present	4 / 4
ENGL 260	African American Literature	4 / 4
ENGL 266	British Lit to 1800	4 / 4
ENGL 267	British Lit 1800 to Present	4 / 4
ENGL 270	Gender and Literature	4 / 4
ENGL 290	Shakespeare	4 / 4

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Mathematics
MTA Natural Science
ENGL 200 - Milestone course

Semester II
MTA Humanities and Fine Arts
MTA Natural Science
ENGL 122 or ENGL 132
ENGL 261

Semester III
MTA Social Science
Limited Choice
Electives as needed for total credits

Semester IV
MTA Social Science
Limited Choice
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Local Corrections Officer C.C.

Career Community: Public Service Careers

Curriculum Code: 1810

Effective: Fall 2024 – Summer 2029

Description

This certificate option is designed to provide entry level skills for the person who wishes to enter the job market as a Local Correctional Officer at a Sheriff Department or Local Detention Center. This curriculum meets the Michigan Coordinating and Training Council requirements. Students completing this certificate may use the credits towards the Criminal Justice, Corrections Associate in Applied Science Degree (1209). Students interested in working in State facilities should pursue the Correctional Officer Certificate of Completion (0840).

Milestone

Completion of CJUS 131 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Requirements for Admission to the Local Corrections Officer Academy

For further information, including career options, admission requirements for CJUS 272 and CJUS 273, course substitutions and waivers, etc., contact the Public Service Careers Program, West Campus Building, Room M127, telephone number (517) 483-1570.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CJUS 101	Intro to Criminal Justice	3 / 3
CJUS 131	Introduction to Corrections	3 / 3
CJUS 135	Legal Issues in Corrections	3 / 3
CJUS 272	Local Corrections Academy I	5 / 5
CJUS 273	Local Corrections Academy II	3 / 5

Minimum Total Credit Hours

17 credits / 19 billing hours

Recommended Course Sequence

Semester I
CJUS 101
CJUS 135
CJUS 131 – Milestone course
Semester II
CJUS 272
CJUS 273

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Long-Term Care Nurse Aide C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1025

Effective: Fall 2024 – Summer 2025

Description

This certificate curriculum will prepare an individual to be a nurse aide in a long-term care facility or home health care agency. This state-approved course will provide specific knowledge and skills required for a nurse aide to safely function in a long-term care setting. Upon successful completion of this course, the student is qualified to take the State Competency Evaluation Nurse Aide Examination to become a Certified Nursing Assistant (CNA).

Additional Information

Students must complete CHSE 108 with a minimum grade of 2.5 to receive this certificate.

Students wishing to pursue an associate degree, should declare the Allied Health A.A.S. major. Courses in this program of study may be applied toward that degree.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Community Health Services Education Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHSE 108	Long-Term Care Nurse Aide	4 / 6.5

Minimum Total Credit Hours

4 credits / 6.5 billing hours

Recommended Course Sequence

Semester I
CHSE 108

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Machine Tool Technology C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 1470

Effective: Fall 2024 – Summer 2029

Description

This certificate is designed for an apprentice, pre-apprentice, or person interested in advancing his/her skill set in the machinist or tool & die trade. Technical math, blueprint reading, knowledge of the Machinery Handbook, and metallurgy are just some of the skills and knowledge that are necessary for this type of work. Ideally, this curriculum should be taken concurrently with an industry-based work experience or apprenticeship or in preparation for an apprenticeship as a machinist or tool and die maker.

Milestone

Completion of METM 108 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
METD 110	Mechanical CAD Drafting I	4 / 6
METM 108	Machine Tool Operations	4 / 6
METM 112	Introduction to CNC Machining	4 / 6
METM 190	Metallurgy and Heat Treatment	4 / 6
TECH 102	General Industry Safety	2 / 3

Program of Study Required Courses, Limited Choice – Select four

Course Code	Course Title	Credit / Billing Hours
MATH 115	Technical Mathematics	4 / 4
METD 111	Mechanical CAD Drafting II	4 / 6
METD 130	Geometric Dimension/Tolerance	4 / 6
METD 150	Industrial Blueprint Reading	3 / 3
METD 220	Basic Unigraphics/NX	4 / 6
METM 150	Advanced CNC Machining	4 / 6
METM 220	Basic Mastercam	4 / 6
METS 140	Rigging	3 / 4.5
WELD 103	Combination Welding	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

32 credits / 44.5 billing hours

Recommended Course Sequence

Semester I
TECH 102
Limited Choice

Semester II
METD 110
METM 108 – Milestone course

Semester III
METM 112
METM 190

Semester IV
Limited Choice
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Magnetic Resonance Imaging Technology A.A.S.

Career Community: Health and Human Service Careers

Curriculum Code: 1632

Effective: Summer 2024 – Summer 2027

Description

This associate degree program is intended for individuals who are not already certified technologists with the American Registry of Radiologic Technologist (ARRT). The curriculum provides didactic hybrid distance education, laboratory simulation, and clinical experience to teach the essential content needed to begin a career in Magnetic Resonance Imaging. Graduates will be eligible to take the national registry examination administered by ARRT.

Courses in this program are offered through the Michigan Workforce Training and Education Collaborative, and are taught by various colleges in the Michigan Educational Programs in Collaboration (MI-EPiC) Consortium.

Milestone

In addition to the required General Education courses in Math and English, completion of MRIT 201, MRIT 220, and MRIT 229 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

The MRI (Magnetic Resonance Imaging) Consortium Program through the Michigan Workforce Training and Education Collaborative of which LCC is a member, has been developed to be consistent with standards and requirements of the American Society of Radiologic Technologists (ASRT), the American College of Radiology (ACR), and the American Registry of Radiologic Technologists (ARRT).

Students must complete all non-MRIT courses with a minimum 2.5 prior to submitting their application for Program Approval. First semester MRIT courses require Program Approval. Applications must be submitted by February 1 and are available by contacting the Program Director of Imaging Technology at 517-483-1410. Once Program Approval is received, students must complete each MRIT course with a minimum 2.5 to progress to the next semester and meet graduation requirements.

Contact Information

The admission and/or graduation requirements for this program may change each academic year. The program requirements below apply only to those students who have been admitted to the program for the 2024/2025 academic year. For further information, including career options, course substitutions and waivers, etc., contact the Medical Imaging Program, Health and Human Services Building, Room 108, telephone number 517-483-1410.

General Education – Applied Degrees Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English
Program of Study Required Courses for Admission will meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Program of Study Required Courses for Admission will meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics
Program of Study Required Courses for Admission will meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses for Admission will meet this requirement.

Program of Study Required Courses for Admission – BIOL 201 and 202 also satisfies the General Education Natural Sciences Lab or Applied Science and Technology Lab requirement.

Course Code	Course Title	Credit / Billing Hours
BIOL 201	Human Anatomy	4 / 6
BIOL 202	Human Physiology	4 / 5

Program of Study Required Courses for Admission, Limited Choice – English

Composition - *Select one. This selection satisfies the General Education English Composition requirement. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
ENGL 121	Composition I	4 / 4
ENGL 122	Composition II	4 / 4
ENGL 131	Honors Composition I	4 / 4
ENGL 132	Honors Composition II	4 / 4

Program of Study Required Courses for Admission, Limited Choice – English

Composition (second course)/Communication - *Select one. This selection satisfies the General Education English Composition (second course)/Communication or Applied Communication requirement. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
COMM 240	Interpersonal Communication	3 / 3

Program of Study Required Courses for Admission, Limited Choice –

Mathematics - *Select one. This selection satisfies the General Education Mathematics or Applied Mathematics requirement. (Any course from the General Education Mathematics College Algebra category may also be selected.)*

Course Code	Course Title	Credit / Billing Hours
MATH 120	College Algebra	4 / 4
STAT 170	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Program of Study Required Courses for Admission, Limited Choice - *Select one.*

Course Code	Course Title	Credit / Billing Hours
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5

Minimum Total Credit Hours for Admission

27 credits / 31 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
MRIT 200	Professional Prospectus	1 / 0*
MRIT 201	Computer Apps/Medical Imaging	3 / 0*
MRIT 220	MR Physics I	3 / 0*
MRIT 222	MR Physics II	3 / 0*
MRIT 229	Applied Sectional Anatomy	3 / 0*
MRIT 230	MR Procedures and Pathophys I	3 / 0*
MRIT 232	MR Procedures and Pathophys II	3 / 0*
MRIT 240	MRI Image Analysis	3 / 0*
MRIT 260	MRI Pre-Clinical Preparation	3 / 0*
MRIT 261	Clinical Practice I	3 / 0*
MRIT 262	Clinical Practice II	3 / 0*
MRIT 263	Clinical Practice III	3 / 0*
MRIT 295	MRI Certification Exam Prep	3 / 0*

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

64 credits / 31 billing hours*

*MRIT courses follow the Michigan Workforce Training and Education Collaborative tuition rates, and are not included in the billing hours. Please contact the Radiologic Technology Program Director at 517-483-1410 for current tuition rates.

Recommended Course Sequence

Semester I
BIOL 201
COMM 110, 120, 130, or 240
ENGL 121, 122, 131, or 132
PHYS 120 or 200

Semester II
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
BIOL 202
MATH 120 (or other Gen Ed Mathematics College Algebra course), STAT 170 or 215

Semester III (Summer 2024)
MRIT 200
MRIT 229 – Milestone course
MRIT 260

Semester IV (Fall 2024)
MRIT 201 – Milestone course
MRIT 220 – Milestone course
MRIT 230
MRIT 261

Semester V (Spring 2025)
MRIT 222
MRIT 232
MRIT 240
MRIT 262

Semester VI (Summer 2025)
MRIT 263
MRIT 295

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Magnetic Resonance Imaging Technology C.A.

Career Community: Health and Human Service Careers

Curriculum Code: 1602

Effective: Summer 2024 – Fall 2025

Description

The MRI Certificate of Achievement is intended for registered/certified radiologic technologists with the American Registry of Radiologic Technologists® (ARRT). As of January 1, 2015, these registered/certified technologists must also already have an associate degree or higher. The curriculum provides didactic hybrid distance education, laboratory simulation, and clinical experience to teach the essential content needed to begin a career in Magnetic Resonance Imaging. Successful completion of the program qualifies students for examination by the ARRT in Magnetic Resonance Imaging.

Courses in this program are offered through the Michigan Workforce Training and Education Collaborative, and are taught by various colleges in the Michigan Educational Programs in Collaboration (MI-EPiC) Consortium.

Milestone

Completion of MRIT 201, MRIT 220, and MRIT 229 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

The MRI (Magnetic Resonance Imaging) Consortium Program through the Michigan Workforce Training and Education Collaborative of which LCC is a member, has been developed to be consistent with standards and requirements of the American Society of Radiologic Technologists (ASRT), the American College of Radiology (ACR), and the American Registry of Radiologic Technologists (ARRT).

First semester MRIT courses require Department Approval. Applications must be submitted by February 1 and are available by contacting the Imaging Technology Program Director at 517-483-1410. Once Department Approval is received, students must complete each MRIT course with a minimum 2.5 to progress to the next semester and meet graduation requirements.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Medical Imaging Program, Health and Human Services Building, Room 108, telephone number 517-483-1410.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
MRIT 200	Professional Prospectus	1 / 0*
MRIT 201	Computer Apps/Medical Imaging	3 / 0*
MRIT 220	MR Physics I	3 / 0*
MRIT 222	MR Physics II	3 / 0*
MRIT 229	Applied Sectional Anatomy	3 / 0*
MRIT 230	MR Procedures and Pathophys I	3 / 0*
MRIT 232	MR Procedures and Pathophys II	3 / 0*
MRIT 240	MRI Image Analysis	3 / 0*
MRIT 260	MRI Pre-Clinical Preparation	3 / 0*
MRIT 261	Clinical Practice I	3 / 0*
MRIT 262	Clinical Practice II	3 / 0*
MRIT 263	Clinical Practice III	3 / 0*
MRIT 295	MRI Certification Exam Prep	3 / 0*

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

37 credits / 0* billing hours

*MRIT courses follow the Michigan Workforce Training and Education Collaborative tuition rates, and are not included in billing hours. Please contact the Medical Imaging Program Director at telephone number 517-483-1410 for current tuition rates.

Recommended Course Sequence

Semester I (Summer 2024)
MRIT 200
MRIT 229 – Milestone course
MRIT 260
Semester II (Fall 2024)
MRIT 201 – Milestone course
MRIT 220 – Milestone course
MRIT 230
MRIT 261

Semester III (Spring 2025)
MRIT 222
MRIT 232
MRIT 240
MRIT 262
Semester IV (Summer 2025)
MRIT 263
MRIT 295

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Management C.A.

Career Community: Business

Curriculum Code: 0249

Effective: Fall 2024 – Summer 2029

Description

Certificate holders may improve their opportunities for advancement in this or a related area. The Certificate of Achievement is often useful in conjunction with another degree in professions such as health careers or computers. Additional education enhances an individual's employment opportunities. Students may complete this certificate as part of the Management and Leadership Associate of Business degree.

Milestone

Completion of MGMT 223 or MGMT 225 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BUSN 118	Introduction to Business	3 / 3
LABR 200	Intro to Labor Relations	3 / 3
MGMT 200	Creative Thinking for Business	3 / 3
MGMT 224	Human Resource Management	3 / 3
MGMT 228	Organization Behavior	3 / 3
MGMT 231	Developing and Leading Teams	3 / 3
MGMT 234	Diversity in the Workplace	3 / 3

Program of Study Required Courses, Limited Choice – *Select two*

Course Code	Course Title	Credit / Billing Hours
LEGL 215	Business Law-Basic Principles	3 / 3
MGMT 150	Managing Customer Relations	3 / 3
MGMT 237	Managing/Continual Improvement	3 / 3
MGMT 300	Leading for Possibility	3 / 3

Note: Students considering completing the Management and Leadership Associate of Business degree should choose LEGL 215 and MGMT 237.

Program of Study Required Courses, Limited Choice – Communication and Writing – *Select one*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
ENGL 121	Composition I	4 / 4
ENGL 127	Business Writing	3 / 3
ENGL 131	Honors Composition I	4 / 4

Note: Students considering completing the Management and Leadership Associate of Business degree should choose ENGL 121 or ENGL 131.

Program of Study Required Courses, Limited Choice - Management – *Select one*

Course Code	Course Title	Credit / Billing Hours
MGMT 223	Supervisory Skills	3 / 3
MGMT 225	Principles of Mgmt/Leadership	3 / 3

Note: Students considering completing the Management and Leadership Associate of Business degree should choose MGMT 225.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

33 credits / 33 billing hours

Recommended Course Sequence

Semester I
BUSN 118
MGMT 224
MGMT 234
MGMT 223 or 225 – Milestone course
Limited Choice

Semester II
LABR 200
MGMT 200
MGMT 228
MGMT 231
Limited Choice
Limited Choice – Communication and Writing

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Management and Leadership A.B.

Career Community: Business

Curriculum Code: 0245

Effective: Fall 2024 – Summer 2029

Purpose of Major

This major is designed for students wishing to work in the field of Management on completion of the Associate of Business degree. A manager leads from all levels of the organization. A manager plans, organizes, delegates, and controls projects from start to finish. The role cuts across all areas of business and organizational life and has as its central purpose the increase of resources: personnel, money, machines, and materials. Managers encourage, coordinate, and lead to achieve company goals. Graduates of this degree may qualify for entry-level positions. Addition of a technical or business specialty increases one's employability. Not all courses in this program transfer to all institutions. Students who also wish to transfer to a four-year institution should select coursework indicated for that institution and may complete the coursework for a Business, Enhanced AB degree. The Business, Enhanced AB option allows students to transfer additional credits toward the Bachelor's degree. This allows completion of credits required for employment and of additional requirements for the Bachelor's. Institutions accepting coursework for the Business, Enhanced AB, Management and Leadership Pathway include Davenport University, Eastern Michigan University, Ferris State University (Business Administration – Professional Track), Northwood University, Oakland University, and Siena Heights University.

Milestone

In addition to the required General Education courses in Math and English, completion of MGMT 225 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Business Career Community courses meet this requirement.
- English Composition (second course) or Communication or Applied Communication
Business Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Science or Applied Social Science
Business Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Business Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Business Career Community Required Courses – *These courses are required for all Business programs. They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ACCG 210	Principles of Financial Accg	4 / 4
BUSN 118	Introduction to Business	3 / 3
COMM 110 or COMM 130	Communication in the Workplace Fundamentals Public Speaking	3 / 3 3 / 3
ECON 201	Principles of Economics - Micro	4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LEGL 215	Business Law – Basic Principles	3 / 3
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4
MGMT 225	Principles of Mgmt/Leadership	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For students not considering transfer as an option, MGMT 234, Diversity in the Workplace, may be substituted for ECON 201 using the Course Substitution process. MGMT 234 meets LCC General Education requirements for Applied Degrees – Humanities or Social Science or Applied Social Science. MGMT 234 does not meet Michigan Transfer Agreement (MTA) Social Science requirements for transfer as a General Education course.

For future transfer to:

- Davenport University choose COMM 110 and STAT 170.
- Eastern Michigan University choose STAT 170.
- Ferris State University choose COMM 130 and STAT 170.
- Northwood University and Oakland University choose MATH 120.
- Siena Heights University (Business Administration) choose STAT 170.

Program of Study Required Courses - *A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
BUSN 201	International Business	3 / 3
LABR 200	Intro to Labor Relations	3 / 3
MGMT 150	Managing Customer Relations	3 / 3
MGMT 200	Creative Thinking for Business	3 / 3
MGMT 224 or MGMT 337	Human Resource Management Advanced Human Resource Mgmt	3 / 3 3 / 3
MGMT 227	Training/Development for Busn	3 / 3
MGMT 228 or MGMT 304	Organization Behavior Organization Development	3 / 3 3 / 3
MGMT 231	Developing and Leading Teams	3 / 3
MGMT 237	Managing/Continual Improvement	3 / 3
MGMT 280 or MGMT 345	Mgmt/Leadership Internship Context and Transformation	3 / 3 3 / 3

Note: For future transfer to Northwood University choose MGMT 304 and MGMT 345.

Program of Study Required Courses – Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab - Select one course as indicated for each transfer institution. If a specific course is not indicated for the institution you are considering, or if transfer is not your goal, select any recommended course or any course from [LCC General Education, Applied Degrees, Natural Sciences Lab or Applied Sciences and Technology Lab](#).

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Eastern Michigan University choose ASTR 201 or BIOL 120 or 125 or CHEM 135 or GEOG 221 or ISCI 131.
- Northwood University choose BIOL 120.
- Siena Heights University choose BIOL 120 or CHEM 135 or PHYS 120.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

65 credits / 65 billing hours

Recommended Course Sequence

Semester I
ACAD 100
BUSN 118
ENGL 121 or ENGL 131
MGMT 225 – Milestone course
MKTG 200

Semester II
MATH 120, or STAT 170
MGMT 224 or MGMT 337
MGMT 237
Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab

Semester III
ECON 201
LEGL 215
MGMT 200
MGMT 228 or MGMT 304

Semester IV
BUSN 201
COMM 110 or COMM 130
LABR 200
MGMT 227
MGMT 280 or MGMT 345 (if choosing MGMT 345)

Semester V
ACCG 210
MGMT 150
MGMT 231
MGMT 280 or MGMT 345 (if choosing MGMT 280)

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Manufacturing Engineering Technology A.A.S.

Career Community: Electrical and Manufacturing

Curriculum Code: 1359

Effective: Fall 2024 – Summer 2029

Description

This program prepares individuals to apply technical skills and advanced computer software to the manufacturing of machined components relating to a broad range of industries. Students receive instruction in manual machine tools, computer numerical control (CNC) machine programming and operation, computer-aided manufacturing (CAM) design/programming, manufacturing processes, metrology, metallurgy, geometric dimensioning and tolerancing, three-dimensional engineering design graphics, and parametric modeling. Employment possibilities include engineering firms and manufacturing companies in the automotive, defense, special machinery, and medical components industries to name a few. Students completing this pathway would also qualify for the CNC Machine Technology Certificate of Achievement.

Milestone

In addition to the required General Education courses in Math and English, completion of METD 130 and METM 112 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours

- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
METM 190, Metallurgy and Heat Treatment, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
METD 100	Basic Mechanical Drafting	3 / 4
METD 110	Mechanical CAD Drafting I	4 / 6
METD 130	Geometric Dimension/Tolerance	4 / 6
METD 220	Basic Unigraphics/NX	4 / 6
METM 108	Machine Tool Operations	4 / 6
METM 112	Introduction to CNC Machining	4 / 6
METM 150	Advanced CNC Machining	4 / 6
METM 195	Quality/Metrology/Inspection	4 / 6
METM 220	Basic Mastercam	4 / 6
METM 221	Advanced Mastercam	4 / 6
METS 115	Intro to Mechanical Systems	4 / 6
TECH 102	General Industry Safety	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

62 credits / 86 billing hours

Recommended Course Sequence

Semester I
Gen Ed – Mathematics or Applied Mathematics
METD 100
METM 108
TECH 102

Semester II
METD 110
METD 130 – Milestone course
METM 112 – Milestone course
METM 220

Semester III
Gen Ed – English Composition or Applied English
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
METM 150
METM 195
METM 221
Semester IV
Gen Ed – English Composition (second course)/ Communication or Applied Communication
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
METD 220
METS 115

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Marketing A.B.

Career Community: Business

Curriculum Code: 0204

Effective: Fall 2024 – Summer 2029

Purpose of Major

This major is designed for students wishing to work in the field of Marketing on completion of the Associate of Business degree. Marketing is the set of activities that aims to satisfy the customer while making a profit. It is concerned with determining need and meeting demand by making goods and services known, available, and affordable. Entry-level personnel may require time in sales before internal promotion into marketing management positions. Graduates of this program are prepared to work in nearly every type of business and organization today. Traditional product marketing management is giving ways to areas like nonprofit organization marketing, leading to a diverse job opportunity picture. Not all courses in this program transfer to all colleges. Students who also wish to transfer to a four-year institution should select coursework indicated for that institution and complete the coursework for a Business, Enhanced AB degree. The Business, Enhanced AB option allows students to transfer additional credits toward the Bachelor's degree. This allows completion of credits required for employment and of additional requirements for the Bachelor's. Institutions accepting coursework for Business, Enhanced AB, Marketing track degrees include Davenport University, Eastern Michigan University, Ferris State University (Business Administration – Professional Track), Northwood University, Oakland University, and Siena Heights University.

Milestone

In addition to the required General Education courses in Math and English, completion of MKTG 200 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degree Courses, Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Business Career Community Courses meet this requirement.

- English Composition (second course) or Communication or Applied Communication
Business Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Science or Applied Social Science
Business Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Business Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Business Career Community Required Courses – *These courses are required for all Business programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ACCG 210	Principles of Financial Accg	4 / 4
BUSN 118	Introduction to Business	3 / 3
COMM 110 or COMM 130	Communication in the Workplace Fundamentals Public Speaking	3 / 3 3 / 3
ECON 201	Principles of Economics - Micro	4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LEGL 215	Business Law – Basic Principles	3 / 3
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4
MGMT 225	Principles of Mgmt/Leadership	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Notes:

ACAD 100 may be waived when students meet College-approved waiver criteria.

For future transfer to:

- Davenport University choose COMM 110 and STAT 170.
- Eastern Michigan University choose STAT 170.
- Ferris State University choose COMM 130 and STAT 170.
- Northwood University and Oakland University choose MATH 120.
- Siena Heights University (Bachelor of Business Administration major) choose STAT 170.

Program of Study Required Courses - A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
MGMT 234	Diversity in the Workplace	3 / 3
MKTG 119	Mktg/Manage Your Profess Image	3 / 3
MKTG 120	Sales	3 / 3
MKTG 130	Retailing	3 / 3
MKTG 140	Principles of Advertising	3 / 3
MKTG 204	Marketing Research	3 / 3
MKTG 210	Intro to Digital Marketing	3 / 3
MKTG 229	Public Relations	3 / 3

Program of Study Required Courses, Limited Choice – Select one

Course Code	Course Title	Credit / Billing Hours
ACCG 211	Principles of Managerial Accg	4 / 4
MKTG 235	Marketing Internship	3 / 3

Note: For future transfer, choose ACCG 211.

Program of Study Required Courses, Limited Choice – Natural Sciences or Applied Natural Science - Select one as indicated for each transfer institution. If a specific course is not indicated for the institution you are considering, or if transfer is not your goal, select any recommended course or from [LCC General Education, Applied Degrees, Natural Sciences Lab or Applied Sciences and Technology Lab](#).

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 200	World Regional Geography	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

For future transfer to:

- Eastern Michigan University choose ASTR 201 or BIOL 120 or 125 or CHEM 135 or GEOG 221 or ISCI 131.
- Northwood University choose BIOL 120.
- Siena Heights University choose BIOL 120 or CHEM 135 or PHYS 120.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

62 credits / 62 billing hours

Recommended Course Sequence

Semester I
ACAD 100
BUSN 118
ENGL 121 or ENGL 131
MKTG 119
MKTG 200 – Milestone course
Semester II
LEGL 215
MATH 120 or STAT 170
MGMT 225
MKTG 120
MKTG 130
Semester III
ACCG 210
MGMT 234
MKTG 140
MKTG 204
MKTG 210
Semester IV
ACCG 211 or MKTG 235
COMM 110 or COMM 130
ECON 201
MKTG 229
Limited Choice – Natural Sciences Lab or Applied Science and Technology Lab

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Marketing C.A.

Career Community: Business

Curriculum Code: 0225

Effective: Fall 2024 – Summer 2029

Purpose of Major

Certificate holders may improve their opportunities for advancement in this or a related area. Additional education enhances an individual's employment opportunities. Students in this curriculum learn the basics of marketing in relation to other business operations. Students may complete this certificate as part of the Marketing Associate of Business degree.

Milestone

Completion of MKTG 200, with a 2.0 or higher, is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BUSN 118	Introduction to Business	3 / 3
MKTG 120	Sales	3 / 3
MKTG 130	Retailing	3 / 3
MKTG 140	Principles of Advertising	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Program of Study Required Courses, Limited Choice – Communication and Composition – *Select one*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
ENGL 121	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4

Note: Students considering completing the Marketing Associates of Business degree should choose ENGL 121 or ENGL 131.

Program of Study Required Courses, Limited Choice - Marketing - *Select four courses, minimum of twelve credits*

Course Code	Course Title	Credit / Billing Hours
MKTG 119	Mktg/Manage Your Profess Image	3 / 3
MKTG 204	Marketing Research	3 / 3
MKTG 210	Intro to Digital Marketing	3 / 3
MKTG 229	Public Relations	3 / 3
MKTG 235	Marketing Internship	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

30 credits / 30 billing hours

Recommended Course Sequence

Semester I
BUSN 118
MKTG 140
MKTG 200 – Milestone course
Limited Choice – Composition and Communication
Limited Choice – Marketing

Semester II
MKTG 120
MKTG 130
Limited Choice – Marketing
Limited Choice – Marketing
Limited Choice - Marketing

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Massage Therapy C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1826

Effective: Fall 2024 – Summer 2027

Description

The Massage Therapy Program prepares an individual in the field of massage and bodywork. Massage therapists may be employed in private practice or in a variety of health care settings, spas, and exercise facilities. This program is accredited by the Commission on Massage Therapy Accreditation (COMTA), 2101 Wilson Blvd, Suite 302. Arlington, VA 22201. The Program is also a school member of the American Massage Therapy Association (AMTA). Successful completion of this program prepares an individual for testing through the Massage and Bodywork Licensing Exam (MBLEx).

Milestone

Completion of MSGE 131, MSGE 132A, and MSGE 132B with a 2.5 or higher are key components for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students must complete all required courses with a minimum grade of 2.5 to receive this Certificate of Completion.

Students must progress through the program pathway with the cohort with which they take MSGE 131. Once admitted, a student may not begin a new semester in the Massage Therapy Program until they have successfully completed all the MSGE courses listed in the previous sequenced semester with a minimum grade of 2.5. If this requirement is not met, students will be dismissed from the program and may reapply to begin again at a new start date. When this requirement is met and all courses have been completed, students may apply for a Certificate of Completion.

Students who are interested in pursuing an associate degree after completing this certificate may complete BIOL 145, or BIOL 201 and BIOL 202, in lieu of MSGE 132A and MSGE 132B. Upon completion, students wishing to pursue an associate degree should declare the Allied Health A.A.S. major. Courses in this certificate program of study may be applied toward that degree.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Massage Therapy Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
MSGE 131	Massage I	2.13 / 4
MSGE 132A	Anatomy/Physiology Massage I	2.13 / 4
MSGE 132B	Anatomy/Physiology Massage II	1.06 / 2
MSGE 137	Medical Terminology in Massage	1.06 / 2
MSGE 139A	Pathology for Massage I	.53 / 1
MSGE 139B	Pathology for Massage II	.53 / 1
MSGE 141	Massage Clinic I	1.33 / 2.5
MSGE 151B	Event Massage	.80 / 1.5
MSGE 151D	Special Populations	.80 / 1.5
MSGE 231	Massage II	2.13 / 4
MSGE 232	Massage III	2.13 / 4
MSGE 241	Massage Clinic II	1.33 / 2.5
MSGE 242	Massage Clinic III	1.60 / 3
MSGE 254	Busn App for Massage	1.10 / 2
MSGE 256	Clinical Assess for Massage	1.06 / 2
MSGE 258	Career Longevity	1.06 / 2

Minimum Total Credit Hours

20.78 credits / 39 billing hours

Required Course Sequence – Daytime Cohort

Semester I (Fall 2024)
MSGE 131 – Milestone course
MSGE 132A – Milestone course
MSGE 137
MSGE 139A
MSGE 151B
MSGE 258

Semester II (Spring 2025)
MSGE 132B – Milestone course
MSGE 139B
MSGE 141
MSGE 231
MSGE 241

Semester III (Summer 2025)
MSGE 151D
MSGE 232
MSGE 242
MSGE 254
MSGE 256

Required Course Sequence – Evening Cohort

Semester I (Spring 2025)
MSGE 131 – Milestone course
MSGE 132A – Milestone course
MSGE 137
MSGE 139A
MSGE 151B
MSGE 258

Semester II (Summer 2025)
MSGE 132B – Milestone course
MSGE 139B
MSGE 141
MSGE 231
MSGE 241

Semester III (Fall 2025)
MSGE 151D
MSGE 232
MSGE 242
MSGE 254
MSGE 256

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Mathematics A.S.

Career Community: Science and Mathematics

Curriculum Code: 1620

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree is designed for students who plan to transfer to a four-year university to pursue a Bachelor's of Science degree in Mathematics with a variety of concentrations. Students completing this degree will also satisfy Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482). This degree includes a set of courses common to all Science and Mathematics majors and many transfer institutions. Students are encouraged to work with an academic advisor and program advisor to explore transfer opportunities.

Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution.

Milestone

In addition to the required General Education courses in Math and English, completion of MATH 151 and MATH 152 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Mathematics Department, Arts and Sciences Building, Room 3203, telephone number 517-483-1092, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA) - Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Science and Mathematics Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Science and Mathematics Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meets this requirement.
- Mathematics
Program of Study Required Courses meets this requirement.

- Natural Sciences
Science and Mathematics Career Community Courses meet this requirement.
- Social Sciences
Science and Mathematics Career Community and Program of Study Required Courses meets this requirement.

Science and Math Career Community Courses – *These courses are required for all Science and Math programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 127 or GEOG 221 or GEOL 221 or PHYS 251	Cell Biology Physical Geography Physical Geology Physics I with Calculus	4 / 6 4 / 4 4 / 6 5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 120 or MATH 126 or MATH 151	College Algebra Precalculus Calculus I	4 / 4 5 / 5 4 / 4

Notes:

Choose MATH 151 and PHYS 251 for this degree.

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Program of Study Required Courses - *Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
CPSC 101	Intro to Computer Science	3 / 3
CPSC 230	Algorithms and Computing w/C++	4 / 4
CPSC 260	Computer Science Structures	4 / 4
MATH 151	Calculus I	4 / 4
MATH 152	Calculus II	4 / 4
MATH 253	Calculus III	4 / 4
MATH 254	Intro to Differential Equation	4 / 4
MATH 260	Linear Algebra	4 / 4
PHIL 151	Intro to Logic & Critical Think	4 / 4
PHYS 251	Physics I with Calculus	5 / 7

Notes:

- If MATH 151 and PHYS 251 were completed as part of the Career Community block, do not repeat enrollment.
- CPSC 260 is only offered in Spring.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -

Select one course, of a different discipline than PHIL, from [LCC General Education, Transfer Degrees \(MTA\), Humanities and Fine Arts](#).

Program of Study Required Courses, Limited Choice – Social Sciences - *Select two courses from [LCC General Education, Transfer Degrees \(MTA\), Social Sciences](#). Courses must be from different disciplines.*

Notes:

Students considering adding Secondary Education Certification in Math or Science in order to teach in Michigan Public Schools are strongly encouraged to select PSYC 200 and EDUC courses as listed to meet the Michigan Transfer Agreement (MTA) Social Science requirement.

For future transfer (Secondary Education Certification) choose PSYC 200.

For future transfer (Secondary Education Certification) to:

- Central Michigan University, Ferris State University, or Michigan State University choose EDUC 204.
- Eastern Michigan University, Grand Valley State University, University of Michigan Flint, or Western Michigan University choose EDUC 220.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree, select courses from [AA and AS Degree Electives](#).

Minimum Total Credit Hours

61 credits / 64 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
MATH 151 – Milestone course
PHIL 151
Limited Choice – Social Sciences
Semester II
CHEM 151
CHEM 161
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
CPSC 101
MATH 152 – Milestone course
Semester III
CPSC 230
MATH 253
PHYS 251
Limited Choice – Social Sciences
Semester IV
CPSC 260
MATH 254
MATH 260
Limited Choice – Humanities and Fine Arts

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Mechanical Systems A.A.S.

Career Community: Electrical and Manufacturing

Curriculum Code: 0173

Effective: Fall 2024 – Summer 2029

Description

Machine maintenance technicians are involved with the repair, maintenance, and installation of industrial equipment. They repair the machinery of industry, solving mechanical problems. The skills necessary for this type of work are many and varied: critical thinking, problem solving, mechanics, math and physics are but a few. Maintenance technicians also need to know how to diagnose hydraulic problems, perform preventative maintenance procedures, and be able to work well with others. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of METD 150 and METM 108 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for the ELTE and METS courses.

Students may substitute ELTE 129 and ELTE 130 for ELTE 131.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
METM 190, Metallurgy and Heat Treatment, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
ELTE 131	Machine Controls I	4 / 5
METD 150	Industrial Blueprint Reading	3 / 3
METM 108	Machine Tool Operations	4 / 6
METS 110	Mechanical Power Transmissions	4 / 6
METS 120	Industrial Pneumatics	4 / 6
METS 130	Industrial Hydraulics	4 / 6
METS 140	Rigging	3 / 4.5
METS 160	Introduction to Robotics	3 / 4.5
METS 210	Lubrication and Bearings	4 / 6
METS 250	Gen. Prevent/Predictive Maint	3 / 4.5
TECH 102	General Industry Safety	2 / 3
WELD 103	Combination Welding	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

63 credits / 85.5 billing hours

Recommended Course Sequence

Semester I
Gen Ed – Mathematics or Applied Mathematics
ELTE 110
METD 150 – Milestone course
METS 120
TECH 102

Semester II
ELTE 131
METS 110
METS 130
METS 160

Semester III
Gen Ed – English Composition or Applied English
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
METM 108 – Milestone course
METS 210

Semester IV
Gen Ed – English Composition (second course)/ Communication or Applied Communication
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
METS 140
METS 250
WELD 103

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Mechanical Systems C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 0147

Effective: Fall 2024 – Summer 2029

Description

This program provides technical knowledge and skills in the adjustment, maintenance, part replacement, and repair of tools, equipment and machines. It prepares an individual for an entry-level position.

Milestone

Completion of METD 150 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for the ELTE and METS courses.

Students may substitute ELTE 129 and ELTE 130 for ELTE 131.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
ELTE 131	Machine Controls I	4 / 5
MATH 115	Technical Mathematics	4 / 4
METD 150	Industrial Blueprint Reading	3 / 3
METS 110	Mechanical Power Transmissions	4 / 6
METS 120	Industrial Pneumatics	4 / 6
METS 130	Industrial Hydraulics	4 / 6
METS 160	Introduction to Robotics	3 / 4.5
TECH 102	General Industry Safety	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

32 credits / 43.5 billing hours

Recommended Course Sequence

Semester I
ELTE 110
MATH 115
METD 150 – Milestone course
METS 120
TECH 102
Semester II
ELTE 131
METS 110
METS 130
METS 160

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Mechatronics - Multi-Skilled Maintenance Technology

A.A.S.

Career Community: Electrical and Manufacturing

Curriculum Code: 1780

Effective: Fall 2024– Summer 2029

Description

A Mechatronics—Multi-Skilled Maintenance Technician will have knowledge of electrical, electronic, computer, mechanical, fluid power, robotic and programmable logic controller systems. Mechatronics Technicians install, maintain, troubleshoot, test, and repair technologically diverse equipment in industries such as manufacturing, aerospace, automotive, medical, material processing, consumer products, and defense systems.

Milestone

In addition to the required General Education courses in Math and English, completion of ELTE 110, METD 150, and METS 125 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for the ELTE and METS courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Science or Applied Social Science – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours

- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
PHYS 200, Intro to Applied Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
ELTE 131	Machine Controls I	4 / 5
ELTE 132	Control Panel Assembly	2 / 3
ELTE 260	Programmable Controllers I	4 / 6
METD 150	Industrial Blueprint Reading	3 / 3
METM 108	Machine Tool Operations	4 / 6
METS 110	Mechanical Power Transmissions	4 / 6
METS 125	Intro to Hydraulics/Pneumatics	4 / 6
METS 145	Automated Systems	3 / 4.5
METS 160	Introduction to Robotics	3 / 4.5
METS 250	Gen. Prevent/Predictive Maint	3 / 4.5
METS 260	Advanced Robotics Capstone	3 / 4.5
TECH 102	General Industry Safety	2 / 3
WELD 110	Gas Metal Arc Welding	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

64 credits / 86 billing hours

Recommended Course Sequence

Semester I
Gen Ed – Mathematics or Applied Mathematics
ELTE 110 – Milestone course
METD 150 – Milestone course
METS 160
TECH 102

Semester II
ELTE 131
ELTE 132 (Second 8 weeks)
METM 108
METS 125 – Milestone course
METS 145

Semester III
Gen Ed – English Composition or Applied English
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
ELTE 260
METS 110

Semester IV
Gen Ed – English Composition (second course)/ Communication or Applied Communication
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
METS 250
METS 260
WELD 110

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Medical Assistant C.A.

Career Community: Health and Human Service Careers

Curriculum Code: 1811

Effective: Fall 2024 – Summer 2026

Description

The purpose of this program is to produce educated, highly skilled, credentialed medical assistants to meet the needs of our community in its many ambulatory care settings. This three-semester program is designed for each student to successfully achieve all of the competencies listed on the American Medical Technologists (AMT) Medical Assistant Educational Review Board (MAERB) Master Competency list. The focus is on credentialing requirements, including 160 hours of practicum which prepares the student for gainful employment. Upon successful completion of the certificate of achievement students are eligible to take the Registered Medical Assistant exam to become nationally credentialed.

Milestone

Completion of MEDA 110A, MEDA 110B, MEDA 156A, and MEDA 156B with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students must complete all courses with a minimum grade of 2.5 to progress to the next semester and receive this certificate.

NCHE 102, AHA BLS Provider CPR, is a co-requisite requirement for MEDA 166. It is a 5-hour non-credit seminar course, which is flat-rated and not covered by financial aid.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Medical Assistant Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904. Students should also visit the Health and Human Services Division website for more information.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
MEDA 110A	Intro MA Med Terms & Patho I	2.5 / 2.5
MEDA 110B	Intro MA Med Terms & Patho II	2.5 / 2.5
MEDA 126A	MA Administrative Skills I	2.5 / 3
MEDA 126B	MA Administrative Skills II	2.5 / 3
MEDA 135	MA Pharmacology & Med Math	2 / 2
MEDA 145	Legal & Ethical Concepts	2 / 2
MEDA 156A	MA Clinical Procedures IA	3.5 / 5.5

Course Code	Course Title	Credit / Billing Hours
MEDA 156B	MA Clinical Procedures IB	3.5 / 5.5
MEDA 166	MA Clinical Procedures II	5 / 7
MEDA 175	MA Certification Review	3 / 3
MEDA 177A	MA Practicum Immersion I	1 / 1
MEDA 177B	MA Practicum Immersion II	2 / 2

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

32 credits / 39 billing hours

Required Course Sequence

Semester I (Fall 2024)
MEDA 110A – Milestone course
MEDA 110B – Milestone course
MEDA 135
MEDA 156A – Milestone course
MEDA 156B – Milestone course

Semester II (Spring 2025)
MEDA 126A
MEDA 126B
MEDA 145
MEDA 166
NCHE 102

Semester III (Summer 2025)
MEDA 175
MEDA 177A
MEDA 177B

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Medical Insurance Billing and Coding C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1488

Effective: Fall 2024 – Summer 2026

Description

This curriculum introduces the student to insurance billing, diagnostic and procedure coding for physician and facilities billing as well as comprehensive billing directions for commercial insurances and worker's compensation. Students will also learn to record charges/payments/information; schedule appointments; ICD-10-CM (International Classification of Diseases) and CPT (Current Procedural Terminology) coding; produce claim forms and patient statements; submit claims electronically; and build office databases. Students following the Three-Semester Cohort at the end of this guide may complete this certificate in one year. Upon successful completion of the program, students are eligible to take various billing and coding certification exams.

Milestone

Completion of CHSE 123 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

Students must complete all courses with a minimum grade of 2.5 to receive this Certificate of Completion.

Upon completion, students wishing to pursue an associate degree should declare the Allied Health A.A.S. major. Courses in this certificate program of study may be applied toward that degree.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Community Health Services Education Programs, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHSE 120	Medical Terminology	4 / 4
CHSE 123	Medical Ins Billing/Coding I	4 / 4
CHSE 124	Medical Ins Billing/Coding II	4 / 4
CHSE 125	Comp-Med Ins Billing/Coding	2 / 2
CHSE 127	Medical Ins Billing/Coding III	3 / 3
CHSE 130	Medical Ins Bill/Code Extern	3 / 3
CHSE 131	Electronic Hlth Records Intro	2 / 2

Minimum Total Credit Hours

22 credits / 22 billing hours

Required Course Sequence

Semester I (Fall)
CHSE 120
CHSE 123 – Milestone course
CHSE 131

Semester II (Spring)
CHSE 124
CHSE 125
CHSE 127

Semester III (Summer)
CHSE 130

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Microsoft Office Specialist C.C.

Career Community: Computer Technology and Networking

Curriculum Code: 0841

Effective: Fall 2024 – Summer 2029

Description

Completion of this certificate demonstrates competency in Microsoft Office programs and prepares students for the Microsoft Certified Applications Specialist (MCAS) exams. Preparation is included for MCAS exams for Word, Excel, Access, PowerPoint and Outlook. This certificate can be completed entirely online. Students completing this certificate may use the credits towards the Computer Support Specialist Associate of Business Degree (0713).

Milestone

Completion of CITA 115 and CITA 119 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program at the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITA 115	Microsoft PowerPoint	3 / 3
CITA 119	Microsoft Word	3 / 3
CITA 126	Microsoft Excel	3 / 3
CITA 133	Microsoft Access Database	3 / 3
CITA 140	Microsoft Outlook	3 / 3
CITA 219	Advanced Microsoft Word	3 / 3
CITA 226	Microsoft Excel–Advanced	3 / 3

Minimum Total Credit Hours

21 credits / 21 billing hours

Recommended Course Sequence

Semester I
CITA 115 – Milestone course
CITA 119 – Milestone course
CITA 126
CITA 133
Semester II
CITA 140
CITA 219
CITA 226

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Mid-Michigan Police Academy C.C.

Career Community: Public Service Careers

Curriculum Code: 1707

Effective: Fall 2024 – Summer 2025

Description

The Mid-Michigan Police Academy at Lansing Community College is a 17-week basic police training program designed to meet or exceed state mandated certification requirements set by the Michigan Commission on Law Enforcement Standards (MCOLES) for preparing individuals for a career in law enforcement. Within the 17 weeks, more than 700 hours are utilized to provide training in 126 different topic areas. The curriculum includes topics such as criminal law and procedure, investigations, patrol procedures, human relations, conflict mediation, firearms, CSI, precision driving, use of lethal and non-lethal force, defensive tactics, report writing, traffic enforcement, and crime prevention. The emphasis in this academy is placed upon practical and hands-on training techniques. All courses for this program must be completed in a single semester. Students completing this certificate may use the credits towards the Criminal Justice, Law Enforcement Associate in Applied Science Degree (1210).

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

This is a selective admission program. In order to be considered as a candidate for this program, students must meet basic admission requirements beyond those required for admission to the College. All of the courses for this program are open only to students officially admitted to the Police Academy Program.

Contact Information

For further information, including career options, current admission and/or program requirements, course substitutions and waivers, etc., contact the Police Academy Office in the Public Service Careers Program, West Campus Building, Room M127, telephone number 517-483-5253 or contact the LCC Admissions Office, Gannon Building – StarZone, telephone number 517-483-1254.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CJUS 270	Police Academy I	11 / 14
CJUS 271	Police Academy II	14 / 21
PFFT 114	Police Academy Fitness Trng	2 / 3
PFHW 120	Health and Wellness for Police	.5 / .5

Minimum Total Credit Hours

27.5 credits / 38.5 billing hours

Recommended Course Sequence

Semester I
CJUS 270
CJUS 271
PFFT 114
PFHW 120

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Mobile Application Developer C.A.

Career Community: Computer Technology Networking

Curriculum Code: 1712

Effective: Fall 2024 – Summer 2029

Description

This certificate provides students with an understanding of mobile applications (apps) and how these applications are utilized and integrated to meet specific business needs. The coursework builds a solid foundation of software development skills and introduces the specific skills needed for developing mobile applications. Students will also develop skills in the design of Android and iOS software systems, using appropriate technologies, architectures and techniques. This course work may be applied toward completion of the Computer Programmer/Analyst, Associate of Business degree (0113).

Milestone

Completion of CITP 130 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program at the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITP 110	Intro to Programming-Python	4 / 4
CITP 130	Intro to Mobile App Devel	3 / 3
CITP 180	Intro to C#.NET Programming	4 / 4
CITP 230	Mobile App Devel for Android	4 / 4
CITP 235	Mobile App Devel for Apple	4 / 4
CITW 160	Web Development HTML & CSS	3 / 3

Program of Study Required Courses, Limited Choice - *Select three courses for a minimum of nine credits*

Course Code	Course Title	Credit / Billing Hours
CITD 120	SQL Concepts	3 / 3
CITF 140	Information Technology Ethics	3 / 3
CITP 140	Software Testing	3 / 3
CITP 190	Intro to Programming in JAVA	4 / 4
CITW 150	Internet Literacy	3 / 3
CITW 165	Web Development JavaScript	3 / 3
CITW 185	Web Development PHP & MySQL	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

31credits / 31 billing hours

Recommended Course Sequence

Semester I
CITP 110
Limited Choice
Limited Choice

Semester II
CITP 130 – Milestone course
CITP 180
CITW 160

Semester III
CITP 230
CITP 235
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Music Transfer A.M.

Career Community: Music

Curriculum Code: 1827

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree is designed for students who wish to transfer to a four-year college or university to pursue a Bachelor's degree in this area, either through a Bachelor of Arts degree with a major in music or a Bachelor of Music degree. Students who complete this degree will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and will also qualify for an LCC Transfer Studies Certificate of Achievement (1482). In addition, students will complete the Musicianship Studies Certificate of Completion (1352). Not all courses in this pathway transfer to all colleges. Students who also wish to transfer to a four-year institution should select coursework indicated for that institution and may complete the coursework for an Enhanced Associate degree. The Enhanced Associate option allows completion of credits required for employment and of additional requirements for the Bachelor's degree.

Milestone

In addition to the required General Education courses in Math and English, completion of MUSC 157 and MUSC 168 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Communication, Media, and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. If no course is indicated, choose any listed course, or choose from the list of options under [General Education](#).

- English Composition or Applied English
Music Career Community Courses meet this requirement.
- English (second course)/Communication or Applied Communication
Music Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Music Career Community Courses meet this requirement.

- Mathematics or Applied Mathematics
Music Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Music Career Community Required Courses – *These courses are required for all Music programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4
MUSC 101 or MUSC 108 or MUSC 122 or MUSC 123 or MUSC 124	Vocal Jazz & Pop Ensemble Concert Choir Rock Band Jazz Ensemble Multi-Instrumental Music Ensem	1 / 3 1 / 3 1 / 3 1 / 3 1 / 3
MUSC 138	Keyboard Harmony I	2 / 3
MUSC 157 and MUSC 109	Applied Lesson I Studio Class	2 / 2 1 / 1
MUSC 158 and MUSC 109	Applied Lesson II Studio Class	2 / 2 1 / 1
MUSC 163	Aural Skills I	1 / 2
MUSC 164	Aural Skills II	1 / 2
MUSC 168	Rudiments of Music	3 / 3
MUSC 193	Music Theory I	4 / 4
MUSC 197	Electronic Music Production	2 / 3
MUSC 241	Musical Cultures 1750-Present	4 / 4
MUSC 257 and MUSC 109	Applied Lesson III Studio Class	2 / 2 1 / 1

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Select one ensemble per semester, with MUSC 109 and MUSC 157, 158, 257, or 258. Ensembles may be repeated

For future transfer to:

- Central Michigan University choose ENGL 122, and MATH 119 or MATH 120.
For BA/BS – Choral, choose MUSC 108 (4 times);
For BA/BS – Instrumental, BA/BS – Music, BM – Orchestral Instruments, or BM – Piano, choose MUSC 122 or 123 or 124 (4 times);
For BM – Theory/Composition, choose MUSC 122 or 123 or 124 (4 times);
For BM – Voice, choose MUSC 108 (4 times).
- Eastern Michigan University and University of Michigan Flint choose ENGL 122, and MATH 119 or MATH 120.
For BA – Instrumental, or BM – Instrumental Performance, choose MUSC 122 or 123 or 124 (4 times);
For BA – Vocal, or BM – Vocal Performance, choose MUSC 101 or MUSC 108 (4 times).
- Grand Valley State University and Michigan State University choose COMM 130 and MATH 120.
For BA – Music, or BM – Instruments, choose MUSC 101 or 108 or 122 or 123 or 124 (4 times);
For BM – Voice, choose MUSC 101 or 108 (4 times).
- Michigan State University choose COMM 130, and MATH 119 or MATH 120.
For BA – Music, or BM – Performance, choose MUSC 101 or 108 or 122 or 123 or 124 (4 times);
For BM – Composition, choose MUSC 101 or 108 or 122 or 123 or 124 (4 times).
- UM Flint choose ENGL 122, and MATH 119 or MATH 120.
For BA – General Music, or BM – Performance, choose MUSC 101 or 108 or 122 or 123 or 124 (4 times).
- Western Michigan University choose ENGL 122 and MATH 119.
For BM – any major, choose MUSC 101 or 108 or 122 or 123 or 124 (4 times).

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
COMM 280	Intercultural Communication	3 / 3
MUSC 194	Music Theory II	4 / 4
MUSC 199 or MUSC 240	Music Appreciation Musical Cultures to 1750	3 / 3 4 / 4
MUSC 258 and MUSC 109	Applied Lesson IV Studio Class	2 / 2 1 / 1

For future transfer to:

- Central Michigan University, Eastern Michigan University, Grand Valley State University, Michigan State University, and University of Michigan Flint choose MUSC 240.
- Western Michigan University choose MUSC 199.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -

Select one, as indicated for each transfer institution and major. If a specific course is not noted, select any recommended course.

Course Code	Course Title	Credit / Billing Hours
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
GRMN 121	Elementary German I	4 / 4

For future transfer to:

- Central Michigan University, BM in Voice, choose GRMN 121.
- Eastern Michigan University, BA in Music, or BM in Performance Instrumental, choose ARTH 211 or ARTH 212.
- Eastern Michigan University, BM in Performance Vocal, choose GRMN 121.
- Grand Valley State University, BA in Music or BM – Voice, choose GRMN 121.

Program of Study Required Courses, Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab -

Select 2 or 3 courses from two different disciplines as indicated for each transfer institution and major. One must be a lab course. If specific courses are not indicated for the institution you are considering, select any two courses from different disciplines, one with a lab.

Course Code	Course Title	Credit / Billing Hours
ANTH 275	Biological Anthropology	4 / 4
ANTH 280	Forensic Anthropology	3 / 3
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6

Course Code	Course Title	Credit / Billing Hours
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201	Human Anatomy	4 / 6
BIOL 202	Human Physiology	4 / 5
BIOL 203 and BIOL 204	Microbiology Microbiology Laboratory	3 / 3 1 / 3
BIOL 210	Natural Resource Conservation	4 / 6
BIOL 260	Botany	4 / 6
BIOL 265	Zoology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
CHEM 151 and CHEM 161	General Chemistry Lecture I General Chemistry Lab I	4 / 4 1 / 3
CHEM 152 and CHEM 162	General Chemistry Lecture II General Chemistry Lab II	3 / 3 1 / 3
CHEM 182 and CHEM 192	Introductory Organic Chemistry Intro Organic Chem Lab	3 / 3 1 / 3
CHEM 262	Quantitative Analysis	3 / 6
CHEM 272	Organic Chemistry Laboratory	2 / 6
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 121	Physical Science Concepts	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PFHW 123	Human Nutrition	3 / 3
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5
PHYS 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7

For future transfer to:

- Central Michigan University choose BIOL 120 and any non-BIOL course.
- Eastern Michigan University choose one from ASTR 201, BIOL 125, CHEM 135, GEOG 221, GEOL 230, ISCI 131, or PHYS 120 and PFHW 123.

Program of Study Required Courses - Limited Choices – *Select a minimum of one course as recommended for each transfer institution and major focus.*

Course Code	Course Title	Credit / Billing Hours
ENGL 260	African-American Literature	4 / 4
GRMN 122	Elementary German II	4 / 4
MUSC 144	Beginning Piano I	2 / 2
MUSC 145	Beginning Piano II	2 / 2
MUSC 280	Private Composition	1 / 1

For future transfer to:

- Central Michigan University, BA/BS – Instrumental, BA/BS – Music, BM – Orchestral Instruments, or BM - Piano, choose MUSC 144 and MUSC 145.
- Central Michigan University, BM – Theory/Composition, choose MUSC 144 and MUSC 145.
- Central Michigan University, BM – Voice, choose GRMN 122, MUSC 144, and MUSC 145.
- Eastern Michigan University, BA – Instrumental, or BM – Instrumental Performance, choose ENGL 260.
- Eastern Michigan University, BA – Vocal, or BM – Vocal Performance, choose ENGL 260 and GRMN 122.
- Grand Valley State University, BM – Voice, choose GRMN 122.
- Michigan State University, BM – Composition, choose MUSC 144, MUSC 145, and MUSC 280.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

71 credits / 83 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or 131
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 157 – Milestone course
MUSC 168 – Milestone course
MUSC 197

Semester II
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
MATH 119 or MATH 120 or STAT 170
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 138
MUSC 158
MUSC 163
MUSC 193

Semester III
ANTH 270 or COMM 280
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 164
MUSC 194
MUSC 241
MUSC 257
Limited Choice - Natural Sciences

Semester IV
ANTH 270 or COMM 280
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 199 or 240
MUSC 258
Limited Choice – Humanities and Fine Arts
Limited Choice – Natural Sciences
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Music G.A.

Career Community: Music

Curriculum Code: 1828

Effective: Fall 2024 – Summer 2029

Purpose of Major:

This degree is designed for students wishing to work in any Music-related field. The degree includes a common set of courses applicable to all Music majors and to many transfer institutions. Students beginning their college study in this degree program are encouraged to work with academic and program advisors throughout their first few semesters of study to determine their specific major area and transfer destination (if transfer is a goal). Students may select the Music A.M., Music Education/Pre-Music Therapy A.M., Music Industry A.M., or an Associate of Music degree that leads directly to employment in the Music Industry field and also may transfer to Ferris State University in the Bachelor of Science degree with major in Music and Entertainment Business. Not all courses in this pathway transfer to all colleges. Students who also wish to transfer to a four-year institution should select coursework indicated for that institution and may complete the coursework for an Enhanced Associate degree. The Enhanced Associate option allows students to transfer additional credits (depending on institution) toward the Bachelor's degree. This allows completion of credits required for employment and of additional requirements for the Bachelor's degree.

Milestone

In addition to the required General Education courses in Math and English, completion of MUSC 157 and MUSC 168 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Communication and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degrees - Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose any listed course or choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Music Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Music Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Music Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Music Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Music Career Community Required Courses – *These courses are required for all Music programs. They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for LCC General Education – Applied Degrees and Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 33 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4
MUSC 101 or MUSC 108 or MUSC 122 or MUSC 123 or MUSC 124	Vocal Jazz & Pop Ensemble Concert Choir Rock Band Jazz Ensemble Multi-Instrumental Music Ensem	1 / 3 1 / 3 1 / 3 1 / 3 1 / 3
MUSC 138	Keyboard Harmony I	2 / 3
MUSC 157 and MUSC 109	Applied Lesson I Studio Class	2 / 2 1 / 1
MUSC 158 and MUSC 109	Applied Lesson II Studio Class	2 / 2 1 / 1
MUSC 163	Aural Skills I	1 / 2
MUSC 164	Aural Skills II	1 / 2
MUSC 168	Rudiments of Music	3 / 3

Course Code	Course Title	Credit / Billing Hours
MUSC 193	Music Theory I	4 / 4
MUSC 197	Electronic Music Production	2 / 3
MUSC 241	Musical Cultures 1750-Present	4 / 4
MUSC 257 and MUSC 109	Applied Lesson III Studio Class	2 / 2 1 / 1

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Select one ensemble per semester, with MUSC 109 and MUSC 157, 158, or 257. Ensembles may be repeated.

For future transfer to:

- Central Michigan University choose ENGL 122, and MATH 119 or MATH 120.
- Ferris State University choose COMM 130, and MATH 119 or MATH 120.
- Grand Valley State University and Michigan State University choose COMM 130 and MATH 120.
- Eastern Michigan University and University of Michigan Flint choose ENGL 122 and MATH 120.
- Western Michigan University choose ENGL 122 and MATH 119.

Program of Study Required Courses, Limited Choices – Natural Sciences Lab or Applied Sciences and Technology Lab – *Select 1 or 2 courses; one must be a lab course.*

Course Code	Course Title	Credit / Billing Hours
ANTH 275	Biological Anthropology	4 / 4
ANTH 280	Forensic Anthropology	3 / 3
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201	Human Anatomy	4 / 6
BIOL 202	Human Physiology	4 / 5

Course Code	Course Title	Credit / Billing Hours
BIOL 203 and BIOL 204	Microbiology Microbiology Laboratory	3 / 3 1 / 3
BIOL 210	Natural Resource Conservation	4 / 6
BIOL 260	Botany	4 / 6
BIOL 265	Zoology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
CHEM 151 and CHEM 161	General Chemistry Lecture I General Chemistry Lab I	4 / 4 1 / 3
CHEM 152 and CHEM 162	General Chemistry Lecture II General Chemistry Lab II	3 / 3 1 / 3
CHEM 182 and CHEM 192	Introductory Organic Chemistry Intro Organic Chem Lab	3 / 3 1 / 3
CHEM 262	Quantitative Analysis	3 / 6
CHEM 272	Organic Chemistry Laboratory	2 / 6
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 121	Physical Science Concepts	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5
PHYS 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7

Program of Study Required Courses, Limited Choices - *Select 12 credits. Work with an Academic Advisor or Program Advisor to select the most appropriate courses or to select a field-specific major or transfer major that meets your educational and career goals. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
BUSN 118	Introduction to Business	3 / 3
COMM 280	Intercultural Communication	3 / 3
EDUC 204	Educational Psychology	3 / 3
EDUC 220	Introduction to Education	3 / 3
EDUC 230	Intro to Special Education	3 / 3
ENGL 211	World Literature I	4 / 4
ENGL 212	World Literature II	4 / 4
GRMN 121	Elementary German I	4 / 4
GRMN 122	Elementary German II	4 / 4
MGMT 225	Principles Mgmt/Leadership	3 / 3
MKTG 200	Principles of Marketing	3 / 3
MUSC 106	Private Music Lesson	2 / 2
MUSC 143	Beginning Piano I - Summer	1 / 1
MUSC 144	Beginning Piano I	2 / 2
MUSC 145	Beginning Piano II	2 / 2
MUSC 171	Sound Design and Production	4 / 4
MUSC 172	Studio Recording	4 / 4
MUSC 194	Music Theory II	4 / 4
MUSC 199	Music Appreciation	3 / 3
MUSC 237	Musical Theater Performance	2 / 3
MUSC 240	Musical Cultures to 1750	4 / 4
MUSC 255	Music Business & Management	3 / 3
MUSC 258 and MUSC 109	Applied Lesson IV Studio Class	2 / 2 1 / 1
MUSC 280	Private Composition	1 / 1
MUSC 296	Music Internship	3 / 3
MUSC 298	Composition and Sound Design	3 / 3
PFHW 123	Human Nutrition	3 / 3
PHIL 151	Intro to Logic & Critical Think	4 / 4
PHIL 152	Introduction to Ethics	4 / 4
PHYS 120	The Art of Physics	4 / 5
PSYC 200	Introduction to Psychology	4 / 4
PSYC 221	Child Psychology	3 / 3

Course Code	Course Title	Credit / Billing Hours
PSYC 250	Abnormal Psychology	3 / 3
RELG 150	Intro to World Religions	4 / 4

Note: If selecting MUSC 258, take with MUSC 109 and an Ensemble class.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credits Hours

60 credits / 72 billing hours

Recommended Course Sequence

College-ready Full-time

Semester I (Fall)
ACAD 100 (if waived, substitute Career Community course)
ENGL 121 or ENGL 131
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 157 – Milestone course
MUSC 168 – Milestone course
MUSC 197

Semester II (Spring)
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
MATH 119 or MATH 120 or STAT 170
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 138
MUSC 158
MUSC 163
MUSC 193

Semester III (Fall)
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 164
MUSC 194
MUSC 241
MUSC 257
Limited Choice - Natural Sciences Lab or Applied Sciences and Technology Lab
Students who have decided on an academic program within the Music Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.

Semester IV
Limited Choice courses for students completing the Music GA

College-ready Part-time

Semester I (Fall)
ACAD 100 (if waived, substitute Career Community course)
ENGL 121 or ENGL 131
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 157 – Milestone course
MUSC 168 – Milestone course

Semester II (Spring)
MATH 119 or MATH 120 or STAT 170
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 158
MUSC 197

Semester III (Summer – optional)
COMM 130 or ENGL 122 or ENGL 132

Semester IV (Fall)
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132 (if no Summer enrollment)
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 163
MUSC 193
MUSC 257

Semester V (Spring)
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 164
MUSC 194
MUSC 258
Students who have decided on an academic program within the Music Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.

Semester VI (Fall)
MUSC 138
MUSC 241
Limited Choice - Natural Sciences Lab or Applied Science and Technology Lab
Students who have decided on an academic program within the Music Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.

Semester VII
Limited Choice courses for students completing the Music GA

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Music Education/Pre-Music Therapy A.M.

Career Community: Music

Curriculum Code: 1829

Effective: Fall 2024 – Summer 2029

Purpose of Major

The purpose of this major is to prepare students to enter a Bachelor's of Music Education program, leading to K-12 certification to teach music in Michigan schools or to enter the Music Therapy programs at Eastern Michigan University or Western Michigan University. Not all courses in this pathway transfer to all colleges. Students who also wish to transfer to a four-year institution should select coursework indicated for that institution and may complete the coursework for an Enhanced Associate degree. The Enhanced Associate option allows completion of credits required for employment and of additional requirements for the Bachelor's degree.

Milestone

In addition to the required General Education courses in Math and English, completion of MUSC 157 and MUSC 168 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media, and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. If no course is indicated, choose from the list of options under [General Education](#).

- English Composition or Applied English
Music Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Music Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Music Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Music Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Sciences and Technology Lab
Program of Study Required Courses meet this requirement.

Music Career Community Required Courses – *These courses are required for all Music programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I or Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4
MUSC 101 or MUSC 108 or MUSC 122 or MUSC 123 or MUSC 124	Vocal Jazz & Pop Ensemble Concert Choir Rock Band Jazz Ensemble Multi-Instrumental Music Ensem	1 / 3 1 / 3 1 / 3 1 / 3 1 / 3
MUSC 138	Keyboard Harmony I	2 / 3
MUSC 157 and MUSC 109	Applied Lessons I Studio Class	2 / 2 1 / 1
MUSC 158 and MUSC 109	Applied Lessons II Studio Class	2 / 2 1 / 1
MUSC 163	Aural Skills I	1 / 2
MUSC 164	Aural Skills II	1 / 2
MUSC 168	Rudiments of Music	3 / 3
MUSC 193	Music Theory I	4 / 4
MUSC 197	Electronic Music Production	2 / 3
MUSC 241	Musical Cultures 1750-Present	4 / 4
MUSC 257 and MUSC 109	Applied Lesson III Studio Class	2 / 2 1 / 1

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Select one ensemble per semester, with MUSC 109 and MUSC 157, 158, 257, and 258.
Ensembles may be repeated.

For future transfer to:

- Central Michigan University choose COMM 130 and STAT 170.
For Music Education Choral and Music Education General Music, choose MUSC 108 (4 times).
- Eastern Michigan University choose ENGL 122 and MATH 120.
For Music Education Instrumental, choose MUSC 124 (4 times).
For Music Education Vocal, choose MUSC 108 (4 times).
For Music Therapy, choose MUSC 101 or 108 (four times), or MUSC 101 or 108 (two times) and MUSC 122 or 123 or 124 (two times).
- Grand Valley State University and Michigan State University choose COMM 130 and MATH 120.
For Music Education choose MUSC 101 or MUSC 108 or MUSC 122 or MUSC 123 or MUSC 124 (4 times).
- University of Michigan Flint choose ENGL 122 and MATH 120.
- Western Michigan University ENGL 122 and MATH 120
For Music Education Choral choose MUSC 108 (4 times).
For Music Therapy choose MUSC 101 or 108 or 122 or 123 or 124 (4 times).

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ENGL 122 or ENGL 132	Composition II Honors Composition II	4 / 4 4 / 4
MUSC 194	Music Theory II	4 / 4
MUSC 199 or MUSC 240	Music Appreciation Musical Cultures to 1750	3 / 3 4 / 4
MUSC 258 and MUSC 109	Applied Lesson IV Studio Class	2 / 2 1 / 1

For future transfer to:

- Central Michigan University, Music Education Choral, and Music Education General Music, choose ENGL 122.
- Central Michigan University, Eastern Michigan University, Michigan State University, and University of Michigan Flint choose MUSC 240.
- Grand Valley State University and Western Michigan University choose MUSC 199.

Program of Study Required Courses, Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab – *Select 2 or 3 courses from two different disciplines as indicated for each transfer institution and major. One must be a lab course. If specific courses are not indicated for the institution you are considering, select any two courses, one with a lab, from different disciplines.*

Course Code	Course Title	Credit / Billing Hours
ANTH 275	Biological Anthropology	4 / 4
ANTH 280	Forensic Anthropology	3 / 3
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201	Human Anatomy	4 / 6
BIOL 202	Human Physiology	4 / 5
BIOL 203 and BIOL 204	Microbiology Microbiology Laboratory	3 / 3 1 / 3
BIOL 210	Natural Resource Conservation	4 / 6
BIOL 260	Botany	4 / 6
BIOL 265	Zoology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
CHEM 151 and CHEM 161	General Chemistry Lecture I General Chemistry Lab I	4 / 4 1 / 3
CHEM 152 and CHEM 162	General Chemistry Lecture II General Chemistry Lab II	3 / 3 1 / 3
CHEM 182 and CHEM 192	Introductory Organic Chemistry Intro Organic Chem Lab	3 / 3 1 / 3
CHEM 262	Quantitative Analysis	3 / 6
CHEM 272	Organic Chemistry Laboratory	2 / 6
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 121	Physical Science Concepts	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5
PHYS 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7

For future transfer to:

- Central Michigan University choose BIOL 120 and one non-BIOL recommended course.
- Eastern Michigan University choose two from ASTR 201, BIOL 125, CHEM 135, GEOG 221, GEOL 230, ISCI 131, or PHYS 120.

Program of Study Required Courses, Limited Choice – Social Sciences – *Select PSYC 200 and one EDUC course as indicated for each transfer institution and major.*

Course Code	Course Title	Credit / Billing Hours
EDUC 204	Educational Psychology	3 / 3
EDUC 220	Introduction to Education	3 / 3
EDUC 230	Intro to Special Education	3 / 3
PSYC 200	Introduction to Psychology	4 / 4

For future transfer to:

- Central Michigan University (Music Education) choose EDUC 220.
- Eastern Michigan University (Music Education or Music Therapy) choose EDUC 230.
- Grand Valley State University (Music Education) choose EDUC 220.
- Michigan State University, University of Michigan Flint, and Western Michigan University (Music Education or Music Therapy) choose EDUC 204.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

66 credits / 78 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or 131
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 157 – Milestone course
MUSC 168 – Milestone course
MUSC 197

Semester II
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
MATH 119 or MATH 120 or STAT 170
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 138
MUSC 158
MUSC 163
MUSC 193

Semester III
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 164
MUSC 194
MUSC 257
Limited Choice - Natural Sciences
Limited Choice – Social Sciences
Limited Choice

Semester IV
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 199 or 240
MUSC 241
MUSC 258
Limited Choice – Natural Sciences
Limited Choice – Social Sciences

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Music Industry A.M.

Career Community: Music

Curriculum Code: 1830

Effective: Fall 2024 – Summer 2029

Purpose of Major

The purpose of this major is to prepare students to work in the field of Music Industry on completion of the Associate degree. This ever-evolving field, commercial music, offers opportunities in Popular Music Performance, Composition and Arrangement, Music Production, and Music Business. Additionally, upon graduation, students will be prepared to teach music, either independently or through training centers. This degree also offers students the option to transfer to Ferris State University to complete their Bachelor's Degree in Music Industry. Students wishing to transfer to Ferris State University and complete credits beyond the A.M., to transfer toward their Bachelor's Degree, should complete the Enhanced A.M. degree upon completion of the A.M. degree. Not all courses in this program transfer to all colleges. Students should work with an academic advisor and program advisor as they enroll each semester.

Milestone

In addition to the required General Education courses in Math and English, completion of MUSC 157 and MUSC 168 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Communications and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

Additional Information

Students must be enrolled in one ensemble per semester for a total of four credits.

General Education – Applied Degree Courses - Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. If no course is indicated, choose from the list of options under [General Education](#).

- English Composition – *Select one*
Music Career Community Courses meet this requirement.
- English Composition (second course) or Communication or Applied Communication
Music Career Community Courses meet this requirement.

- Humanities and Fine Arts or Social Science or Applied Social Science
Music Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Music Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Music Career Community Courses – *These courses are required for all Music programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4
MUSC 101 or MUSC 108 or MUSC 122 or MUSC 123 or MUSC 124	Vocal Jazz & Pop Ensemble Concert Choir Rock Band Jazz Ensemble Multi-Instrumental Music Ensem	1 / 3 1 / 3 1 / 3 1 / 3 1 / 3
MUSC 138	Keyboard Harmony I	2 / 3
MUSC 157 and MUSC 109	Applied Lesson I Studio Class	2 / 2 1 / 1
MUSC 158 and MUSC 109	Applied Lesson II Studio Class	2 / 2 1 / 1
MUSC 163	Aural Skills I	1 / 2
MUSC 164	Aural Skills II	1 / 2
MUSC 168	Rudiments of Music	3 / 3
MUSC 193	Music Theory I	4 / 4
MUSC 197	Electronic Music Production	2 / 3
MUSC 241	Musical Cultures 1750-Present	4 / 4
MUSC 257 and MUSC 109	Applied Lesson III Studio Class	2 / 2 1 / 1

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Select one ensemble per semester, with MUSC 109 and MUSC 157, 158, 257, and 258. Ensembles may be repeated.

For future transfer to Ferris State University, choose COMM 130 and MATH 119 or MATH 120.

Program of Study Required Courses - Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)

Course Code	Course Title	Credit / Billing Hours
MUSC 194	Music Theory II	4 / 4
MUSC 255	Music Business & Management	3 / 3
MUSC 258 and MUSC 109	Applied Lesson IV Studio Class	2 / 2 1 / 1
MUSC 296	Music Internship	3 / 3

Program of Study Required Courses, Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab – Select 1 course. A course may also be chosen from the list [LCC General Education Applied Degrees, Natural Sciences or Applied Sciences and Technology Lab](#).

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

Note: For future transfer to Ferris State University choose BIOL 120.

Program of Study Required Courses, Limited Choice – *Select one course. A minimum of 2.0 is required to meet for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
BUSN 118	Introduction to Business	3 / 3
MGMT 223	Supervisory Skills	3 / 3
MKTG 200	Principles of Marketing	3 / 3
MUSC 171	Sound Design and Production	4 / 4
MUSC 172	Studio Recording	4 / 4
MUSC 298	Composition and Sound Design	3 / 3

Note: For future transfer to Ferris State University, choose MGMT 223 and MKTG 200

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

61 credits / 73 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or 131
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 157 – Milestone course
MUSC 168 – Milestone course
MUSC 197

Semester II
MATH 119 or MATH 120 or STAT 170
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 138
MUSC 158
MUSC 163
MUSC 193

Semester III (Summer)
MUSC 255
MUSC 296

Semester IV
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 164
MUSC 194
MUSC 257

Semester V
MUSC 101 or 108 or 122 or 123 or 124
MUSC 109
MUSC 258
MUSC 241
Limited Choice
Limited Choice – Natural Sciences

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Music Technology C.C.

Career Community: Music

Curriculum Code: 1358

Effective: Fall 2024 – Summer 2029

Description

The Music Technology Certificate of Completion combines practical and applied coursework in audio production, recording, MIDI composition, music fundamentals, and keyboard skills. Students develop technical and creative skills in the field of music and sound through access to state-of-the-art sound recording and electronic music studios. Diverse opportunities exist to develop performance skills.

Milestone

Completion of MUSC 197 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Students following this pathway select one subspecialty, Music Producer or Audio Engineering.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
DMAC 120	Intro to Audio Production	4 / 4
MUSC 134	Live Sound/Event Production	3 / 3
MUSC 171	Sound Design and Production	4 / 4
MUSC 172	Studio Recording	4 / 4
MUSC 197	Electronic Music Production	2 / 3
MUSC 255	Music Business & Management	3 / 3
MUSC 298	Composition and Sound Design	3 / 3

Select one subspecialty, Music Producer or Audio Engineering, and take the courses indicated for that subspecialty.

Program of Study Required Courses, Music Producer Subspecialty

Course Code	Course Title	Credit / Billing Hours
MUSC 138	Keyboard Harmony I	2 / 3
MUSC 168	Rudiments of Music	3 / 3

Program of Study Required Courses, Audio Engineering Subspecialty

Course Code	Course Title	Credit / Billing Hours
MUSC 296	Music Internship	3 / 3

Minimum Total Credit Hours

26 credits / 27 billing hours

Recommended Course Sequence

Semester I - Fall
DMAC 120
MUSC 134
MUSC 168 if choosing Music Producer subspecialty
MUSC 197 – Milestone course

Semester II – Spring
MUSC 171
MUSC 172
MUSC 298
MUSC 138 if choosing Music Producer subspecialty

Semester III - Summer
MUSC 255
MUSC 296 if choosing Audio Engineering subspecialty

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Musicianship Studies C.C.

Career Community: Music

Curriculum Code: 1352

Effective: Fall 2024 – Summer 2029

Description

The Certificate of Completion in Musicianship Studies provides basic training in music theory, aural skills, keyboard harmony, solo and ensemble performance for: a) students preparing to transfer to college or university Music programs; b) qualifying dual-enrolled high school or home school students; or c) those seeking to reinforce their own professional musical competencies. The focus is on skills acquisition most necessary for successfully meeting audition and music placement requirements. Students may also apply all courses in this curriculum toward other degrees in Music. Not all courses in this program transfer to all colleges.

Milestone

Completion of MUSC 157 and MUSC 168 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

In order to meet the prerequisites for some Music major courses, students must complete the following requirements:

- a. Interview with a Performing Arts advisor to discuss curriculum requirements, musical repertoires and audition procedures.
- b. Perform an audition on an instrument or voice to be adjudicated by LCC Music faculty.
- c. Take a Music Theory Placement Test covering music reading skills and basic harmony.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
MUSC 109*	Studio Class	1 / 1 (2 / 2)
MUSC 138	Keyboard Harmony I	2 / 3
MUSC 157	Applied Lesson I	2 / 2
MUSC 158	Applied Lesson II	2 / 2
MUSC 163	Aural Skills I	1 / 2

Course Code	Course Title	Credit / Billing Hours
MUSC 168	Rudiments of Music	3 / 3
MUSC 193	Music Theory I	4 / 4
MUSC 197	Electronic Music Production	2 / 3

*MUSC 109 must be taken twice

Program of Study Required Courses, Limited Choice - *Select one each semester.*

Courses may be duplicated.

Course Code	Course Title	Credit / Billing Hours
MUSC 101	Vocal Jazz & Pop Ensemble	1 / 3
MUSC 108	Concert Choir	1 / 3
MUSC 122	Rock Band	1 / 3
MUSC 123	Jazz Ensemble	1 / 3
MUSC 124	Multi-Instrumental Music Ensem	1 / 3

Minimum Total Credit Hours

20 credits / 27 billing hours

Recommended Course Sequence

Semester I
MUSC 109
MUSC 157 – Milestone course
MUSC 168 – Milestone course
MUSC 197
Limited Choice

Semester II
MUSC 109
MUSC 138
MUSC 158
MUSC 163
MUSC 193
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Neurodiagnostic Technology A.A.S.

Career Community: Health and Human Service Careers

Curriculum Code: 1812

Effective: Fall 2024 – Summer 2026

Description

Neurodiagnostic Technology is the medical diagnostic field devoted to the recording and study of electrical activity in the brain and nervous system. Neurodiagnostic Technologists (EDT) are highly skilled professionals trained to perform electroencephalograms (EEGs) in medical facilities and outpatient centers under the direct supervision of a health care provider. The EEG program not only is designed to foster the skills and knowledge necessary for competent practice, but also places emphasis on professional attitudes, values and behaviors that encourage the professional growth of the individual student. Clinical learning experiences are provided by affiliating hospitals, clinics and other outpatient facilities. Didactic learning experiences occur in supportive college course work delivered through an online environment and laboratory practice. Both are equally important to the development of the competent Neurodiagnostic Technologist. The Neurodiagnostic Technology Program has been developed by the EPiC Consortium, following the Commission on Accreditation of Allied Health Programs' (CAAHEP) Standards and Guidelines for the Accreditation of Educational Programs in Neurodiagnostic Technology. As a member of the EPiC Consortium, Lansing Community College's Neurodiagnostic Technology (EEG) program is CAAHEP accredited. Upon completion of the EEG program, graduates will be eligible to take the American Board of Registration in Electroencephalographic (ABRET) exam. Upon passing the ABRET exam, Neurodiagnostic Technologists have earned their Registered Electroencephalographic Technologist (R.EEG T) Certification.

Courses in this program are offered through the Michigan Workforce Training and Education Collaborative, and are taught by various colleges in the Michigan Educational Programs in Collaboration (MI-EPiC) Consortium.

Milestone

In addition to the required General Education courses in Math and English, completion of NDXT 120, NDXT 132, and NDXT 200 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students must complete all non-NDXT courses prior to submitting their application for Program Approval. Courses in semesters I and II must be completed with a minimum 2.0 grade, with the exception of the General Education English Composition (second course)/Communications or Applied Communications requirement which must be completed with a minimum 2.5 grade. First semester NDXT courses require Program Approval. Applications must be submitted by May 15 and are available by contacting the Program Office at 517-483-1410. Once Program Approval is received, all students must complete each NDXT course with a minimum 2.5 grade

to continue in the program and receive this degree. Students may not progress to the next semester until they have successfully completed all of the courses in the previous sequenced semester.

30 general NDXT credits may be awarded for a current Registered Electroencephalographic Technologist (R.EEG T) Certification and may be applied to the 30 required NDXT credits. For information regarding Licensure and Certification credit go to [Transfer Equivalencies – Licensure and Certification](#).

Contact Information

The admission and/or graduation requirements for this program may change each academic year. The program requirements below apply only to those students who have been admitted to the program for the 2024/2025 academic year. For further information, including career options, course substitutions and waivers, etc., contact the Medical Imaging Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
- English Composition (second course)/Communication or Applied Communication
Program of Study Required Courses for Admission will meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Program of Study Required Courses for Admission will meet this requirement.
- Mathematics or Applied Mathematics
Program of Study Required Courses for Admission will meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses for Admission will meet this requirement.

Program of Study Required Courses for Admission, Limited Choice – English

Composition (second course)/Communication – *Select one. This selection also satisfies the General Education English Composition (second course)/Communication or Applied Communication requirement. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
COMM 240	Interpersonal Communication	3 / 3

Program of Study Required Courses for Admission, Limited Choice –

Mathematics – *Select one. This course will satisfy the General Education Mathematics or Applied Mathematics requirement. (Any course from the General Education Mathematics College Algebra category may also be selected.)*

Course Code	Course Title	Credit / Billing Hours
MATH 119	Math – Applications for Living	4 / 4
MATH 120	College Algebra	4 / 4
STAT 170	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Program of Study Required Courses for Admission, Limited Choice – Natural

Sciences – *Select BIOL 145 or, BIOL 201 and BIOL 202. This selection also satisfies the General Education Natural Sciences Lab or Applied Science and Technology Lab requirement.*

Course Code	Course Title	Credit / Billing Hours
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201 and 202	Human Anatomy and Human Physiology	8 / 11

Program of Study Required Courses for Admission – *PSYC 200 or SOCL 120 satisfies the General Education Humanities and Fine Arts or Social Sciences or Applied Social Sciences requirement. PSYC 200 or SOCL 120 may be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
CHSE 117	Health Law and Ethics	2 / 2
CHSE 120	Medical Terminology	4 / 4
PFHW 163	Healthy Lifestyles	2 / 3
PSYC 200	Introduction to Psychology	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
NDXT 100	Neuroanatomy and Physiology	3 / 0*
NDXT 101	Neurodiagnostic Procedures	3 / 0*
NDXT 102	EEG Applications	3 / 0*
NDXT 120	EEG Pre-Clinical Preparation	3 / 0*
NDXT 130	Principles of EEG	2 / 0*
NDXT 131	Electricity Principles/Safety	1 / 0*
NDXT 132	EEG Instrumentation I	2 / 0*
NDXT 200	EEG Procedures & Pathology I	1 / 0*
NDXT 201	EEG Instrumentation II	2 / 0*
NDXT 202	EEG Quality Control	1 / 0*
NDXT 220	EEG Clinical Practice I	3 / 0*
NDXT 221	EEG Clinical Practice II	3 / 0*
NDXT 230	EEG Procedures & Pathology II	1 / 0*
NDXT 231	EEG Procedures & Pathology III	1 / 0*
NDXT 232	EEG Procedures & Pathology IV	1 / 0*

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

61 credits / 34 billing hours*

*NDXT courses follow the Michigan Workforce Training and Education Collaborative tuition rates, and are not included in billing hours. Please contact the Medical Imaging Program at 517-483-1410 for current tuition rates.

Recommended Course Sequence

Semester I (Fall)
Gen Ed -English Composition/Applied English
MATH 119, MATH 120, STAT 170, or STAT 215
PFHW 163
PSYC 200
SOCL 120
Semester II (Spring)
BIOL 145 or (BIOL 201 and BIOL 202)
CHSE 117
CHSE 120
COMM 110, 120, 130, or 240

Semester III (Fall)
NDXT 100
NDXT 101
NDXT 102
NDXT 120 – Milestone course

Semester IV (Spring)
NDXT 130
NDXT 131
NDXT 132 – Milestone course
NDXT 200 – Milestone course
NDXT 201
NDXT 202
NDXT 220

Semester V (Summer)
NDXT 221
NDXT 230
NDXT 231
NDXT 232

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Neurodiagnostic Technology C.A.

Career Community: Health and Human Service Careers

Curriculum Code: 1808

Effective: Fall 2024 – Summer 2025

Description

This certificate is designed only for hospital-based training with an approved health care provider. Neurodiagnostic Technology is the medical diagnostic field devoted to the recording and study of electrical activity in the brain and nervous system. Neurodiagnostic Technologists (EDT) are highly skilled professionals trained to perform electroencephalograms (EEGs) in medical facilities and outpatient centers under the direct supervision of a health care provider. The EEG program is designed not only to foster the skills and knowledge necessary for competent practice, but also places emphasis on professional attitudes, values and behaviors that encourage the professional growth of the individual student.

Clinical learning experiences are provided by affiliating hospitals, clinics and other outpatient facilities. Didactic learning experiences occur in supportive college course work delivered through an online environment and laboratory practice. Both are equally important to the development of the competent Neurodiagnostic Technologist.

Courses in this program are offered through the Michigan Workforce Training and Education Collaborative, and are taught by various colleges in the Michigan Educational Programs in Collaboration (MI-EPiC) Consortium.

Milestone

Completion of NDXT 120, NDXT 132, and NDXT 200 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

The Neurodiagnostic Technology Program has been developed by the EPiC Consortium, following the Commission on Accreditation of Allied Health Education Programs' (CAAHEP) Standards and Guidelines for the Accreditation of Educational Programs in Neurodiagnostic Technology. As a member of the EPiC Consortium, Lansing Community College's Neurodiagnostic Technology (EEG) program is CAAHEP accredited. Upon successful completion of the EEG program, graduates will be eligible to take the American Board of Registration in Electroencephalographic (ABRET) exam. Upon passing the ABRET exam, Neurodiagnostic Technologists have earned their R.EEG T.

First semester NDXT courses require Program Approval. Students who are not part of a hospital-based training program must follow the Neurodiagnostic Technology A.A.S. curriculum (#1812). All NDXT courses must be completed with a minimum 2.5 grade to continue in the program and receive this certificate. Students may not progress to the next semester until they have successfully completed all of the courses in the previous sequenced semester.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Health and Human Services Division, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
NDXT 100	Neuroanatomy and Physiology	3 / 0*
NDXT 101	Neurodiagnostic Procedures	3 / 0*
NDXT 102	EEG Applications	3 / 0*
NDXT 120	EEG Pre-Clinical Preparation	3 / 0*
NDXT 130	Principles of EEG	2 / 0*
NDXT 131	Electricity Principles/Safety	1 / 0*
NDXT 132	EEG Instrumentation I	2 / 0*
NDXT 200	EEG Procedures & Pathology I	1 / 0*
NDXT 201	EEG Instrumentation II	2 / 0*
NDXT 202	EEG Quality Control	1 / 0*
NDXT 220	EEG Clinical Practice I	3 / 0*
NDXT 221	EEG Clinical Practice II	3 / 0*
NDXT 230	EEG Procedures & Pathology II	1 / 0*
NDXT 231	EEG Procedures & Pathology III	1 / 0*
NDXT 232	EEG Procedures & Pathology IV	1 / 0*

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

30 credits / 0 billing hours*

*NDXT courses follow the Michigan Workforce Training and Education Collaborative tuition rates, and are not included in billing hours. Please contact the Medical Imaging Program at 517-483-1410 for current tuition rates.

Recommended Course Sequence

Semester I (Fall)
NDXT 100
NDXT 101
NDXT 102
NDXT 120 – Milestone course
Semester II (Spring)
NDXT 130
NDXT 131
NDXT 132 – Milestone course
NDXT 200 – Milestone course
NDXT 201
NDXT 202
NDXT 220
Semester III (Summer)
NDXT 221
NDXT 230
NDXT 231
NDXT 232

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Nursing - PN Option C.A.

Career Community: Health and Human Service Careers

Curriculum Code: 0235

Effective: Fall 2024 – Fall 2025

Description

The Nursing Program at Lansing Community College is nationally accredited by the Accreditation Commission for Education in Nursing, Inc., 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326, 404-975-5000, and is approved by the Michigan Board of Nursing. It utilizes the career ladder concept. The practical nurse program is offered in a 2-year Traditional or 2nd Degree track. The 2nd Degree track is available for students with a bachelor's degree. There are specific prerequisites required for entry into the program. Building on these prerequisites, once admitted a student completing Semester I and Semester II of the program receives a Certificate of Achievement and is eligible to take the national examination for Practical Nurse (PN), which is the National Council Licensing Examination-Practical Nurse (NCLEX-PN).

The Practical Nurse (PN) Program prepares an individual to, with supervision from the Registered Nurse, implement a plan of care for clients in a variety of healthcare settings often working in long-term care. The education and scope of practice of the PN is determined by state law. The student must successfully complete this Certificate of Achievement and the National Council Licensing Examination-Practical Nurse (NCLEX-PN) to practice as a practical nurse.

Milestone

Completion of NURS 201 with a 3.0 or higher, and BIOL 201 and BIOL 202 with a 2.5 or higher, is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

This is a selective admission program. In order to be considered as a candidate for this program, students must meet admission requirements beyond those required for admission to the college. Students are admitted using the Nursing RN Option A.A.S. Pathway (please see curriculum code 0222). All courses required for admission must be completed by the deadlines posted on the Nursing Program website. Students must achieve a minimum grade of 2.5 in each of the courses required for admission to the Nursing Program with the exception of NURS 201, which requires a minimum grade of 3.0. Once admitted, a student may not begin a new semester in the Nursing Program until they have successfully completed all of the NURS courses listed in the previous sequenced semester with a minimum grade of 3.0.

Contact Information

The admission and/or graduation requirements for this program may change each academic year. The program requirements below apply only to those students who have been admitted to the program for the 2024/2025 academic year. For further information, including career options, admission requirements, course substitutions and waivers, etc., contact the Nursing Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, [selective admissions email](#), or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

Program of Study Required Courses for Admission

Course Code	Course Title	Credit / Billing Hours
BIOL 201	Human Anatomy	4 / 6
BIOL 202	Human Physiology	4 / 5
NURS 201	Patient-Centered Care	3 / 3
PFHW 163	Healthy Lifestyles	2 / 3

Program of Study Required Course for Admission, Limited Choice – English

Composition – *Select one. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
ENGL 121	Composition I	4 / 4
ENGL 122	Composition II	4 / 4
ENGL 131	Honors Composition I	4 / 4
ENGL 132	Honors Composition II	4 / 4

Program of Study Required Course for Admission, Limited Choice - Mathematics

– *Select one. (Any course from the General Education Mathematics College Algebra category may also be selected.)*

Course Code	Course Title	Credit / Billing Hours
MATH 119	Math - Applications for Living	4 / 4
STAT 170	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
NURS 211	Intro to Nursing Practice	8 / 13.25
NURS 212	Concepts of Pharmacology	3 / 3.5
NURS 221	Nursing Practice I	6 / 10.75
NURS 222	Childbearing Families	4 / 5.5

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

42 credits / 58 billing hours

Recommended Course Sequence for Admission

Semester I
BIOL 201 – Milestone course
BIOL 202 – Milestone course
NURS 201 – Milestone course
PFHW 163

Semester II
Program of Study Required Course for Admission – English Composition
Program of Study Required Course for Admission – Mathematics

Required Course Sequence

Semester III
NURS 211
NURS 212

Semester IV
NURS 221
NURS 222

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Nursing - RN Option A.A.S.

Career Community: Health and Human Service Careers

Curriculum Code: 0222

Effective Dates: Fall 2024 –Fall 2027

Description

The Nursing Program at Lansing Community College is nationally accredited by the Accreditation Commission for Education in Nursing, Inc., 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326, 404-975-5000, and is approved by the Michigan Board of Nursing. It utilizes the career ladder concept. There are specific prerequisites required for entry into the registered nurse program. The program is offered in a 2-year Traditional or 2nd Degree track. The 2nd Degree track is available for students with a bachelor's degree.

The Registered Nurse (RN) Program prepares the individual to care for clients of all ages in a variety of health care settings. As an essential member of the health care team, the RN is responsible for developing, implementing, and evaluating a plan of care for clients. The RN is required to assist clients in achieving their health goals through effective communication, decision making, problem-solving, management, and technological skills. Registered nurses work in hospitals, clinics, offices, nursing homes, and home health care settings, in addition to schools, research facilities, and community agencies. The education and scope of practice of the RN is determined by state law. The student must successfully complete this program and the National Council Licensing Examination-Registered Nurse (NCLEX-RN) to practice as a registered nurse.

Students admitted in the 2-Year and 2nd Degree tracks will complete Practical Nurse (PN) coursework during the first two semesters of the program. The Practical Nurse (PN) certificate program prepares an individual to, with supervision from the Registered Nurse, implement a plan of care for clients in a variety of healthcare settings often working in long-term care. The education and scope of practice of the PN is determined by state law. The student must successfully complete the Certificate of Achievement and the National Council Licensing Examination-Practical Nurse (NCLEX-PN) to practice as a practical nurse.

Milestone

In addition to the required General Education courses in Math and English, completion of NURS 201 with a 3.0 or higher, and BIOL 201 and BIOL 202 with a 2.5 or higher, is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

This is a selective admission program. In order to be considered as a candidate for this program, students must meet admission requirements beyond those required for admission to the college. All courses listed below for Semesters I and II must be completed by the deadlines posted on the Nursing Program website. Students must achieve a minimum grade of 2.5 in each of the courses required for admission to the Nursing Program with the exception of NURS

201, which requires a minimum grade of 3.0. Once admitted, a student may not begin a new semester in the Nursing Program until they have successfully completed all of the NURS courses listed in the previous sequenced semester with a minimum grade of 3.0.

Contact Information

The admission and/or graduation requirements for this program may change each academic year. The program requirements below apply only to those students who have been admitted to the program for the 2024/2025 academic year. For further information, including career options, admission information, course substitutions and waivers, etc., contact the Nursing Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, [selective admissions email](mailto:selective_admissions@lcc.edu) (selective_admissions@lcc.edu) or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English
Program of Study Required Course for Admissions – English Composition will meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Program of Study Required Course for Admissions – English Composition (second course)/Communication or Applied Communication will meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*
ANTH 271, Medical Anthropology, 3 credits / 3 billing hours
COMM 280, Intercultural Communication, 3 credits / 3 billing hours
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics
Program of Study Required Course for Admission - Mathematics will meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses for Admission will meet this requirement.

Program of Study Required Courses for Admission - BIOL 201 and BIOL 202 will also satisfy the General Education - Natural Sciences Lab or Applied Science and Technology Lab requirement.

Course Code	Course Title	Credit / Billing Hours
BIOL 201	Human Anatomy	4 / 6
BIOL 202	Human Physiology	4 / 5
BIOL 203	Microbiology	3 / 3
NURS 201	Patient-Centered Care	3 / 3
PFHW 163	Healthy Lifestyles	2 / 3

Program of Study Required Course for Admission, Limited Choice – English

Composition – Select one. This course will also satisfy the General Education - English Composition requirement. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.

Course Code	Course Title	Credit / Billing Hours
ENGL 121	Composition I	4 / 4
ENGL 122	Composition II	4 / 4
ENGL 131	Honors Composition I	4 / 4
ENGL 132	Honors Composition II	4 / 4

Program of Study Required Course for Admission, Limited Choice – English

Composition (second course)/Communication or Applied Communication – Select one. This course will also satisfy the General Education - English Composition (second course)/Communication or Applied Communication requirement. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
COMM 240	Interpersonal Communication	3 / 3

Program of Study Required Course for Admission, Limited Choice - Mathematics

– Select one. This course will satisfy the General Education - Mathematics or Applied Mathematics requirement. (Any course from the General Education Mathematics College Algebra category may also be selected.)

Course Code	Course Title	Credit / Billing Hours
MATH 119	Math - Applications for Living	4 / 4
STAT 170	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Recommended Course for Admission

Course Code	Course Title	Credit / Billing Hours
BIOL 204	Microbiology Laboratory	1 / 3

Minimum Total Admission Credit Hours

30 credits / 34 billing hours

Recommended Course Sequence for Admission

(Sequence may be determined based on prerequisites for the courses. To obtain current prerequisite information, search for the course in the Course Description & Required Prerequisites (Course Catalog) link in Banner.)

Semester I
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
BIOL 201 – Milestone course
ENGL 121, 122, 131, or 132
MATH 119, STAT 170, or 215 (or any Gen Ed Mathematics College Algebra course)
PFHW 163

Semester II
BIOL 202 – Milestone course
BIOL 203
BIOL 204 (Recommended)
COMM 110, 120, 130, or 240
NURS 201 – Milestone course

2-Year Track and 2nd Degree Track Pathway

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
NURS 211	Intro to Nursing Practice	8 / 13.25
NURS 212	Concepts of Pharmacology	3 / 3.5
NURS 221	Nursing Practice I	6 / 10.75
NURS 222	Childbearing Families	4 / 5.5
NURS 231	Nursing Practice II	6 / 10
NURS 232	Children and Their Families	4 / 5.5
NURS 241	Nursing Practice III	6 / 11.75
NURS 242	Professional Practice	2 / 2

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

69 credits / 96.25 billing hours (includes Admission requirement credits)

Required Course Sequence for 2-Year Track and 2nd Degree Track

(Sequence may be determined based on prerequisites for the courses. To obtain current prerequisite information, search for the course in the Course Description & Required Prerequisites (Course Catalog) link in Banner.)

Semester III
NURS 211
NURS 212

Semester IV
NURS 221
NURS 222

Semester V
NURS 231
NURS 232

Semester VI
NURS 241
NURS 242

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Paramedic C.A.

Career Community: Health and Human Service Careers

Curriculum Code: 0272

Effective: Fall 2024 – Summer 2026

Description

This certificate is for individuals with a valid State of Michigan EMT License. The program provides education and training for advanced techniques of administering care in life-threatening conditions. Paramedics are employed by advanced life support ambulance services and in emergency departments and critical care units of hospitals. State licensing is required. All Emergency Medical Services courses are approved by the Michigan Department of Health and Human Services. The Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs, 25400 US Highway 19 North, Suite 158, Clearwater, FL 33763, in conjunction with the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions.

Milestone

Completion of PARA 221, PARA 231, PARA 241, PARA 251, and PARA 261 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Registration for PARA 221, PARA 231, PARA 241, PARA 251, and PARA 261 requires Program Approval. The application deadline is July 1. The application, advising guide, and current information regarding program requirements are available through the [LCC EMS webpage](#).

Students may not begin a new semester in the Paramedic Program until they have successfully completed all of the PARA courses listed in the previous semester. To earn the Certificate of Achievement, a grade of 2.5 or above is required in PARA 221, 231, 241, 251 and 261, and a grade of 3.0 or above is required in all other PARA courses.

The BIOL course(s) must be completed with a minimum grade of 2.5 within 8 years of the application deadline and by the end of LCC's Summer semester. The BIOL 201 and 202 option is recommended for transferability into other health care programs and colleges.

Contact Information

The program approval and/or graduation requirements for this program may change each academic year. The program requirements below apply only to those students who begin the program during the 2024-2025 academic year. For further information, including career options, program requirements, course substitutions and waivers, etc., contact the Paramedic Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

Program of Study Required Courses for Admission, Limited Choice – Select BIOL 145 or, BIOL 201 and BIOL 202.

Course Code	Course Title	Credit / Billing Hours
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201 and 202	Human Anatomy and Human Physiology	8 / 11 (total)

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
PARA 221	Paramedic Medical Trauma I	3.75 / 3.75
PARA 222	Paramedic Medical Trauma II	4 / 4
PARA 231	Paramedic Cardiology I	2.5 / 2.5
PARA 232	Paramedic Cardiology II	2.5 / 2.5
PARA 241	Paramedic Pharmacology I	2.5 / 2.5
PARA 242	Paramedic Pharmacology II	2.5 / 2.5
PARA 251	Paramedic Skills I	2.5 / 7.5
PARA 252	Paramedic Skills II	2.5 / 7.5
PARA 261	Paramedic Clinical I	2.5 / 4
PARA 262	Paramedic Clinical II	2.75 / 4
PARA 263	Paramedic Internship	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

36 credits / 50.75 billing hours

Required Course Sequence

Semester I
BIOL 145 or (BIOL 201 and 202)

Semester II (Fall)
PARA 221 – Milestone course
PARA 231 – Milestone course
PARA 241 – Milestone course
PARA 251 – Milestone course
PARA 261 – Milestone course

Semester III (Spring)
PARA 222
PARA 232
PARA 242
PARA 252
PARA 262
Semester IV (Summer)
PARA 263

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Patient Care Technician C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1784

Effective: Fall 2024 – Summer 2025

Description

This certificate curriculum will prepare an individual for employment as a patient care technician in a hospital or other acute care delivery setting. Students will learn the knowledge and skills needed in order to provide safe basic patient care, including basic phlebotomy and EKG. Upon successful completion students are eligible to take the National Certified Patient Care Technician (NCPCT) exam.

Milestone

Completion of CHSE 108 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

Students must complete all courses with a minimum grade of 2.5 to receive this certificate.

Students must enroll in CHSE 151 within one year of completing CHSE 108 with a minimum grade of 2.5, or have current Michigan Certified Nurse Assistant (CNA) Certification.

NCHE 102, AHA BLS Provider CPR, is a co-requisite requirement for CHSE 151. It is a 5-hour non-credit seminar course, which is flat-rated.

Students wishing to pursue an associate degree, should declare the Allied Health A.A.S. major. Courses in this program of study may be applied toward that degree.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Community Health Services Education Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHSE 108	Long-Term Care Nurse Aide	4 / 6.5
CHSE 151	Patient Care Technician	6 / 9.25

Minimum Total Credit Hours

10 credits / 15.75 billing hours

Required Course Sequence

Students follow one of the options listed below, to complete the certificate in one semester or two semesters.

One-Semester Option

Semester I
CHSE 108 – Milestone course
CHSE 151

Two-Semester Option

Semester I
CHSE 108 – Milestone course

Semester II
CHSE 151

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Personal Trainer C.A.

Career Community: Health and Human Service Careers

Curriculum Code: 1705

Effective: Fall 2024 – Summer 2029

Description

After successful completion of this certificate individuals are prepared to take a Personal Trainer Certification Exam by a National Commission for Certifying Agencies (NCCA) accrediting organization, such as American Council on Exercise®(ACE), American College of Sports Medicine®(ACSM), National Academy of Sports Medicine (NASM), or National Strength and Conditioning Association (NCSA). Once the Personal Trainer certification is obtained, individuals are prepared for jobs as a Personal Trainer and are eligible to take the Level 1 Exercise is Medicine® (EIM) credential exam through the American College of Sports Medicine (ACSM). This curriculum is the second certificate in the Kinesiology/Exercise Science Program curriculum. Courses for this certificate may be applied toward the Kinesiology/Exercise Science Associate in Applied Science Degree.

Milestone

In addition to the required Math course, completion of BIOL 145, or BIOL 201 and BIOL 202, with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

All courses must be completed with a minimum 2.0 grade to receive this certificate.

Some courses are offered only once a year. Review the recommended course sequence section of this pathway for course offering timeframes. To complete this certificate in three semesters, students should follow the recommended course sequence.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Kinesiology Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
PFFT 109	Introduction to Fitness	1 / 2
PFHW 163	Healthy Lifestyles	2 / 3
PFKN 106	Group Fitness Instructor Prep	3 / 4
PFKN 170	Foundations of Kinesiology	3 / 3
PFKN 200	Exercise Physiology	3 / 3

Course Code	Course Title	Credit / Billing Hours
PFKN 201	Exercise Physiology Lab	1 / 2
PFKN 208	Biomechanics	3 / 3
PFKN 250	Measurements in Kinesiology	3 / 4
PFKN 260	Growth and Motor Behavior	3 / 3
PFKN 270	Personal Trainer Preparation	4 / 5
PFKN 280	Kinesiology Internship	3 / 3
PFWT 112	Intro to Weight Training	1 / 2

Program of Study Required Courses, Limited Choice – Biology – *Select BIOL 145 or, BIOL 201 and BIOL 202. Students planning to transfer to a four-year institution must take BIOL 201 and 202.*

Course Code	Course Title	Credit / Billing Hours
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201 and 202	Human Anatomy and Human Physiology	8 / 11 (total)

Program of Study Required Courses, Limited Choice – English/Communications – *Select one. Students planning to pursue a bachelor's degree are encouraged to complete ENGL 122.*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
ENGL 122	Composition II	4 / 4

Program of Study Required Courses, Limited Choice – Mathematics – *Select one. Students planning to pursue a bachelor's degree are encouraged to complete a MATH course.*

Course Code	Course Title	Credit / Billing Hours
MATH 120	College Algebra	4 / 4
MATH 126	Precalculus	5 / 5
MATH 151	Calculus I	4 / 4
STAT 170	Introduction to Statistics	4 / 4

Program of Study Required Courses, Limited Choice – Personal Trainer– *Select one*

Course Code	Course Title	Credit / Billing Hours
PFHW 123	Human Nutrition	3 / 3
PFHW 181	Stress Management	1 / 1
PFKN 205	Sport & Exercise Psychology	3 / 3
PFKN 210	Athletic Training Principles	3 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the

[Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

42 credits / 51 billing hours

Recommended Course Sequence

Semester I (Fall)
PFFT 109
PFHW 163
PFKN 170
BIOL 145 or BIOL 201 – Milestone course
Limited Choice – Mathematics

Semester II (Spring)
BIOL 202 (if selected BIOL 201 and 202) – Milestone course
PFKN 106 (Spring offering only)
PFKN 200 (Spring offering only)
PFKN 201 (Spring offering only)
PFKN 250
PFWT 112
Limited Choice – Personal Trainer

Semester III (Fall)
PFKN 208 (Fall offering only)
PFKN 260
PFKN 270 (Fall offering only)
PFKN 280
Limited Choice – English/Communication

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Pharmacy Technician C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1024

Effective: Fall 2024 – Summer 2025

Description

This certificate curriculum is designed to introduce students to the skills necessary for a pharmacy technician position in a hospital or retail pharmacy. Students will be prepared to function with knowledge and accuracy in preparing, dispensing and control of drugs in either setting. Upon successful completion, students are prepared for the technical portion of the Pharmacy Technician Certification Board National Certification Exam. Review of certification and exam requirements, along with additional requirements, will be needed prior to taking the exam.

Milestone

Completion of CHSE 235 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students must complete all courses with a minimum grade of 2.5 to receive this certificate.

Students wishing to pursue an associate degree, should declare the Allied Health A.A.S. major. Courses in this program of study may be applied toward that degree.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Community Health Services Education Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHSE 235	Pharmacy Technician	4 / 4
CHSE 236	Pharmacy Technician Externship	3 / 3

Minimum Total Credit Hours

7 credits / 7 billing hours

Required Course Sequence

Semester I
CHSE 235 – Milestone course
Semester II
CHSE 236

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Philosophy A.A.

Career Community: History, Humanities, and English

Curriculum Code: 0159

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of PHIL 151 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course) or Communication – *Select one*
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
- Humanities and Fine Arts – *Select one, from a discipline other than PHIL*
ENGL 200, Introduction to Literature, 3 credits / 3 billing hours
HIST 211, U.S. History to 1877, 4 credits / 4 billing hours
HIST 212, U.S. History: 1877 to Present, 4 credits / 4 billing hours
RELG 150, Intro to World Religions, 4 credits / 4 billing hours

- Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
STAT 215, Intro to Probability and Stats, 4 credits / 4 billing hours
- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 120, Environmental Science, 4 credits / 6 billing hours
BIOL 125, Introductory Biology, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
GEOG 221, Physical Geography, 4 credits / 4 billing hours
GEOL 221, Physical Geology, 4 credits / 6 billing hours
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours
- Social Sciences – *Select two, each from a different discipline*
ECON 120, Power, Authority and Exchange, 4 credits / 4 billing hours
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
POLS 120, American Political System, 4 credits / 4 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
PHIL 101	Introduction to Philosophy	3 / 3
PHIL 151	Intro to Logic & Critical Think	4 / 4

Program of Study Required Courses, Limited Choice – *Select two*

Course Code	Course Title	Credit / Billing Hours
PHIL 152	Introduction to Ethics	4 / 4
PHIL 211	Philosophy: Ancient & Medieval	4 / 4
PHIL 212	Philosophy: Modern & Contemporary	4 / 4

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for this degree. (For the full list of options, see [AA and AS Degree Electives.](#))*

Course Code	Course Title	Credit / Billing Hours
ARTH 120	Masterpieces of Art & Music	4 / 4
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
ENGL 211	World Literature I	4 / 4
ENGL 212	World Literature II	4 / 4
FREN 121	Elementary French I	4 / 4
FREN 122	Elementary French II	4 / 4
GRMN 121	Elementary German I	4 / 4

Course Code	Course Title	Credit / Billing Hours
GRMN 122	Elementary German II	4 / 4
HUMS 140	Art of Being Human	4 / 4
HUMS 160	Mythology	4 / 4
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
RELG 211	Asian Religions and Traditions	4 / 4
RELG 230	Introduction to Christianity	3 / 3
RELG 232	Introduction to Islam	3 / 3

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Mathematics
MTA Social Sciences
PHIL 101

Semester II
MTA English Comp (second course) or Communication
MTA Natural Sciences
MTA Social Sciences
PHIL 151 – Milestone course

Semester III
MTA Humanities and Fine Arts
MTA Natural Sciences
Limited Choice
Electives as needed for total credits

Semester IV
Limited Choice
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Phlebotomy Technician C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1010

Effective: Fall 2024 – Summer 2026

Description

This certificate curriculum is designed to prepare an individual to function as a phlebotomy technician. It will provide the knowledge, skills, and externship experience that is necessary to safely and skillfully obtain a blood specimen from a patient. A phlebotomist may work in a variety of settings such as hospitals, outpatient labs, physicians' offices, or clinics.

Milestone

Completion of CHSE 143 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the course.

Additional Information

Students must enroll in CHSE 144 within one year of completing CHSE 143 with a minimum grade of 2.5. CHSE 144 must also be completed with a minimum grade of 2.5 to receive this certificate.

Students wishing to pursue an associate degree, should declare the Allied Health A.A.S. major. Courses in this program of study may be applied toward that degree.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Community Health Services Education Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHSE 143	Phlebotomy Technician	2 / 3
CHSE 144	Phlebotomy Externship	4 / 4

Minimum Total Credit Hours

6 credits / 7 billing hours

Required Course Sequence – One-Semester Option

Semester I – Fall or Spring
CHSE 143 – Milestone course
CHSE 144

Required Course Sequence – Two-Semester Option

Semester I
CHSE 143 – Milestone course

Semester II
CHSE 144

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Political Science A.A.

Career Community: Social Sciences

Curriculum Code: 0750

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses Math and English, completion of POLS 120 and POLS 201 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department in the Arts & Sciences Building, Room 2203, telephone number 517-483-1061 or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Social Science Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Social Science Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meet this requirement.
- Mathematics
Social Science Career Community Courses meet this requirement.
- Natural Sciences
Program of Study Required Courses meet this requirement.
- Social Sciences
Social Science Career Community Courses meet this requirement.

Social Science Career Community Courses – *These courses are required for all Social Sciences programs (Anthropology, Political Science, Psychology, and Sociology). Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Central Michigan University choose COMM 130 and STAT 170.
- Eastern Michigan University choose COMM 120 or COMM 130.
- Grand Valley State University (International Relations BA or Political Science BS) choose COMM 130.
- Michigan State University choose COMM 130 and MATH 120.
- University of Michigan Ann Arbor choose ENGL 122 and MATH 120.
- University of Michigan Flint choose ENGL 122 and MATH 120.
- Western Michigan University choose ENGL 122 and STAT 170.

Social Sciences Career Community Courses, Limited Choice – *Select POLS 120 and one other course*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
POLS 120	American Political System	4 / 4
PSYC 200	Introduction to Psychology	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Note: Political Science majors choose POLS 120, and one other course listed above.

Program of Study Required Courses - *Students who have already selected POLS 120 as part of the Career Community above, do not repeat enrollment.*

Course Code	Course Title	Credit / Billing Hours
POLS 120	American Political System	4 / 4
POLS 121	State and Local Government	4 / 4
POLS 201	Intro to Political Science	3 / 3
POLS 260 or POLS 270	Comparative Political Systems International Relations	3 / 3 3 / 3

For future transfer to:

- Central Michigan University (International Relations BS) choose POLS 270.
- Eastern Michigan University (International Affairs BA) Choose POLS 270.
- Grand Valley State University (International Relations BA) choose POLS 270.
- Western Michigan University (Political Science BA) choose POLS 270.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -

Select two courses from two different disciplines, as indicated for each transfer institution. If specific courses are not noted, select any two courses from different disciplines. A course may also be chosen from the list of LCC General Education Transfer, Humanities and Fine Arts courses.

Course Code	Course Title	Credit / Billing Hours
ARTH 120	Masterpieces of Art & Music	4 / 4
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
ARTS 102	2D Design	3 / 4
ENGL 200	Introduction to Literature	3 / 3
ENGL 201	Introduction to Poetry	4 / 4
ENGL 208	Children's Literature	4 / 4
ENGL 211	World Literature I	4 / 4
ENGL 212	World Literature II	4 / 4
ENGL 220	Science Fiction	4 / 4
ENGL 255	American Lit to 1865	4 / 4
ENGL 256	American Lit 1865 to Present	4 / 4
ENGL 260	African-American Literature	4 / 4
ENGL 266	British Lit to 1800	4 / 4
ENGL 267	British Lit 1800 to Present	4 / 4
ENGL 270	Gender and Literature	4 / 4
ENGL 290	Shakespeare	4 / 4
GRMN 121 or GRMN 122 or GRMN 201 or	Elementary German I Elementary German II Intermediate German I	4 / 4 4 / 4 4 / 4

Course Code	Course Title	Credit / Billing Hours
GRMN 202 or JAPN 121 or JAPN 122 or JAPN 201 or JAPN 202 or SPAN 121 or SPAN 122 or SPAN 201 or SPAN 202	Intermediate German II Elementary Japanese I Elementary Japanese II Intermediate Japanese I Intermediate Japanese II Elementary Spanish I Elementary Spanish II Intermediate Spanish I Intermediate Spanish II	4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4
HIST 150	African-American History	4 / 4
HIST 211	U.S. History to 1877	4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4
HIST 214	African History	4 / 4
HIST 215	World History to 1500	4 / 4
HIST 216	World History since 1500	4 / 4
HIST 220	Michigan History	4 / 4
HIST 240	Latin American History	4 / 4
HIST 250	History of Modern Asia	4 / 4
HUMS 140	Art of Being Human	4 / 4
HUMS 160	Mythology	4 / 4
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
MUSC 199	Music Appreciation	3 / 3
MUSC 240	Musical Cultures to 1750	4 / 4
MUSC 241	Musical Cultures 1750-Present	4 / 4
PHIL 101	Introduction to Philosophy	3 / 3
PHIL 151	Intro to Logic & Critical Think	4 / 4
PHIL 152	Introduction to Ethics	4 / 4
PHIL 211	Philosophy: Ancient & Medieval	4 / 4
PHIL 212	Philosophy: Modern & Contempry	4 / 4
PHIL 215	Philosophy of Religion	3 / 3
RELG 150	Intro to World Religions	4 / 4
RELG 210	Comparative Religions	3 / 3
RELG 211	Asian Religions and Traditions	4 / 4
RELG 230	Introduction to Christianity	3 / 3
RELG 232	Introduction to Islam	3 / 3

For future transfer to:

- Eastern Michigan University (International Relations BA) choose HIST 216 and PHIL 151 or 152.
- Grand Valley State University (International Relations BA) choose HIST 216 and RELG 210.
- University of Michigan Flint and Western Michigan University choose one HIST and one PHIL course.

Program of Study Required Courses, Limited Choice – Natural Sciences – *Select 2-3 courses from two different disciplines, including at least one lab course, as indicated for each transfer institution and major. A course may also be chosen from the list of LCC General Education Transfer, Natural Sciences courses.*

Course Code	Course Title	Credit / Billing Hours
ANTH 275	Biological Anthropology	4 / 4
ANTH 280	Forensic Anthropology	3 / 3
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201	Human Anatomy	4 / 6
BIOL 202	Human Physiology	4 / 5
BIOL 203 and BIOL 204	Microbiology Microbiology Laboratory	3 / 3 1 / 3
BIOL 210	Natural Resource Conservation	4 / 6
BIOL 260	Botany	4 / 6
BIOL 265	Zoology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
CHEM 151 and CHEM 161	General Chemistry Lecture I General Chemistry Lab I	4 / 4 1 / 3
CHEM 152 and CHEM 162	General Chemistry Lecture II General Chemistry Lab II	3 / 3 1 / 3
CHEM 182 and CHEM 192	Introductory Organic Chemistry Intro Organic Chem Lab	3 / 3 1 / 3
CHEM 262	Quantitative Analysis	3 / 6
CHEM 272	Organic Chemistry Laboratory	2 / 6
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 121	Physical Science Concepts	4 / 6

Course Code	Course Title	Credit / Billing Hours
ISCI 131	Integrated Physical Science	4 / 6
PFHW 123	Human Nutrition	3 / 3
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5
PHYS 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7

Note: For future transfer to Central Michigan University choose BIOL 120 and any non-BIOL course.

Elective Courses, Recommend Choices – *Select courses as needed to reach the 60 credits required for the degree. See notes below for specific courses for each transfer institution and major. If specific courses are not indicated for your transfer institution, select any Elective courses. Courses already taken for Career Community or Program of Study Required requirements, will not count for Elective credits. (For the full list of options, see [AA and AS Degree Electives.](#))*

Course Code	Course Title	Credit/Billing Hours
ANTH 120	Introduction to Anthropology	3 / 3
ANTH 270	Cultural Anthropology	3 / 3
ANTH 275	Biological Anthropology	4 / 4
ANTH 276	Introduction to Archaeology	3 / 3
ENGL 122 or ENGL 132	Composition II Honors Composition II	4 / 4 4 / 4
GRMN 121 or GRMN 122 or GRMN 201 or GRMN 202 or	Elementary German I Elementary German II Intermediate German I Intermediate German II	4 / 4 4 / 4 4 / 4 4 / 4
JAPN 121 or JAPN 122 or JAPN 201 or JAPN 202 or	Elementary Japanese I Elementary Japanese II Intermediate Japanese I Intermediate Japanese II	4 / 4 4 / 4 4 / 4 4 / 4
SPAN 121 or SPAN 122 or SPAN 201 or SPAN 202	Elementary Spanish I Elementary Spanish II Intermediate Spanish I Intermediate Spanish II	4 / 4 4 / 4 4 / 4 4 / 4
ECON 201	Principles of Economics-Micro	4 / 4
ECON 202	Principles of Economics-Macro	4 / 4
GEOG 120	Introduction to Geography	3 / 3
GEOG 200	World Regional Geography	4 / 4
GEOG 202	Geography of North America	3 / 3
GEOL 222	Historical Geology	4 / 6
POLS 205	Government Internship	3 / 3

Course Code	Course Title	Credit/Billing Hours
POLS 240	Introduction to Public Policy	3 / 3
POLS 250	Campaigns & Elections	3 / 3
POLS 260	Comparative Political Systems	3 / 3
POLS 270	International Relations	3 / 3
PSYC 200	Introduction to Psychology	4 / 4
PSYC 202	Psychology of Personality	3 / 3
PSYC 203	Social Psychology	3 / 3
PSYC 205	Human Growth and Development	3 / 3
PSYC 209	Cognitive Psychology	3 / 3
PSYC 210	Brain and Behavior	3 / 3
PSYC 221	Child Psychology	3 / 3
PSYC 222	Adolescent Psychology	3 / 3
PSYC 250	Abnormal Psychology	3 / 3
SOCL 120	Introduction to Sociology	4 / 4
SOCL 254	Marriage and Family	3 / 3
SOCL 255	Contemporary Social Problems	3 / 3
SOCL 260	Race and Ethnicity	3 / 3
STAT 215	Intro to Probability and Stats	4 / 4

Notes:

POLS 205 is not highly transferrable and therefore should only be selected when students are preparing to transfer to the institutions which will accept the course as noted below.

For future transfer to:

- Central Michigan University (Political Science BS) choose ENGL 122, POLS 205 or POLS 260 or POLS 270, and PSYC 202 and PSYC 203.
- Central Michigan University (International Relations BS) choose ENGL 122, POLS 205 or POLS 270, and PSYC 202 and PSYC 203.
- Eastern Michigan University (Political Science BA and Public and Nonprofit Administration BA) choose ENGL 122 and 3 from POLS 205, POLS 240, POLS 250, and POLS 270.
- Eastern Michigan University (International Affairs BA) choose ENGL 122 and one of the following pairs: ECON 201 and ECON 202, or GEOG 120 and GEOG 200, or 2 courses from the same foreign language: GRMN, JAPN, or SPAN.
- Eastern Michigan University (Public and Nonprofit Administration) choose ENGL 122 and POLS 205, POLS 240, and POLS 250.
- Grand Valley State University (Political Science BS) choose ECON 201 or ECON 202, and POLS 240, POLS 250, and POLS 270.
- Grand Valley State University (International Relations BA) choose ECON 201 or ECON 202, and 4 courses from the same foreign language: GRMN, JAPN, or SPAN.
- Michigan State University (Political Science and Pre-Law) choose POLS 270 and 2 courses from the same foreign language: GRMN, JAPN, or SPAN.
- Michigan State University (Public Policy and World Politics) choose POLS 240 and 2 courses from the same foreign language: GRMN, JAPN, or SPAN.

- University of Michigan Flint choose POLS 205, and POLS 260 or POLS 270, and 2 courses from the same foreign language: GRMN, JAPN, or SPAN.
- Western Michigan University (Political Science and Comparative Politics and International Relations BA) choose POLS 205 and POLS 260, and 2 courses from the same foreign language: GRMN, JAPN, or SPAN.
- Western Michigan University (Public Policy or Public Law BA) choose 2 from POLS 205, POLS 240, and POLS 250, and 2 courses from the same foreign language: GRMN, JAPN, or SPAN.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or 131
POLS 120 – Milestone course
POLS 201 – Milestone course

Semester II
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
MATH 120 or STAT 170
POLS 121
ANTH 270 or PSYC 200 or SOCL 120

Semester III
POLS 260 or POLS 270
Limited Choice – Humanities and Fine Arts
Limited Choice – Natural Sciences
Elective courses as needed for total credits

Semester IV
Limited Choice - Humanities and Fine Arts
Limited Choice - Natural Sciences
Elective courses as needed for total credits

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Powerplant Maintenance Technology A.A.S.

Career Community: Transportation

Curriculum Code: 0745

Effective: Fall 2024 – Summer 2029

Description

Powerplant Maintenance Technicians maintain aircraft in accordance with the Federal Aviation Regulations. Technicians perform inspections, repairs and alterations to aircraft powerplants, propellers and their related systems. In addition, they troubleshoot the operation of induction, cooling, exhaust, fuel metering, ignition, electrical, starting, lubrication propeller and other associated systems. Powerplant maintenance technicians are employed throughout the world maintaining aircraft for major air carriers, commuter airlines, air freight operators, corporate flight departments, fixed base operators and a variety of other specialized aviation businesses. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of AVGM 111, AVGM 112, AVGM 113, and AVGM 114, with a 2.0 or higher is a key component for success in this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional information

Students are required to successfully complete the entire 6 semester program with a 2.0 or higher in each class that includes Basic Aviation Technology and Airframe Maintenance Technology in order to be eligible to test for Federal Aviation Administration (FAA) licensure as an Airframe and Powerplant (A&P) Mechanic. All program courses are offered one time per year and this is a full-time program. Program courses are offered in a required sequence. General Education courses may be taken any time throughout the program.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Aviation Technology Program at the Mason-Jewett Field, 661 Aviation Drive, Mason, telephone number 517-483-1406.

General Education - Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 124, Technical Writing, 3 credits / 3 billing hours
ENGL 127, Business Writing, 3 credits / 3 billing hours

- English Composition (second course)/Communication or Applied Communication – *Select one*
 COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
 COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
 COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
 HUMS 223, The Western World to 1500, 4 credits / 4 billing hours
 HUMS 224, The Western World since 1500, 4 credits / 4 billing hours
 MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
 SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics/Applied Mathematics – *Select one*
 MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
 ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
 BIOL 120, Environmental Science, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AVAF 212	Aircraft Electrical II	4 / 5.75
AVGM 111	Aviation General I	4 / 5
AVGM 112	Aviation General II	6 / 8
AVGM 113	Aviation General III	4 / 5
AVGM 114	Materials and Processes	5 / 7
AVPP 241	Reciprocating Engine	8 / 11.25
AVPP 251	Reciprocating Engine Systems	2 / 2.5
AVPP 253	Reciprocating Ignition Systems	5 / 6.75
AVPP 255	Reciprocating Induction Sys	4 / 5.5
AVPP 257	Aircraft Propeller Systems	4 / 5.5
AVPP 259	Turbine Engine I	4 / 5.5
AVPP 261	Turbine Engine II	4 / 5.5
AVPP 263	Turbine Engine Systems	2 / 2.75
AVPP 265	Powerplant Instruments	2 / 2.5
AVPP 267	Powerplant Certification	1 / 1.5

Minimum Total Credit Hours

76 credits / 98 billing hours

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Required Course Sequence

Semester I (Fall)
AVGM 111 – Milestone course
AVGM 112 – Milestone course
AVGM 113 – Milestone course
AVGM 114 – Milestone course
Semester II (Spring)
Gen Ed – English Composition (second course)/Communication or Applied Communication
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
Semester III (Summer)
AVAF 212
Semester IV (Fall)
AVPP 241
Gen Ed – English Composition or Applied English
Gen Ed – Mathematics or Applied Mathematics
Semester V (Spring)
AVPP 251
AVPP 253
AVPP 255
AVPP 257
AVPP 259
Semester VI (Summer)
AVPP 261
AVPP 263
AVPP 265
AVPP 267

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Powerplant Maintenance Technology C.A.

Career Community: Transportation

Curriculum Code: 1035

Effective: Fall 2024 – Summer 2029

Description

This certificate of achievement enables a non-licensed individual to expand their knowledge of powerplant maintenance practices used to maintain aircraft engines in accordance with the Title 14 Code of Federal Aviation Regulations. While enrolled in this program, students will learn the basic science and technical knowledge necessary to repair and maintain modern aerospace vehicle powerplants. Graduates will have demonstrated technical abilities in the following areas: reciprocating and turbine engine overhaul and repair, ignition and fuel system maintenance and repair, engine electrical system diagnosis and repair, and engine inspections. Completion of this certificate may be applied to the Airframe and Powerplant License provided the student meets the requirements of the Federal Aviation Regulation Part 147.

Milestone

Completion of AVPP 241 and AVPP 259 with a 2.0 or higher is a key component for success in this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Aviation Technology Program at the Mason-Jewett Field, 661 Aviation Drive, Mason, telephone number 517-483-1406.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
AVAF 212	Aircraft Electrical II	4 / 5.75
AVPP 241	Reciprocating Engine	8 / 11.25
AVPP 251	Reciprocating Engine Systems	2 / 2.5
AVPP 253	Reciprocating Ignition Systems	5 / 6.75
AVPP 255	Reciprocating Induction Sys	4 / 5.5
AVPP 257	Aircraft Propeller Systems	4 / 5.5
AVPP 259	Turbine Engine I	4 / 5.5
AVPP 261	Turbine Engine II	4 / 5.5
AVPP 263	Turbine Engine Systems	2 / 2.75
AVPP 265	Powerplant Instruments	2 / 2.5
AVPP 267	Powerplant Certification	1 / 1.5

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

40 credits / 55 billing hours

Required Course Sequence

Semester I (Summer)
AVAF 212
Semester II (Fall)
AVPP 241 – Milestone course
Semester III (Spring)
AVPP 251
AVPP 253
AVPP 255
AVPP 257
AVPP 259 – Milestone course
Semester IV (Summer)
AVPP 261
AVPP 263
AVPP 265
AVPP 267

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Pre-Medical Studies A.S.

Career Community: Science and Mathematics

Curriculum Code: 0754

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of BIOL 127, BIOL 128, CHEM 151, and CHEM 161 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses. Some courses require a higher grade for transfer; it is important to check with the school you are transferring to for their minimum grade requirements.

Contact Information

Contact the Science Department in the Arts and Sciences Building, Room 3203, telephone number 517-483-1092, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education - Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Science and Mathematics Career Community Courses meet this requirement.
- English Composition (second course) or Communication
Science and Mathematics Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meet this requirement.
- Mathematics
Science and Mathematics Career Community Courses meet this requirement.
- Natural Sciences
Science and Mathematics Career Community Courses meet this requirement.
- Social Sciences
Program of Study Required Courses meet this requirement.

Science and Math Career Community Courses – These courses are required for all Science and Math programs. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 127 or	Cell Biology	4 / 6
GEOG 221 or	Physical Geography	4 / 4
GEO 221 or	Physical Geology	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3
COMM 240 or	Interpersonal Communication	3 / 3
COMM 260 or	Nonverbal Communication	3 / 3
ENGL 122 or	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4
ENGL 121 or	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4
MATH 120 or	College Algebra	4 / 4
MATH 126 or	Precalculus	5 / 5
MATH 151	Calculus I	4 / 4

Notes:

Choose BIOL 127 and, MATH 126 or MATH 151 for this degree.

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
CHEM 251	Organic Chemistry Lecture I	4 / 4
CHEM 252	Organic Chemistry Lecture II	4 / 4
CHEM 272	Organic Chemistry Laboratory	2 / 6
MATH 126 or MATH 151	Precalculus Calculus I	5 / 5 4 / 4
PHYS 221	Introductory Physics I	4 / 6

Note: If BIOL 127 and, MATH 126 or MATH 151 were completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -

Select two courses from different disciplines from [LCC General Education, Transfer Degrees \(MTA\), Humanities and Fine Arts](#).

PHIL 151 or PHIL 152 recommended.

Program of Study Required Courses, Limited Choice – Social Sciences- Select two

courses from different disciplines from [LCC General Education, Transfer Degrees \(MTA\), Social Sciences](#).

Program of Study Required Courses, Limited Choice – Select 8 credits

Course Code	Course Title	Credit / Billing Hours
MATH 141	Calculus with Applications	4 / 4
MATH 151	Calculus I	4 / 4
MATH 152	Calculus II	4 / 4
PHYS 222	Introductory Physics II	4 / 6

Elective Courses

Complete courses as needed from the list of [AA and AS Elective Courses](#) to reach the 60-credit minimum for this degree. Courses used to fulfill the requirements above cannot be used as Elective courses. For course selections, speak with an advisor or consult the program website(s) at the institution(s) you are considering for transfer.

Minimum Total Credit Hours

60 credits / 72 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
CHEM 151 – Milestone course
CHEM 161 – Milestone course
MATH 126 or MATH 151

Semester II
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
BIOL 128 – Milestone course
PHYS 221
Limited Choice – Social Sciences

Semester III
BIOL 127 – Milestone course
CHEM 251
Limited Choice - Humanities and Fine Arts
Limited Choice - Social Sciences

Semester IV
CHEM 252
CHEM 272
Limited Choice
Limited Choice
Limited Choice - Humanities and Fine Arts
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Psychology A.A.

Career Community: Social Sciences

Curriculum Code: 0215

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of PSYC 200 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Social Sciences Career Community Courses meet this requirement.
- English Composition (second course) or Communications
Social Sciences Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meet this requirement.
- Mathematics
Social Sciences Career Community Courses meet this requirement.
- Natural Sciences
Program of Study Required Courses meet this requirement.
- Social Sciences
Social Sciences Career Community Courses meet this requirement.

Social Sciences Career Community Courses – *These courses are required for all Social Sciences programs (Anthropology, Political Science, Psychology, and Sociology). Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Central Michigan University choose COMM 120 or COMM 130, and STAT 170.
- Eastern Michigan University choose COMM 120 or COMM 130, and STAT 170.
- Grand Valley State University (Psychology BS or Health Sciences major in preparation for Public Health Master's program) choose COMM 130 and STAT 170.
- Grand Valley State University (Psychology major BA) choose COMM 130 and MATH 120
- Michigan State University choose COMM 130 and MATH 120.
- University of Michigan Flint choose ENGL 122 and MATH 120.
- Western Michigan University choose ENGL 122 and STAT 170.

Social Sciences Career Community Courses, Limited Choices – *Select PSYC 200 and one other course.*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
POLS 120	American Political System	4 / 4
PSYC 200	Introduction to Psychology	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Notes:

For future transfer to Western Michigan University (Psychology or Public Health major) choose PSYC 200 and SOCL 120.

Student considering transfer into a Public Health Administration or Social Work major choose PSYC 200 and SOCL 120.

Program of Study Required Courses – If PSYC 200 was already selected as a Social Sciences Career Community course, do not repeat enrollment.

Course Code	Course Title	Credit / Billing Hours
PSYC 200	Introduction to Psychology	4 / 4
PSYC 202 or PSYC 240	Psychology of Personality Psychology of Human Sexuality	3 / 3 3 / 3
PSYC 203	Social Psychology	3 / 3
PSYC 205 or PSYC 221	Human Growth and Development Child Psychology	3 / 3 3 / 3
PSYC 250	Abnormal Psychology	3 / 3

For future transfer to:

- Central Michigan University, Grand Valley State University, Michigan State University, and University of Michigan Flint choose PSYC 202 and PSYC 205.
- Eastern Michigan University choose PSYC 221 and PSYC 240.
- University of Michigan Flint choose PSYC 240.
- Western Michigan University choose PSYC 205 and PSYC 240.

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -
Select two courses from different disciplines, as indicated for each transfer institution. If specific courses are not noted, select any two courses from different disciplines.

Course Code	Course Title	Credit / Billing Hours
ARTH 120	Masterpieces of Art & Music	4 / 4
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
ARTS 102	2D Design	3 / 4
ENGL 200	Introduction to Literature	3 / 3
ENGL 201	Introduction to Poetry	4 / 4
ENGL 208	Children's Literature	4 / 4
ENGL 211	World Literature I	4 / 4
ENGL 212	World Literature II	4 / 4
ENGL 220	Science Fiction	4 / 4
ENGL 255	American Lit to 1865	4 / 4
ENGL 256	American Lit 1865 to Present	4 / 4
ENGL 260	African-American Literature	4 / 4
ENGL 266	British Lit to 1800	4 / 4
ENGL 267	British Lit 1800 to Present	4 / 4

Course Code	Course Title	Credit / Billing Hours
ENGL 270	Gender and Literature	4 / 4
ENGL 290	Shakespeare	4 / 4
GRMN 121 or GRMN 122 or GRMN 201 or GRMN 202 or JAPN 121 or JAPN 122 or JAPN 201 or JAPN 202 or SPAN 121 or SPAN 122 or SPAN 201 or SPAN 202	Elementary German I Elementary German II Intermediate German I Intermediate German II Elementary Japanese I Elementary Japanese II Intermediate Japanese I Intermediate Japanese II Elementary Spanish I Elementary Spanish II Intermediate Spanish I Intermediate Spanish II	4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4
HIST 150	African-American History	4 / 4
HIST 211	U.S. History to 1877	4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4
HIST 214	African History	4 / 4
HIST 215	World History to 1500	4 / 4
HIST 216	World History since 1500	4 / 4
HIST 220	Michigan History	4 / 4
HIST 240	Latin American History	4 / 4
HIST 250	History of Modern Asia	4 / 4
HUMS 140	Art of Being Human	4 / 4
HUMS 160	Mythology	4 / 4
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
MUSC 199	Music Appreciation	3 / 3
MUSC 240	Musical Cultures to 1750	4 / 4
MUSC 241	Musical Cultures 1750-Present	4 / 4
PHIL 101	Introduction to Philosophy	3 / 3
PHIL 151	Intro to Logic & Critical Think	4 / 4
PHIL 152	Introduction to Ethics	4 / 4
PHIL 211	Philosophy: Ancient & Medieval	4 / 4
PHIL 212	Philosophy: Modern & Contempory	4 / 4
PHIL 215	Philosophy of Religion	3 / 3
RELG 150	Intro to World Religions	4 / 4
RELG 210	Comparative Religions	3 / 3
RELG 211	Asian Religions and Traditions	4 / 4
RELG 230	Introduction to Christianity	3 / 3
RELG 232	Introduction to Islam	3 / 3

For future transfer to:

- Grand Valley State University (Health Sciences major in preparation for Public Health Master's program) choose HIST 211 or HIST 212, and PHIL 151 or PHIL 152.
- Grand Valley State University (Psychology major) choose RELG 210 and one HIST or PHIL course.
- University of Michigan Flint choose PHIL 152 and one course from another discipline.
- Western Michigan University (Public Health major) choose PHIL 152 and RELG 210.

Program of Study Required Courses, Limited Choice – Natural Sciences – *Select 2-3 courses from two different disciplines, including at least one lab course, as indicated for each transfer institution and major. If specific courses are not indicated, select any two courses from two different disciplines.*

Course Code	Course Title	Credit / Billing Hours
ANTH 275	Biological Anthropology	4 / 4
ANTH 280	Forensic Anthropology	3 / 3
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 125	Introductory Biology	4 / 6
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201	Human Anatomy	4 / 6
BIOL 202	Human Physiology	4 / 5
BIOL 203 and BIOL 204	Microbiology Microbiology Laboratory	3 / 3 1 / 3
BIOL 210	Natural Resource Conservation	4 / 6
BIOL 260	Botany	4 / 6
BIOL 265	Zoology	4 / 6
CHEM 125	Basic Chemistry	4 / 4
CHEM 135	Chemistry in Society	4 / 5
CHEM 151 and CHEM 161	General Chemistry Lecture I General Chemistry Lab I	4 / 4 1 / 3
CHEM 152 and CHEM 162	General Chemistry Lecture II General Chemistry Lab II	3 / 3 1 / 3
CHEM 182 and CHEM 192	Introductory Organic Chemistry Intro Organic Chem Lab	3 / 3 1 / 3
CHEM 262	Quantitative Analysis	3 / 6
CHEM 272	Organic Chemistry Laboratory	2 / 6
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 121	Physical Science Concepts	4 / 6

Course Code	Course Title	Credit / Billing Hours
ISCI 131	Integrated Physical Science	4 / 6
PFHW 123	Human Nutrition	3 / 3
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5
PHYS 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7

For future transfer to:

- Central Michigan University (Psychology BS) BIOL 120 and any non-BIOL course.
- Central Michigan University (Public Health major) choose BIOL 145 and any non-BIOL Science course.
- Eastern Michigan University (Public Health) choose BIOL 125 and CHEM 135.
- Grand Valley State University (Health Sciences major in preparation for Public Health Master's program) choose BIOL 145 and CHEM 125.
- Grand Valley State University (Psychology major) choose ANTH 275 or ANTH 280, and one non-ANTH course.
- Michigan State University choose BIOL 121, CHEM 151, and CHEM 161.
- University of Michigan Flint choose BIOL 121 and any non-BIOL Science course.
- Western Michigan University (Public Health major) choose ANTH 275 or ANTH 280, and BIOL 121 or BIOL 145.

Elective Courses, Limited Choices – *Select courses as needed to reach the 60 credits required for the degree. See notes below for specific courses for each transfer institution and major. If specific courses are not listed for your transfer institution, select any Elective courses. Courses already taken for Career Community or Program of Study requirements, will not count for Elective credits. (For the full list of options, see [AA and AS Degree Electives.](#))*

Course Code	Course Title	Credit / Billing Hours
ANTH 120	Introduction to Anthropology	3 / 3
ANTH 270	Cultural Anthropology	3 / 3
ANTH 275	Biological Anthropology	4 / 4
ANTH 276	Introduction to Archaeology	3 / 3
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
EDUC 204	Educational Psychology	3 / 3
ENGL 122 or ENGL 132	Composition II Honors Composition II	4 / 4 4 / 4

Course Code	Course Title	Credit / Billing Hours
GRMN 121 or GRMN 122 or GRMN 201 or GRMN 202 or JAPN 121 or JAPN 122 or JAPN 201 or JAPN 202 or SPAN 121 or SPAN 122 or SPAN 201 or SPAN 202	Elementary German I Elementary German II Intermediate German I Intermediate German II Elementary Japanese I Elementary Japanese II Intermediate Japanese I Intermediate Japanese II Elementary Spanish I Elementary Spanish II Intermediate Spanish I Intermediate Spanish II	4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4
MATH 141	Calculus with Applications	4 / 4
PFHW 123	Human Nutrition	3 / 3
POLS 120	American Political System	4 / 4
POLS 121	State and Local Government	4 / 4
POLS 201	Intro to Political Science	3 / 3
POLS 260	Comparative Political Systems	3 / 3
POLS 270	International Relations	3 / 3
PSYC 175	Psyc of Death: Prep for Living	3 / 3
PSYC 202	Psychology of Personality	3 / 3
PSYC 205	Human Growth and Development	3 / 3
PSYC 209	Cognitive Psychology	3 / 3
PSYC 210	Brain and Behavior	3 / 3
PSYC 222	Adolescent Psychology	3 / 3
SOCL 120	Introduction to Sociology	4 / 4
SOCL 254	Marriage and Family	3 / 3
SOCL 255	Contemporary Social Problems	3 / 3
SOCL 260	Race and Ethnicity	3 / 3

For future transfer to:

- Central Michigan University (Psychology BS) choose ENGL 122 and SOCL 260.
- Central Michigan (Public Health BS) choose BIOL 120 and ENGL 122. If BIOL 120 was completed to meet the Natural Sciences requirement, choose any PSYC course.
- Eastern Michigan University (Psychology major) choose PSYC 222.
- Eastern Michigan University (Public Health major) choose BIOL 120 and ENGL 122.
- Grand Valley State University (Psychology BA) choose a GRMN or JAPN or SPAN course and PSYC 209.
- Grand Valley State University (Health Sciences major in preparation for Public Health Master's program) choose ARTH 211 or ARTH 212, BIOL 121, BIOL 270, and PSYC 209.

- Michigan State University (Psychology major BA) choose a GRMN or JAPN or SPAN course and PSYC 209; (Psychology major BS) choose MATH 141 and PSYC 209.
- University of Michigan Flint (Psychology or Public Health major) choose a GRMN or JAPN or SPAN course and PSYC 202 and PSYC 209.
- Western Michigan University (Psychology major) choose PSYC 209 and SOCL 260.
- Western Michigan University (Public Health major) choose PFHW 123, SOCL 255, and SOCL 260.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
PSYC 200 – Milestone course
Social Sciences Career Community Courses, Limited Choice

Semester II
COMM 120, COMM 130, COMM 200, COMM 240, COMM 260, ENGL 122, or ENGL 132
MATH 120 or STAT 170
PSYC 202 or PSYC 240
PSYC 203

Semester III
PSYC 205 or PSYC 221
Limited Choice - Humanities and Fine Arts
Limited Choice - Natural Sciences
Electives as needed for total credits

Semester IV
PSYC 250
Limited Choice - Humanities and Fine Arts
Limited Choice - Natural Sciences
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Public Service Careers GA

Career Community: Public Service Careers

Curriculum Code: 1848

Effective: Fall 2024 – Summer 2029

Purpose of Major

The Public Service Career Community is right for you if you enjoy helping individuals and communities by providing safety, security, and community service. All of the programs in this pathway offer a path to employment, transfer into a four-year or bachelor's degree program, or both. Programs in this Career Community can lead to immediate work as a corrections officer, digital evidence specialist, firefighter, or police officer.

Milestone

Completion of the required General Education courses in Math and English with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

The Public Service Career Academies are selective admissions programs. Please see an advisor in the Public Service Careers Department office for more information.

If you are interested in the Legal Studies Program, please contact an advisor in the Public Service Career's office, West Campus, Room M127, telephone number 517-483-1507 for more information.

Contact Information

For further information, including about career options, course substitutions and waivers, etc., contact the Public Service Careers, West Campus, Room M127, telephone number 517-483-1507, or Student Services, West Campus, telephone number 517-483-5509.

General Education – Applied Degrees

Select courses as indicated for specific transfer institutions and majors. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category may also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under General Education. A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Career Community Courses meet this requirement.

- Mathematics or Applied Mathematics
Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses meet this requirement.

Career Community Courses

These courses are required for all Public Service Career programs (Criminal Justice and Fire). They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
CJUS 101 or CJUS 131 or FIRE 100	Intro to Criminal Justice Introduction to Corrections Principles Emergency Services	3 / 3 3 / 3 4 / 4
COMM 120 or COMM 130 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition II	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4
MGMT 234 or PSYC 200 or SOCL 120	Diversity in the Workplace Introduction to Psychology Introduction to Sociology	3 / 3 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future major areas:

- Criminal Justice A.A. (Transfer), choose CJUS 101, COMM 130, and SOCL 120.
- Digital Evidence Specialist, choose CJUS 101 and MGMT 234.
- Juvenile Specialization choose CJUS 101 and PSYC 200.
- Corrections choose CJUS 131 and PSYC 200.
- Law Enforcement choose CJUS 101 or CJUS 131, and MGMT 234.
- Fire Science or Fire Science/Basic EMT choose FIRE 100.

Students considering future transfer, choose PSYC 200 or SOCL 120.

Program of Study Required Courses, Limited Choice – Natural Science or Applied Science and Technology Lab – *Select one as indicated for each major and/or transfer institution. If a specific course is not indicated in the notes below, choose any recommended course or choose from [General Education Applied Degrees: Natural Science or Applied Science and Technology Lab](#).*

Course Code	Course Title	Credit / Billing Hours
ANTH 280	Forensic Anthropology	3 / 3
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6

Notes:

- Criminal Justice, BIOL 120 is recommended. (Students not transferring can take ANTH 280 as their Science course.)
- Fire Science or Fire Science/Basic EMT, BIOL 145 is recommended.

Program of Study Required Courses, Limited Choice - *Select 35 credits. Work with an Academic Advisor or Program Advisor to select the most appropriate courses or to select a field-specific major or transfer major that meets your educational and career goals. A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
CITC 287	Cybersecurity Incident Response	3 / 3
CITF 110	Intro Computer Info Systems	3 / 3
CITF 120	Operating Systems Concepts	3 / 3
CITN 280	IT Security Foundations	3 / 3
CJUS 102	Crime Causes and Conditions	3 / 3
CJUS 103	Criminal Law	3 / 3
CJUS 104	Theory of Patrol	3 / 3
CJUS 106	Intro to Juvenile Justice	3 / 3
CJUS 126	Juvenile Offenders/Families	3 / 3
CJUS 133	Juvenile Residential Services	3 / 3
CJUS 134	Probation and Parole	3 / 3
CJUS 135	Legal Issues in Corrections	3 / 3

Course Code	Course Title	Credit / Billing Hours
CJUS 201	Criminal Justice Org/Admin	3 / 3
CJUS 203	Criminal Procedure	3 / 3
CJUS 204	Criminal Investigation	4 / 4
CJUS 207	Digital Evidence/1 st Responder	3 / 3
CJUS 210	Intro to Forensic Science	3 / 3
CJUS 245	Report Writing/Crim Justice	3 / 3
CJUS 250	Correctional Institutions	3 / 3
CJUS 251	Correctional Clients	3 / 3
CJUS 255	Human Relations/Crim Justice	3 / 3
CJUS 272	Local Corrections Academy I	5 / 5
CJUS 273	Local Corrections Academy II	3 / 5
CJUS 286	Juvenile Internship I	3 / 3
COMM 110	Communication in the Workplace	3 / 3
EMTA 101	Basic EMT I	4 / 4
EMTA 102	Basic EMT II	2 / 4
EMTA 103	Basic EMT III	4 / 4
EMTA 104	Basic EMT IV	2 / 4
EMTA 112	Basic EMT Clinical	4 / 4
FIRE 101	MI F.F.T.C. Basic Fire Level I	10 / 14
FIRE 102	MI F.F.T. C. Basic Fire Lev II	6 / 8
FIRE 104	Fire Behavior & Combustion	3 / 3
FIRE 105	Fire/Hydraulics/Water Supply	4 / 4
FIRE 110	Fire Prevention	3 / 3
FIRE 112	Occup Health & Safety/Fire Svc	4 / 4
FIRE 115	Bldg Construction/Fire Protect	4 / 4
FIRE 122	Hazardous Materials Chemistry	4 / 4
FIRE 125	Fire Protection Systems	4 / 4
FIRE 150	Strategy and Tactics	4 / 4
FIRE 210	Fire Investigation I	4 / 4
FIRE 215	Fire Investigation II	3 / 3
FIRE 250	Fire Administration I	4 / 4
FIRE 260	Legal Aspects/Fire Service	4 / 4
FIRE 270	Fire Service Career Developmnt	3 / 3
HUSE 110	Child Abuse and Neglect	3 / 3
HUSE 242	The Family: Addiction/Violence	3 / 3
PFFT 119	Fire Academy Fitness Training	3 / 4
PSYC 202	Psychology of Personality	3 / 3
PSYC 221	Child Psychology	3 / 3
PSYC 250	Abnormal Psychology	3 / 3
SOCL 255	Contemporary Social Problems	3 / 3
SOCL 260	Race and Ethnicity	3 / 3
SOWK 101	Introduction to Social Work	3 / 3

Minimum Total Credit Hours

60 credits / 60 billing hours

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Recommended Course Sequence

College-ready Full-time

Semester I
ACAD 100
CJUS 101 or CJUS 131 or FIRE 100
ENGL 121 or ENGL 131
MGMT 234 or PSYC 200 or SOCL 120
BIOL 120 or BIOL 121 or BIOL 145 or ANTH 280

Semester II
COMM 120 or COMM 130 or ENGL 122 or ENGL 132
MATH 119 or MATH 120 or STAT 170
Limited Choice course for students completing the Public Service Career Community AAS

Semester III
Students who have decided on an academic program within the Public Services Career Community should select that program through the Change of Program request form and follow the coursework outlined for the associated pathway.
Limited Choice course for students completing the Public Service Career Community AAS

Semester IV
Students who have decided on an academic program within the Public Services Career Community should select that program through the Change of Program request form and follow the coursework outlined for the associated pathway.
Limited Choice course for students completing the Public Service Career Community AAS

College-ready Part-time

Semester I
ACAD 100
ENGL 121 or ENGL 131
MATH 119 or MATH 120 or STAT 170
CJUS 101 or CJUS 131 or FIRE 100

Semester II
BIOL 120 or BIOL 121 or BIOL 145 or ANTH 280
COMM 120 or COMM 130 or ENGL 122 or ENGL 132
Limited Choice course(s) for students completing the Public Service Career Community AAS

Semester III (Optional)
MGMT 234 or PSYC 200 or SOCL 120
Limited Choice course for students completing the Public Service Career Community AAS

Semester IV
MGMT 234 or PSYC 200 or SOCL 120 (if no summer enrollment)
Limited Choice course for students completing the Public Service Career Community AAS
Students who have decided on an academic program within the Public Services Career Community should select that program through the Change of Program request form and follow the coursework outlined for the associated pathway.

Semester V
Limited Choice course for students completing the Public Service Career Community AAS

Semester V
Limited Choice course for students completing the Public Service Career Community AAS

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Radiologic Technology A.A.S.

Career Community: Health Careers

Curriculum Code: 0196

Effective: Fall 2024 – Summer 2026

Description

Radiologic technologists, also called radiographers, operate X-ray equipment under the direction of a physician, taking radiographs of internal parts of the body. Most often radiologic technologists are employed in hospitals, clinics and physician offices. Graduates of the program will be eligible for examination by the American Registry of Radiologic Technologists (ARRT). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course. This program is accredited by the Joint Review Committee on Education in Radiologic Technology, 20 N Wacker Drive, Suite 2850, Chicago, IL 60606-3182.

Milestone

In addition to the required General Education courses in Math and English, completion of IRXT 111 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

This is a selective admission program. In order to be considered as a candidate for this program, students must meet basic admission requirements beyond those required for admission to the college. Courses listed below in Semesters I and II must be completed or in progress by the May 1 Radiologic Technology Program admission application deadline. Students must achieve a minimum grade of 2.5 in each of the courses required for admission to the program. Students are admitted for the fall semester only. Once admitted, a student may not begin a new semester in the Radiologic Technology Program until they have successfully completed all of the IRXT courses listed in the previous sequenced semester with a minimum grade of 2.5.

Contact Information

The admission and/or graduation requirements for this program may change each academic year. The program requirements below apply only to those students who have been admitted to the program for the 2024/2025 academic year. For further information, including career options, admission requirements, course substitutions and waivers, etc., contact the Radiologic Technology Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Applied Degrees

Program of Study Required Courses for Admission will meet these requirements.

- English Composition or Applied English
- English Composition (second course)/Communication or Applied Communication
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
- Mathematics or Applied Mathematics
- Natural Sciences Lab or Applied Science and Technology Lab

Program of Study Required Course for Admission

Course Code	Course Title	Credit / Billing Hours
CHSE 117	Health Law and Ethics	2 / 2
CHSE 120	Medical Terminology	4 / 4

Program of Study Required Courses for Admission, Limited Choice – English

Composition or Applied English – *Select one. This course will satisfy the General Education English Composition or Applied English requirement. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
ENGL 121	Composition I	4 / 4
ENGL 122	Composition II	4 / 4
ENGL 131	Honors Composition I	4 / 4
ENGL 132	Honors Composition II	4 / 4

Program of Study Required Courses for Admission, Limited Choice – English

Composition (second course)/Communications – *Select one. This course will satisfy the General Education English Composition (second course)/Communications requirement. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
COMM 240	Interpersonal Communication	3 / 3

Program of Study Required Courses for Admission, Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one. This course will satisfy the General Education Humanities and Fine Arts or Social Sciences or Applied Social Sciences requirement. (Any course from the General Education Humanities and Fine Arts or Social Sciences or Applied Social Sciences may also be selected.) This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
COMM 280	Intercultural Communication	3 / 3
SOCL 120	Introduction to Sociology	4 / 4
SOCL 260	Race and Ethnicity	3 / 3

Program of Study Required Courses for Admission, Limited Choice –

Mathematics – *Select one. This course will satisfy the General Education Mathematics or Applied Mathematics requirement. (Any course from the General Education Mathematics College Algebra category may also be selected.)*

Course Code	Course Title	Credit / Billing Hours
MATH 119	Math - Applications for Living	4 / 4
MATH 120	College Algebra	4 / 4
STAT 170	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Program of Study Required Course for Admission, Limited Choice – Natural

Sciences Lab – *Select BIOL 145 or, BIOL 201 and BIOL 202. This course will satisfy the General Education Natural Sciences Lab or Applied Science and Technology Lab requirement.*

Course Code	Course Title	Credit / Billing Hours
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201 and 202	Human Anatomy and Human Physiology	8 / 11 (total)

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
IRXT 105	Introduction to Imaging	2 / 2
IRXT 111	Radiographic Positioning I	6 / 6
IRXT 112	Radiographic Positioning II	6 / 6
IRXT 116	Patient Care in Radiography	2 / 2.5
IRXT 140	Image Analysis	2 / 2
IRXT 144	Digital Imaging and Exposure	2 / 2
IRXT 170	Clinical Practice I	4 / 4
IRXT 172	Clinical Practice II	6 / 6
IRXT 200	Intro to Radiologic Pathology	2 / 2
IRXT 214	Comprehensive Experience I	6 / 6
IRXT 215	Comprehensive Experience II	6 / 6
IRXT 222	Radiobiology and Protection	2 / 2
IRXT 224	Radiologic Physics	4 / 4
IRXT 280	Radiologic Tech Board Review	2 / 2

Program of Study Recommended Course

Course Code	Course Title	Credit / Billing Hours
IRXT 240	Sectional Anatomy	2 / 2

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

76 credits / 78.5 billing hours

Recommended Course Sequence

Semester I
BIOL 145 or (BIOL 201 and BIOL 202)
COMM 110, 120, 130, or 240
MATH 119, MATH 120, STAT 170, or STAT 215 (or any Gen Ed - Math College Algebra course)

Semester II
CHSE 117
CHSE 120
COMM 280, SOCL 120 or SOCL 260 (or any Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences course)
ENGL 121, 122, 131, or 132

Semester III (Fall)
IRXT 105
IRXT 111 – Milestone course
IRXT 116

Semester IV (Spring)
IRXT 112
IRXT 140
IRXT 144
IRXT 170

Semester V (Summer)
IRXT 172
IRXT 240 (Recommended)

Semester VI (Fall)
IRXT 214
IRXT 222
IRXT 224

Semester VII (Spring)
IRXT 200
IRXT 215
IRXT 280

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Religious Studies A.A.

Career Community: History, Humanities, and English

Curriculum Code: 0751

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of RELG 230 or RELG 232 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course)/Communication – *Select one*
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
- Humanities and Fine Arts
Program of Study Required courses will meet this requirement

- Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
STAT 215, Intro to Probability and Stats, 4 credits / 4 billing hours
- Natural Sciences – *Select two, each from a different discipline, one must be a lab course*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 120, Environmental Science, 4 credits / 6 billing hours
BIOL 125, Introductory Biology, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
GEOG 221, Physical Geography, 4 credits / 4 billing hours
GEOL 221, Physical Geology, 4 credits / 6 billing hours
GEOL 230, Environmental Geology, 4 credits / 6 billing hours
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours
- Social Sciences – *Select two, each from a different discipline*
EDUC 204, Educational Psychology, 3 credits / 3 billing hours
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
PSYC 200, Introduction to Psychology, 4 credits / 4 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
RELG 150	Intro to World Religions	4 / 4
RELG 210	Comparative Religions	3 / 3

Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit / Billing Hours
RELG 230	Introduction to Christianity	3 / 3
RELG 232	Introduction to Islam	3 / 3

Program of Study Required Courses, Limited Choice - Humanities – *Select three*

Course Code	Course Title	Credit / Billing Hours
HUMS 160	Mythology	4 / 4
PHIL 152	Introduction to Ethics	4 / 4
PHIL 215	Philosophy of Religion	3 / 3
RELG 211	Asian Religions and Traditions	4 / 4

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for this degree. (For the full list of options, see [AA and AS Degree Electives](#).)*

Course Code	Course Title	Credit / Billing Hours
ARTH 211	Art History to the Renaissance	4 / 4
HUMS 140	Art of Being Human	4 / 4
HUMS 215	American Cultural Experience	4 / 4
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
HUMS 260	Ancient Egypt	4 / 4
PHIL 101	Introduction to Philosophy	3 / 3
PHIL 151	Intro to Logic and Critical Think	4 / 4
PHIL 211	Philosophy: Ancient & Medieval	4 / 4

Minimum Total Credit Hours

60 credits / 61 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Mathematics
MTA Social Sciences
RELG 150 or 210

Semester II
MTA English Comp (second course)/Communication
MTA Natural Science
MTA Social Science
RELG 230 or 232 – Milestone course

Semester III
MTA Natural Science
Limited Choice
Electives as needed for total credits

Semester IV
Limited Choice
Limited Choice
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Robotics and Automated Technology C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 1605

Effective: Fall 2024 – Summer 2029

Description

A student who completes this certificate will be exposed to the elements of automated systems design and installation needed to obtain employment in various settings including those within the manufacturing and industrial sectors. Students will be able to maintain, troubleshoot, test, and repair modern-day equipment having a technologically diverse design.

Milestone

Completion of ELTE 110 and ELTE 131 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for the ELTE and METS courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
ELTE 131	Machine Controls I	4 / 5
ELTE 132	Control Panel Assembly	2 / 3
MATH 115	Technical Mathematics	4 / 4
METD 150	Industrial Blueprint Reading	3 / 3
METM 108	Machine Tool Operations	4 / 6
METS 125	Intro to Hydraulics/Pneumatics	4 / 6
METS 145	Automated Systems	3 / 4.5
METS 160	Introduction to Robotics	3 / 4.5
TECH 102	General Industry Safety	2 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

33 credits / 45 billing hours

Recommended Course Sequence

Semester I
ELTE 110 – Milestone course
MATH 115
METD 150
METS 160
TECH 102
Semester II
ELTE 131 – Milestone course
ELTE 132 (Second 8 weeks)
METM 108
METS 125
METS 145

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Robotics and Automated Technology C.C.

Career Community: Electrical and Manufacturing

Curriculum Code: 1789

Effective: Fall 2024 – Summer 2029

Description

A student who completes this certificate will have the skills necessary for an entry level position in robotics and automated systems. Students will be able to write and edit programs on industrial robots and repair and maintain fluid power systems.

Milestone

Completion of ELTE 110 and METS 160 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for the ELTE and METS courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
ELTE 131	Machine Controls I	4 / 5
METD 150	Industrial Blueprint Reading	3 / 3
METS 125	Intro to Hydraulics/Pneumatics	4 / 6
METS 160	Introduction to Robotics	3 / 4.5
TECH 102	General Industry Safety	2 / 3

Minimum Total Credit Hours

20 credits / 27.5 billing hours

Recommended Course Sequence

Semester I
ELTE 110 – Milestone course
METS 160 – Milestone course
TECH 102

Semester II
ELTE 131
METD 150
METS 125

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Sales Specialist C.A.

Career Community: Business

Curriculum Code: 0242

Effective: Fall 2024 – Summer 2029

Purpose of Major

Students in this curriculum begin to learn sales skills to enhance their performance on the job. Selling is more than getting a customer to buy a product. It is a system that involves understanding and meeting needs, educating on possibilities, developing lasting relationships, and documenting the sales process in CRM systems. This certificate may help prepare a student for entry-level customer service positions and inbound/outbound for sales and business development jobs. Students may complete this certificate as part of the Marketing Associate of Business degree. Students will gain greater understanding of how sales fits within the promotional Marketing P's.

Milestone

Completion of MKTG 200, with a 2.0 or higher, is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the School of Business, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
BUSN 118	Introduction to Business	3 / 3
CITA 110 or CITF 110	Intro to Microsoft Office Intro Computer Info Systems	3 / 3 3 / 3
COMM 110 or COMM 130	Communication in the Workplace Fundamentals Public Speaking	3 / 3 3 / 3
MGMT 150	Managing Customer Relations	3 / 3
MKTG 119	Mktg/Manage Your Profess Image	3 / 3
MKTG 120	Sales	3 / 3
MKTG 200	Principles of Marketing	3 / 3

Students considering completion of the Field Sales and Marketing Associate of Business degree with future transfer options:

- CITA 110 is preferred for transfer to Oakland University or Northwood University.
- CITF 110 is preferred for transfer to Eastern Michigan University.
- COMM 110 is preferred for transfer to Davenport University.
- COMM 130 is preferred for transfer to Eastern Michigan University, Ferris State University, and Northwood University.

Program of Study Required Courses, Limited Choice – *Select three courses, minimum of nine credits.*

Course Code	Course Title	Credit / Billing Hours
MGMT 200	Creative Thinking for Business	3 / 3
MKTG 130	Retailing	3 / 3
MKTG 140	Principles of Advertising	3 / 3
MKTG 210	Intro to Digital Marketing	3 / 3
MKTG 229	Public Relations	3 / 3
MKTG 235	Marketing Internship	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

30 credits / 30 billing hours

Recommended Course Sequence

Semester I
BUSN 118
CITA 110 or CITF 110
MKTG 120
MKTG 200 – Milestone course
Limited Choice

Semester II
COMM 110 or COMM 130
MGMT 150
MKTG 119
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Science and Mathematics G.A.

Career Community: Science and Mathematics

Curriculum Code: 1831

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree is designed for students interested in pursuing a career in mathematics, engineering, or a broad range of scientific fields. This Career Community includes the following pathways: Biology, Biotechnology, Chemical Technology, Chemistry, Computer Science, Conservation and Sustainability, Engineering-Physics, Geography, Geology, Pre-Medical Studies, and Mathematics. The degree includes a common set of courses applicable to the Science and Mathematics majors listed above and to many transfer institutions. Students beginning college in this degree program are encouraged to work with academic and program advisors throughout their first few semesters of study to determine their specific major area and, if transfer is a goal, the specific requirements of the transfer institution.

Not all courses in this pathway transfer to all colleges.

Milestone

In addition to the required General Education courses in Math and English, completion of CHEM 151 and CHEM 161 with a 2.0 or higher, is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science and Mathematics Department, Arts and Sciences Building, Room 3203, telephone number 517-483-1092.

General Education – Applied Degrees - Recommended Courses

Select courses as indicated for specific transfer institutions and majors. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Science and Mathematics Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Science and Mathematics Career Community Courses meet this requirement.

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Science and Mathematics Career Community courses meet this requirement.
- Mathematics or Applied Mathematics
Science and Mathematics Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Sciences and Technology Lab
Science and Mathematics Career Community Courses meet this requirement.

Science and Mathematics Career Community Courses – *These courses are required for all Science and Mathematics programs. They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
BIOL 127 or	Cell Biology	4 / 6
GEOG 221 or	Physical Geography	4 / 4
GEOL 221 or	Physical Geology	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
CHEM 151	General Chemistry Lecture I	4 / 4
CHEM 161	General Chemistry Lab I	1 / 3
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3
COMM 240 or	Interpersonal Communication	3 / 3
COMM 260 or	Non-Verbal Communication	3 / 3
ENGL 122 or	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4
ENGL 121 or	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4
MATH 120 or	College Algebra	4 / 4
MATH 126 or	Precalculus	5 / 5
MATH 151	Calculus I	4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

In addition to CHEM 151 and CHEM 161, select Science courses as follows:

- Students interested in Biology, Biotechnology, Chemical Technology, Chemistry, Conservation and Sustainability, or Pre-Medical Studies choose BIOL 127.
- Students interested in Computer Science choose BIOL 127 or PHYS 251.
- Students interested in Engineering/Physics or Mathematics choose PHYS 251.
- Students interested in Geography choose GEOG 221.
- Students interested in Geology choose GEOL 221.

Program of Study Required Courses, Limited Choices – Humanities and Fine Arts or Social Sciences or Applied Social Sciences - *Select one from [LCC General Education](#), [Applied Degrees](#), [Humanities and Fine Arts](#) or [Social Sciences](#) or [Applied Social Sciences](#)*

Notes:

Students considering adding Secondary Education Certification in Mathematics or Science in order to teach in Michigan Public Schools are strongly encouraged to select an EDUC course as listed below.

For future transfer (Secondary Education Certification) to:

- Central Michigan University, Ferris State University, or Michigan State University choose EDUC 204.
- Eastern Michigan University, Grand Valley State University, University of Michigan Flint, or Western Michigan University choose EDUC 220.

Program of Study Required Courses – Limited Choices – *Select 32 credits. Work with an Academic Advisor or Program Advisor to select the most appropriate courses or to select a field-specific major or transfer major that meets your educational and career goals. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Humanities and Fine Arts – Select no more than two courses, each from different disciplines, from [LCC General Education](#), [Transfer Degrees \(MTA\)](#), [Humanities and Fine Arts](#).

Social Sciences - Select no more than one course, from a discipline different than what was chosen for the Limited Choice block, from [LCC General Education](#), [Transfer Degrees \(MTA\)](#), [Social Sciences](#).

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
BIOL 203	Microbiology	3 / 3
BIOL 204	Microbiology Laboratory	1 / 3
BIOL 210	Natural Resource Conservation	4 / 6
BIOL 260	Botany	4 / 6

Course Code	Course Title	Credit / Billing Hours
BIOL 265	Zoology	4 / 6
BIOL 270	Human Genetics	3 / 3
BIOL 275	Molecular Biology I	4 / 6
BIOL 276	Molecular Biology II	4 / 6
CHEM 120	Gen Organic & Biological Chem	4 / 4
CHEM 125	Basic Chemistry	4 / 4
CHEM 152	General Chemistry Lecture II	3 / 3
CHEM 162	General Chemistry Lab II	1 / 3
CHEM 182	Introductory Organic Chemistry	3 / 3
CHEM 192	Intro Organic Chem Lab	1 / 3
CHEM 251	Organic Chemistry Lecture I	4 / 4
CHEM 252	Organic Chemistry Lecture II	4 / 4
CHEM 262	Quantitative Analysis	3 / 6
CHEM 272	Organic Chemistry Laboratory	2 / 6
CITF 110	Intro Computer Info Systems	3 / 3
CJUS 210	Intro to Forensic Science	3 / 3
COMM 240	Interpersonal Communication	3 / 3
CPSC 101	Intro to Computer Science	3 / 3
CPSC 131	Numerical Methods and MATLAB	3 / 4
CPSC 230	Algorithms and Computing w/ C++	4 / 4
CPSC 231	Computing and Data Structures	4 / 4
CPSC 260	Computing Science Structures	4 / 4
ECON 120	Power, Authority and Exchange	4 / 4
ECON 202	Principles of Economics-Macro	4 / 4
ENVR 121	Environmental Rules and Regs	3 / 3
ENVR 122	Enviro Sampl & Instrumentation	4 / 6
ENVR 131	Industrial Process Safety	3 / 3
GEOG 120	Introduction to Geography	3 / 3
GEOG 200	World Regional Geography	4 / 4
GEOG 202	Geography of North America	3 / 3
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
GSCI 100	Intro to Geospatial Tech	3 / 3
GSCI 110	Beginning ArcGIS	3 / 5
GSCI 120	Advanced ArcGIS	3 / 5
GSCI 210	Global Positioning Systems	3 / 4
GSCI 240	Cartography in GIS	3 / 4
GSCI 241	Remote Sens/AirPhoto Interpret	3 / 4
ISCI 121	Physical Science Concepts	4 / 6
ISCI 122	Integrated Sci for Education II	4 / 6

Course Code	Course Title	Credit / Billing Hours
ISCI 131	Integrated Physical Science	4 / 6
ISCI 245	S.T.E.M. Workplace Practices	4 / 6
MATH 126	Precalculus	5 / 5
MATH 141	Calculus with Applications	4 / 4
MATH 151	Calculus I	4 / 4
MATH 152	Calculus II	4 / 4
MATH 253	Calculus III	4 / 4
MATH 254	Intro to Differential Equation	4 / 4
MATH 260	Linear Algebra	4 / 4
PHIL 151	Intro to Logic & Critical Think	4 / 4
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5
PHYS 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7
PHYS 260	Statics for Engineers	3 / 3
POLS 120	American Political System	4 / 4
POLS 260	Comparative Political Systems	3 / 3
PSYC 200	Introduction to Psychology	4 / 4
SCIN 287	Science Technology Internship	2-4 / 2-4
SOCL 120	Introduction to Sociology	4 / 4
STAT 170	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 62 billing hours

Recommended Course Sequence

College-ready Full-time

Semester I
ACAD 100 (if waived, substitute Career Community course)
BIOL 127 or GEOG 221 or GEOL 221 or PHYS 251
ENGL 121 or 131
MATH 120 or MATH 126 or MATH 151
Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences

Semester II
Students who have decided on an academic program within the Science and Math Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.
CHEM 151
CHEM 161
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
Limited Choice courses for students completing the Science and Mathematics GA

Semester III
Students who have decided on an academic program within the Science and Math Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.
Limited Choice courses for students completing the Science and Mathematics GA

Semester IV
Limited Choice courses for students completing the Science and Mathematics GA

College-ready Part-time

Semester I
ACAD 100 (if waived, substitute Career Community course)
MATH 120 or MATH 126 or MATH 151
Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences

Semester II
CHEM 151
CHEM 161
ENGL 121 or 131

Semester III (Summer – optional)
Students who have decided on an academic program within the Science and Math Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.
BIOL 127 or GEOG 221 or GEOL 221 or PHYS 251
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132

Semester IV
Students who have decided on an academic program within the Science and Math Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.
BIOL 127 or GEOG 221 or GEOL 221 or PHYS 251 (if no Summer enrollment)
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132 (if no Summer enrollment)
Limited Choice courses for students completing the Science and Mathematics GA

Semester V
Limited Choice courses for students completing the Science and Mathematics GA

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Sign Language Interpreter A.A.A.

Career Community: Communication, Journalism, and Language

Curriculum Code: 0282

Effective: Fall 2024 – Summer 2029

Description

A Sign Language Interpreter is a person specially trained to facilitate communication between the Deaf, DeafBlind, Hard of Hearing, and hearing communities. Employment opportunities may be in educational settings, freelance, or contracted with agencies to provide interpreting services for D/deaf persons. State of Michigan PA 204 of 2007 states that interpreters must possess certification in order to be employed. The State of Michigan regulates all required certifications under Licensing and Regulatory Affairs' (LARA) Bureau of Community and Health Systems (BCHS) and state credential testing is through the Board for Evaluation of Interpreters (BEI). To apply for BEI certification in Michigan, you must have at least an associate degree from an accredited institution and pass a Test of English Proficiency. In addition to BEI certification for the State of Michigan, graduates may also consider taking the Educational Interpreter Performance Assessment (EIPA) for interpreting in educational settings only, or National Interpreter Certification (NIC) for nationally recognized certification. Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution and may also complete coursework for a Communication, Journalism, and Language Enhanced AA, Sign Language Interpreter track, degree. The Enhanced AA option allows students to transfer additional credits toward the Bachelor's degree. Institutions accepting credits from the Enhanced AA, Sign Language Interpreter track, include Gallaudet University and Siena Heights University. Students planning to enroll must meet with a faculty advisor from the Sign Language Interpreter Program.

Milestone

In addition to the required General Education courses in Math and English, completion of SIGN 163, SIGN 167, and SIGN 170 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Entrance to the Interpreter Training Program is granted by passing a screening implemented by the Sign Language Program. Once students have successfully completed, with a minimum 2.0, or are currently enrolled in SIGN 163 (American Sign Language III), SIGN 166 (Fingerspelling), SIGN 167 (Beginning Sign to Voice), and SIGN 170 (Expressive/Receptive ASL), then they are eligible to screen.

To complete this degree, students must receive at least a 2.5 in ALL 200-level SIGN courses and complete 400 practicum hours - 240 hours their second year of the program (sophomore year) and 160 hours their third year of the program (junior year) - while also satisfying the individual category requirements. For questions related to the practicum, please contact the Practicum Supervisor by [email](mailto:signpracticum@star.lcc.edu) (signpracticum@star.lcc.edu).

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Sign Language Interpreter Program, 517-483-5329, signadvising@star.lcc.edu.

General Education – Applied Degrees, Recommended Courses

Select courses as indicated for specific transfer institutions. These courses are preferred General Education courses listed on Transfer Articulation agreements. The recommended courses in each General Education category also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English – *Select one*
Communication, Journalism, and Language Career Community Courses will meet this requirement
- English Composition (second course)/Communication or Applied Communication
Communication, Journalism, and Language Career Community Courses will meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Program of Study Required Courses will meet this requirement
- Mathematics or Applied Mathematics – *Select one*
Communication, Journalism, and Language Career Community Courses will meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
Program of Study Required Courses will meet this requirement

Communications and Language Career Community Courses – *These courses are required for all Communications and Language programs (Communication, Sign Language Interpreter, and World Language). Some courses meet General Education requirements for MTA. A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or	Dynamics of Communication	3 / 3
COMM 130 or	Fundamentals Public Speaking	3 / 3
COMM 200 or	Small Group Communication	3 / 3
COMM 240 or	Interpersonal Communication	3 / 3
COMM 260 or	Nonverbal Communication	3 / 3
ENGL 122 or	Composition II	4 / 4
ENGL 132 or	Honors Composition II	4 / 4

Course Code	Course Title	Credit / Billing Hours
SIGN 160	Intro to the Deaf Community	3 / 3
DMAC 260 or	World Cinema	4 / 4
ENGL 200 or	Introduction to Literature	3 / 3
ENGL 261 or	Creative Writing I	3 / 3
JAPN 121 or	Elementary Japanese I	4 / 4
SIGN 162 or	American Sign Language II	3 / 3
SPAN 121 or	Elementary Spanish I	4 / 4
THEA 110	Introduction to Theater	3 / 3
ENGL 121 or	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4
LING 230 or	Introduction to Linguistics	3 / 3
SIGN 161	American Sign Language I	3 / 3
MATH 119 or	Math – Applications for Living	4 / 4
MATH 120 or	College Algebra	4 / 4
STAT 170	Introduction to Statistics	4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Sign Language Interpreting students must choose SIGN 160, SIGN 161, and SIGN 162.

For future transfer to Gallaudet University, choose MATH 119.

Program of Study Required Courses - *If SIGN 160, SIGN 161, or SIGN 162 were completed as part of the Career Community block, do not repeat enrollment.*

Course Code	Course Title	Credit / Billing Hours
SIGN 160	Intro to the Deaf Community	3 / 3
SIGN 161	American Sign Language I	3 / 3
SIGN 162	American Sign Language II	3 / 3
SIGN 163	American Sign Language III	3 / 3
SIGN 164	American Sign Language IV	3 / 3
SIGN 166	Fingerspelling	3 / 3
SIGN 167	Beginning Sign to Voice	3 / 3
SIGN 170	Expressive/Receptive ASL	3 / 3
SIGN 200	Sign Practicum Seminar	2 / 2
SIGN 240	Intro to Transliterating	3 / 3

Course Code	Course Title	Credit / Billing Hours
SIGN 250	Deaf Culture and History	3 / 3
SIGN 260	Linguistic Principles of ASL	3 / 3
SIGN 263	Intermediate Sign to Voice	3 / 3
SIGN 266	Post-Secondary Interpreting	2 / 2
SIGN 267	Sign Practicum I	3 / 3
SIGN 268	Sign Practicum II	3 / 3
SIGN 270	Advanced Interpreting	3 / 3
SIGN 271	Advanced Sign to Voice	3 / 3
SIGN 293	Principles of Interpreting	3 / 3
SIGN 296	Specialized Interpreting	2 / 2

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts or Social Science or Applied Social Science - *Select one*

Course Code	Course Title	Credit / Billing Hours
COMM 280	Intercultural Communication	3 / 3
SOCL 120	Introduction to Sociology	4 / 4

Program of Study Required Courses, Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab - *Select one as indicated for each transfer institution and major or choose one from LCC General Education, Applied Degrees, Natural Sciences Lab or Applied Sciences and Technology Lab. If a specific course is not indicated, select any course.*

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

Note: For future transfer to Gallaudet University, choose BIOL 145.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

72 credits / 72 billing hours

Recommended Course Sequence

Semester I (Fall)
ACAD 100
ENGL 121 or ENGL 131
SIGN 160
SIGN 161
Limited Choice – Humanities and Fine Arts or Social Science or Applied Social Science

Semester II (Spring)
MATH 119, MATH 120, or STAT 170
SIGN 162
SIGN 166
Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab

Semester III (Summer)
SIGN 163 – Milestone course
SIGN 167 – Milestone course
SIGN 170 – Milestone course

Semester IV (Fall)
SIGN 164
SIGN 200
SIGN 240
SIGN 250 (can be taken semester IV or VII)

Semester V (Spring)
SIGN 260 (can be taken in semester V or VIII)
SIGN 263
SIGN 267

Semester VI (Summer)
SIGN 266
SIGN 268

Semester VII (Fall)
SIGN 250 (can be taken semester IV or VII)
SIGN 270
SIGN 293

Semester VIII (Spring)
SIGN 260 (can be taken semester V or VIII)
SIGN 271
SIGN 296

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Sign Language Interpreter C.A.

Career Community: Communication, Journalism, and Language

Curriculum Code: 0187

Effective: Fall 2024 – Summer 2029

Description

A Sign Language Interpreter is a person specially trained to facilitate communication between the Deaf, DeafBlind, Hard of Hearing, and hearing communities. Employment opportunities may be educational settings, freelance, or contracted with agencies to provide interpreting services for dDeaf persons. State of Michigan PA 204 of 2007 states that interpreters must possess certification in order to be employed. The State of Michigan regulates all required certifications under Licensing and Regulatory Affairs' (LARA) Bureau of Community and Health Systems (BCHS) and state credential testing is through the Board for Evaluation of Interpreters (BEI). To apply for BEI certification in Michigan, you must have at least an associate's degree from an accredited institution and pass a Test of English Proficiency. In addition to BEI certification for the state of Michigan, graduates may also consider taking the Educational Interpreters Performance Assessment (EIPA) for interpreting in educational settings only, or the National Interpreter Certification (NIC) for nationally recognized certification. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course. Students planning to enroll must meet with a faculty advisor from the Sign Language Interpreter Program.

Milestone

Completion of SIGN 163, SIGN 167, and SIGN 170 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Entrance to the Interpreter Training Program is granted by passing a screening implemented by the Sign Language Program. Students are eligible to screen after they have successfully completed, with a minimum 2.0, or are currently enrolled in, SIGN 163 (American Sign Language III), SIGN 166 (Fingerspelling), SIGN 167 (Beginning Sign to Voice), and SIGN 170 (Expressive/Receptive ASL).

Students must receive at least a 2.0 in all 100-level SIGN courses, 2.5 in all 200-level SIGN courses, and complete 240 practicum hours, while also satisfying the individual category requirements, to complete this certificate. For questions related to the practicum, please contact the Practicum Supervisor by [email](mailto:signpracticum@star.lcc.edu) (signpracticum@star.lcc.edu).

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Sign Language Interpreter Program, 517-483-5329 or signadvising@star.lcc.edu.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
SIGN 160	Intro to the Deaf Community	3 / 3
SIGN 161	American Sign Language I	3 / 3
SIGN 162	American Sign Language II	3 / 3
SIGN 163	American Sign Language III	3 / 3
SIGN 164	American Sign Language IV	3 / 3
SIGN 166	Fingerspelling	3 / 3
SIGN 167	Beginning Sign to Voice	3 / 3
SIGN 170	Expressive/Receptive ASL	3 / 3
SIGN 200	Sign Practicum Seminar	2 / 2
SIGN 240	Intro to Transliterating	3 / 3
SIGN 263	Intermediate Sign to Voice	3 / 3
SIGN 266	Post-Secondary Interpreting	2 / 2
SIGN 267	Sign Practicum I	3 / 3
SIGN 268	Sign Practicum II	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

40 credits / 40 billing hours

Recommended Course Sequence

Semester I (Fall)
SIGN 160
SIGN 161

Semester II (Spring)
SIGN 162
SIGN 166

Semester III (Summer)
SIGN 163 – Milestone course
SIGN 167 – Milestone course
SIGN 170 – Milestone course

Semester IV (Fall)
SIGN 164
SIGN 200
SIGN 240

Semester V (Spring)
SIGN 263
SIGN 267

Semester VI (Summer)
SIGN 266
SIGN 268

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Social Sciences G.A.

Career Community: Social Sciences

Curriculum Code: 1842

Effective: Fall 2024 – Summer 2029

Purpose of Major:

This degree is designed for students wishing to work in a field related to Social Sciences, including Public Health Administration. Pathways included in this Career Community are Anthropology, Political Science, Psychology, and Sociology. This degree includes a set of courses common to all majors within the Career Community and the majority of transfer institutions. Students beginning college in this degree program are encouraged to work with academic and program advisors throughout their first few semesters of study to determine their specific major area and transfer institution.

Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution.

Milestones

In addition to the required General Education courses in English and Mathematics, completion of ANTH 270, POLS 120, PSYC 200, and/or SOCL 120 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061 or the Academic Advising Department, Gannon Building – Star Zone, telephone number 517-483-1904.

General Education – Applied Degrees - Recommended Courses

Select courses as indicated for specific transfer institutions and majors. These courses are preferred General Education courses. The recommended courses in each General Education category may also meet Michigan Transfer Agreement (MTA) requirements. If no course is indicated, choose from the list of options under [General Education](#). A minimum grade of 2.0 is required for each General Education course.

- English Composition or Applied English
Social Sciences Career Community Courses meet this requirement.

- English Composition (second course)/Communication or Applied Communication
Social Sciences Career Community Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Social Sciences Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Social Sciences Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Sciences and Technology Lab
Program of Study Required Courses meet this requirement.

Social Sciences Career Community Courses – *These courses are required for all Social Sciences programs (Anthropology, Political Science, Psychology, and Sociology). They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Central Michigan University choose ENGL 122 and STAT 170.
- Eastern Michigan University choose ENGL 122.
- Grand Valley State University (Political Science BS) choose COMM 130 and STAT 170.
- Grand Valley State University (International Relations BA) choose COMM 130 and MATH 120.
- Michigan State University choose COMM 130 and MATH 120.
- University of Michigan Ann Arbor choose ENGL 122 and MATH 120.
- University of Michigan Flint choose ENGL 122 and MATH 120.
- Western Michigan University choose ENGL 122 and STAT 170.

Social Sciences Career Community Courses, Limited Choices – *Choose two courses as noted below*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
POLS 120	American Political System	4 / 4
PSYC 200	Introduction to Psychology	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Notes:

- Anthropology majors choose ANTH 270, and one other course from the list above.
- Political Science majors choose POLS 120, and any other course above.
- Psychology majors choose PSYC 200, and any other course above.
- Students considering transfer into a Public Health Administration or Social Work major choose SOCL 120, and any other course above.
- Sociology majors choose SOCL 120, and any other course above.

Program of Study Required Courses, Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab – *Select one*

Course Code	Course Title	Credit / Billing Hours
ANTH 275	Biological Anthropology	4 / 4
ANTH 280	Forensic Anthropology	3 / 3
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201	Human Anatomy	4 / 6
BIOL 202	Human Physiology	4 / 5
BIOL 203 and BIOL 204	Microbiology Microbiology Laboratory	3 / 3 1 / 3

Course Code	Course Title	Credit / Billing Hours
BIOL 210	Natural Resource Conservation	4 / 6
BIOL 260	Botany	4 / 6
BIOL 265	Zoology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
CHEM 151 and CHEM 161	General Chemistry Lecture I General Chemistry Lab I	4 / 4 1 / 3
CHEM 152 and CHEM 162	General Chemistry Lecture II General Chemistry Lab II	3 / 3 1 / 3
CHEM 182 and CHEM 192	Introductory Organic Chemistry Intro Organic Chem Lab	3 / 3 1 / 3
CHEM 262	Quantitative Analysis	3 / 6
CHEM 272	Organic Chemistry Laboratory	2 / 6
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 121	Physical Science Concepts	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5
PHYS 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7

Program of Study Required Courses, Limited Choices – *Select 31 credits. To satisfy MTA, two should be MTA Humanities and Fine Arts courses from two different disciplines, not to include more than one foreign language course.*

Course Code	Course Title	Credit / Billing Hours
ANTH 120	Introduction to Anthropology	3 / 3
ANTH 271	Medical Anthropology	3 / 3
ANTH 272	Food and Sustainability	3 / 3
ANTH 275	Biological Anthropology	4 / 4
ANTH 276	Introduction to Archaeology	3 / 3
ANTH 280	Forensic Anthropology	3 / 3
ANTH 300	Applied Field Survey Methods	4-8 / 4-8
ARTH 120 or ARTH 211 or ARTH 212 or ARTH 216	Masterpieces of Art & Music Art History to the Renaissance Art Hist from the Renaissance Contemporary Art	4 / 4 4 / 4 4 / 4 4 / 4
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6

Course Code	Course Title	Credit / Billing Hours
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
CHEM 151 and CHEM 161	General Chemistry Lecture I General Chemistry Lab I	4 / 4 1 / 3
COMM 280	Intercultural Communication	3 / 3
ENGL 122 or ENGL 132	Composition II Honors Composition II	4 / 4 4 / 4
ENGL 200 or ENGL 208 or ENGL 211 or ENGL 212 or ENGL 220 or ENGL 255 or ENGL 256 or ENGL 260 or ENGL 266 or ENGL 267 or ENGL 270 or ENGL 290	Introduction to Literature Children's Literature World Literature I World Literature II Science Fiction American Lit to 1865 American Lit 1865 to Present African-American Literature British Lit to 1800 British Lit 1800 to Present Gender and Literature Shakespeare	3 / 3 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4
ECON 201	Principles of Economics-Micro	4 / 4
ECON 202	Principles of Economics-Macro	4 / 4
GEOG 120	Introduction to Geography	3 / 3
GEOG 200	World Regional Geography	4 / 4
GEOG 202	Geography of North America	3 / 3
GEOG 221	Physical Geography	4 / 4
GEOL 222	Historical Geology	4 / 6
GRMN 121 or JAPN 121 or SPAN 121	Elementary German I Elementary Japanese I Elementary Spanish I	4 / 4 4 / 4 4 / 4
GRMN 122 or JAPN 122 or SPAN 122	Elementary German II Elementary Japanese II Elementary Spanish II	4 / 4 4 / 4 4 / 4
HIST 150 or HIST 211 or HIST 212 or HIST 214 or HIST 215 or HIST 216 or HIST 220 or HIST 235 or HIST 240 or HIST 250	African-American History U.S. History to 1877 U.S. History: 1877 to Present African History World History to 1500 World History since 1500 Michigan History Modern European History Latin American History History of Modern Asia	4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4
HONR 151	Honors Colloquy I	1 / 1

Course Code	Course Title	Credit / Billing Hours
HONR 152	Honors Colloquy II	1 / 1
HONR 155	Community Service Practicum I	1 / 1
HONR 156	Community Service Practicum II	1 / 1
HUMS 140 or HUMS 160 or HUMS 223 or HUMS 224	Art of Being Human Mythology The Western World to 1500 The Western World since 1500	4 / 4 4 / 4 4 / 4 4 / 4
PFWH 123	Human Nutrition	3 / 3
PHIL 101 or PHIL 151 or PHIL 152 or PHIL 211	Introduction to Philosophy Intro to Logic & Critical Think Introduction to Ethics Philosophy: Ancient & Medieval	3 / 3 4 / 4 4 / 4 4 / 4
PHYS 120	The Art of Physics	4 / 5
POLS 121	State and Local Government	4 / 4
POLS 201	Intro to Political Science	3 / 3
POLS 205	Government Internship	3 / 3
POLS 240	Introduction to Public Policy	3 / 3
POLS 250	Campaigns & Elections	3 / 3
POLS 260	Comparative Political Systems	3 / 3
POLS 270	International Relations	3 / 3
PSYC 175	Psyc of Death: Prep for Living	3 / 3
PSYC 202	Psychology of Personality	3 / 3
PSYC 203	Social Psychology	3 / 3
PSYC 205	Human Growth and Development	3 / 3
PSYC 209	Cognitive Psychology	3 / 3
PSYC 210	Brain and Behavior	3 / 3
PSYC 221	Child Psychology	3 / 3
PSYC 222	Adolescent Psychology	3 / 3
PSYC 240	Psychology of Human Sexuality	3 / 3
PSYC 250	Abnormal Psychology	3 / 3
RELG 150 or RELG 210 or RELG 230 or RELG 232	Intro to World Religions Comparative Religions Introduction to Christianity Introduction to Islam	4 / 4 3 / 3 3 / 3 3 / 3
SOCL 254	Marriage and Family	3 / 3
SOCL 255	Contemporary Social Problems	3 / 3
SOCL 260	Race and Ethnicity	3 / 3
STAT 170	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
Social Sciences Career Community, Limited Choice, 2 courses
Limited Choice Courses for students completing the Social Sciences GA
Semester II
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
MATH 120 or STAT 170
Limited Choice - Natural Sciences or Applied Sciences and Technology Lab
Limited Choice Courses for students completing the Social Sciences GA
Semester III
Students who have decided on an academic program within the Social Sciences Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway
Limited Choice Courses for students completing the Social Sciences GA
Semester IV
Limited Choice Courses for students completing the Social Sciences GA

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Sociology A.A.

Career Community: Social Sciences

Curriculum Code: 0753

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a baccalaureate degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Milestone

In addition to the required General Education courses in Math and English, completion of SOCL 120 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Sociology/Anthropology Program, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education - Transfer Degrees (MTA), Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Social Sciences Career Community Courses meet this requirement.
- English Composition (second course)/Communication
Social Sciences Career Community Courses meet this requirement.
- Humanities and Fine Arts
Program of Study Required Courses meet this requirement.
- Mathematics
Social Sciences Career Community Courses meet this requirement.
- Natural Sciences
Program of Study Required Courses meet this requirement.
- Social Sciences
Social Sciences Career Community Courses meet this requirement.

Social Sciences Career Community Courses – *These courses are required for all Social Sciences programs (Anthropology, Political Science, Psychology, and Sociology). Some courses meet General Education requirements for Michigan Transfer Agreement (MTA).*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to:

- Central Michigan University choose COMM 130 and STAT 170.
- Eastern Michigan University choose COMM 120 or COMM 130, and STAT 170.
- Grand Valley State University choose COMM 130 and MATH 120.
- Michigan State University choose COMM 130 and MATH 120.
- University of Michigan Flint choose ENGL 122 and MATH 120.
- Western Michigan University choose ENGL 122 and STAT 170.

Social Sciences Career Community Courses, Limited Choices – *Choose SOCL 120 and one other course*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
POLS 120	American Political Systems	4 / 4
PSYC 200	Introduction to Psychology	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Notes:

- Sociology majors choose SOCL 120, and one other course listed above.
- Students considering transfer into a Public Health Administration or Social Work major also choose SOCL 120.

Program of Study Required Courses – Students who have already selected SOCL 120 as part of the Career Community above, do not repeat enrollment.

Course Code	Course Title	Credit / Billing Hours
SOCL 120	Introduction to Sociology	4 / 4
SOCL 254	Marriage and Family	3 / 3
SOCL 255	Contemporary Social Problems	3 / 3
SOCL 260	Race and Ethnicity	3 / 3

Program of Study Required Courses, Limited Choice – Humanities and Fine Arts -
Select two courses from different disciplines, as indicated for each transfer institution. If specific courses are not noted, select any two courses from different disciplines. A course may also be chosen from the list of LCC General Education Transfer, Humanities and Fine Arts courses.

Course Code	Course Title	Credit / Billing Hours
ARTH 120	Masterpieces of Art & Music	4 / 4
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
ARTS 102	2D Design	3 / 4
ENGL 200	Introduction to Literature	3 / 3
ENGL 201	Introduction to Poetry	4 / 4
ENGL 208	Children's Literature	4 / 4
ENGL 211	World Literature I	4 / 4
ENGL 212	World Literature II	4 / 4
ENGL 220	Science Fiction	4 / 4
ENGL 255	American Lit to 1865	4 / 4
ENGL 256	American Lit 1865 to Present	4 / 4
ENGL 260	African-American Literature	4 / 4
ENGL 266	British Lit to 1800	4 / 4
ENGL 267	British Lit 1800 to Present	4 / 4
ENGL 270	Gender and Literature	4 / 4
ENGL 290	Shakespeare	4 / 4
GRMN 121 or GRMN 122 or GRMN 201 or GRMN 202 or	Elementary German I Elementary German II Intermediate German I Intermediate German II	4 / 4 4 / 4 4 / 4 4 / 4
JAPN 121 or JAPN 122 or JAPN 201 or JAPN 202 or	Elementary Japanese I Elementary Japanese II Intermediate Japanese I Intermediate Japanese II	4 / 4 4 / 4 4 / 4 4 / 4

Course Code	Course Title	Credit / Billing Hours
SPAN 121 or SPAN 122 or SPAN 201 or SPAN 202	Elementary Spanish I Elementary Spanish II Intermediate Spanish I Intermediate Spanish II	4 / 4 4 / 4 4 / 4 4 / 4
HIST 150	African-American History	4 / 4
HIST 211	U.S. History to 1877	4 / 4
HIST 212	U.S. History: 1877 to Present	4 / 4
HIST 214	African History	4 / 4
HIST 215	World History to 1500	4 / 4
HIST 216	World History since 1500	4 / 4
HIST 220	Michigan History	4 / 4
HIST 240	Latin American History	4 / 4
HIST 250	History of Modern Asia	4 / 4
HUMS 140	Art of Being Human	4 / 4
HUMS 160	Mythology	4 / 4
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
MUSC 199	Music Appreciation	3 / 3
MUSC 240	Musical Cultures to 1750	4 / 4
MUSC 241	Musical Cultures 1750-Present	4 / 4
PHIL 101	Introduction to Philosophy	3 / 3
PHIL 151	Intro to Logic & Critical Think	4 / 4
PHIL 152	Introduction to Ethics	4 / 4
PHIL 211	Philosophy: Ancient & Medieval	4 / 4
PHIL 212	Philosophy: Modern & Contempory	4 / 4
PHIL 215	Philosophy of Religion	3 / 3
RELG 150	Intro to World Religions	4 / 4
RELG 210	Comparative Religions	3 / 3
RELG 211	Asian Religions and Traditions	4 / 4
RELG 230	Introduction to Christianity	3 / 3
RELG 232	Introduction to Islam	3 / 3

Note: For future transfer to Eastern Michigan University, University of Michigan Flint, and Western Michigan University choose one HIST and one PHIL course.

Program of Study Required Courses, Limited Choice – Natural Sciences – *Select 2-3 courses from two different disciplines, including at least one lab course, as indicated for each transfer institution and major. If specific courses are not indicated, select any two courses from two different disciplines. A course may also be chosen from the list of LCC General Education Transfer, Natural Sciences courses.*

Course Code	Course Title	Credit / Billing Hours
ANTH 275	Biological Anthropology	4 / 4
ANTH 280	Forensic Anthropology	3 / 3
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 125	Introductory Biology	4 / 6
BIOL 127	Cell Biology	4 / 6
BIOL 128	Organismal Biology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201	Human Anatomy	4 / 6
BIOL 202	Human Physiology	4 / 5
BIOL 203 and BIOL 204	Microbiology Microbiology Laboratory	3 / 3 1 / 3
BIOL 210	Natural Resource Conservation	4 / 6
BIOL 260	Botany	4 / 6
BIOL 265	Zoology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
CHEM 151 and CHEM 161	General Chemistry Lecture I General Chemistry Lab I	4 / 4 1 / 3
CHEM 152 and CHEM 162	General Chemistry Lecture II General Chemistry Lab II	3 / 3 1 / 3
CHEM 182 and CHEM 192	Introductory Organic Chemistry Intro Organic Chem Lab	3 / 3 1 / 3
CHEM 262	Quantitative Analysis	3 / 6
CHEM 272	Organic Chemistry Laboratory	2 / 6
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 121	Physical Science Concepts	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PFHW 123	Human Nutrition	3 / 3
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5
PHYS 221	Introductory Physics I	4 / 6
PHYS 222	Introductory Physics II	4 / 6

Course Code	Course Title	Credit / Billing Hours
PHYS 251	Physics I with Calculus	5 / 7
PHYS 252	Physics II with Calculus	5 / 7

Note: For future transfer to Central Michigan University choose ANTH 275 and BIOL 120.

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for this degree. See notes below for specific courses for each transfer institution and major. If specific courses are not indicated for your transfer institution, select any Elective courses. Courses already taken for Career Community or Program of Study requirements, will not count for Elective credits. (For the full list of options, see [AA and AS Degree Electives.](#))*

Course Code	Course Title	Credit / Billing Hours
ANTH 120	Introduction to Anthropology	3 / 3
ANTH 270	Cultural Anthropology	3 / 3
ANTH 275	Biological Anthropology	4 / 4
ANTH 276	Introduction to Archaeology	3 / 3
COMM 280	Intercultural Communication	3 / 3
ENGL 122 or ENGL 132	Composition II Honors Composition II	4 / 4 4 / 4
GRMN 121 or GRMN 122 or GRMN 201 or GRMN 202 or JAPN 121 or JAPN 122 or JAPN 201 or JAPN 202 or SPAN 121 or SPAN 122 or SPAN 201 or SPAN 202	Elementary German I Elementary German II Intermediate German I Intermediate German II Elementary Japanese I Elementary Japanese II Intermediate Japanese I Intermediate Japanese II Elementary Spanish I Elementary Spanish II Intermediate Spanish I Intermediate Spanish II	4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4 4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 222	Historical Geology	4 / 6
POLS 120	American Political System	4 / 4
POLS 121	State and Local Government	4 / 4
POLS 201	Intro to Political Science	3 / 3
POLS 260	Comparative Political Systems	3 / 3
POLS 270	International Relations	3 / 3
PSYC 200	Introduction to Psychology	4 / 4
PSYC 202	Psychology of Personality	3 / 3
PSYC 203	Social Psychology	3 / 3
PSYC 205	Human Growth and Development	3 / 3
PSYC 209	Cognitive Psychology	3 / 3
PSYC 210	Brain and Behavior	3 / 3
PSYC 221	Child Psychology	3 / 3

Course Code	Course Title	Credit / Billing Hours
PSYC 222	Adolescent Psychology	3 / 3
PSYC 250	Abnormal Psychology	3 / 3
STAT 170	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability & Stats	4 / 4

For future transfer to:

- Central Michigan University (BA) choose ENGL 122, and 2 courses from the same foreign language: GRMN, JAPN, or SPAN. (BS) choose ENGL 122 and PSYC 202 and PSYC 203.
- Eastern Michigan University choose COMM 280, ENGL 122, and any Limited Choice.
- Grand Valley State University choose STAT 170 or STAT 215, and any Limited Choice.
- Michigan State University choose GEOG 221, GEOL 222, and STAT 215.
- University of Michigan Flint choose 2 courses from the same foreign language: GRMN, JAPN, or SPAN, and any Limited Choice.
- Western Michigan University choose 2 courses from the same foreign language: GRMN, JAPN, or SPAN, and any Limited Choice.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
ANTH 270, POLS 120, or PSYC 200
SOCL 120 – Milestone course
Semester II
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
MATH 120 or STAT 170
SOCL 255
Semester III
SOCL 254
SOCL 260
Limited Choice - Humanities and Fine Arts
Limited Choice – Natural Sciences
Semester IV
Limited Choice - Humanities and Fine Arts
Limited Choice - Natural Science
Electives as needed for total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Spanish Studies C.C.

Career Community: Communication, Journalism, and Language

Curriculum Code: 1788

Effective: Fall 2024 – Summer 2029

Description

This Certificate of Completion in Spanish Studies provides the beginning and intermediate level Spanish language skills and cross-cultural information for students preparing to transfer to college or university programs, qualifying dual-enrolled high school or home school students, or those seeking to reinforce their own professional Spanish language and cultural competencies. In an increasingly international world economy, holders of this certificate may improve their employment opportunities, in particular since many companies in Spanish-speaking countries have ties to Michigan businesses. Completion of the certificate may also help employment opportunities in the health care services field. Students may apply all courses in this curriculum toward other certificates and/or degrees.

Milestone

Completion of SPAN 121 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course may be the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
SPAN 121	Elementary Spanish I	4 / 4
SPAN 122	Elementary Spanish II	4 / 4
SPAN 201	Intermediate Spanish I	4 / 4
SPAN 202	Intermediate Spanish II	4 / 4

Minimum Total Credit Hours

16 credits / 16 billing hours

Recommended Course Sequence

Semester I
SPAN 121 – Milestone course
Semester II
SPAN 122
Semester III
SPAN 201
Semester IV
SPAN 202

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Sterile Processing Technician C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1017

Effective: Fall 2024 – Summer 2026

Description

This certificate curriculum prepares individuals to function competently in the central service department of a healthcare facility. Duties include, but are not limited to, processing of patient care equipment, supplies, and instruments for use in all departments. Includes principles and practices of decontamination, cleaning, disinfection, sterilization, and distribution of medical/surgical supplies. This curriculum provides externship experience and prepares the successful completer for the National Certification Exam for Sterile Processing and Distribution.

Milestone

Completion of STPR 145 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

Students must complete all courses with a minimum grade of 2.5 to receive this certificate.

Students wishing to pursue an associate degree, should declare the Allied Health A.A.S. major. Courses in this program of study may be applied toward that degree.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Surgical Technology Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
STPR 145	Foundations Sterile Processing	5 / 6.5
STPR 148	Sterile Processing Externship	2 / 2

Minimum Total Credit Hours

7 credits / 8.5 billing hours

Required Course Sequence

Semester I
STPR 145 – Milestone course
STPR 148

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Studio Art A.F.A.

Career Community: Art, Design, and Media

Curriculum Code: 1781

Effective: Fall 2024 – Summer 2029

Description

This degree provides concentrated study in art at the pre-professional level. It is structured to facilitate students' transfer to a four-year university with a professional degree program: the Bachelor of Fine Arts degree, usually a double major in a specific art concentration. Graduates will be well versed to enter any baccalaureate major with an art concentration. Additional education will enhance an individual's employment and advancement opportunities. Not all courses in this degree transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of ARTS 103 and ARTS 131 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
Program of Study Required Courses meets this requirement.

- Mathematics or Applied Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
PHYS 120, The Art of Physics, 4 credits / 5 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ARTH 216	Contemporary Art	4 / 4
ARTS 102	2D Design	3 / 4
ARTS 103	3D Design	3 / 4
ARTS 131	Drawing I	3 / 4
ARTS 132	Figure Drawing	3 / 4
ARTS 151	Color	3 / 4
ARTS 153	Drawing II	3 / 4
ARTS 171	Adobe Photoshop	3 / 4
ARTS 200	Painting I	3 / 4
ARTS 201	Painting II	3 / 4
ARTS 202	Design for Innovation	3 / 4
PHOT 120	Still/Motion Capture & Editing	3 / 3

Program of Study Required Courses, Limited Choice – *Select courses to reach the minimum of 60 credits required for the degree.*

Course Code	Course Title	Credit / Billing Hours
ARTH 211	Art History to the Renaissance	4 / 4
ARTH 212	Art Hist from the Renaissance	4 / 4
ARTS 162	Type Communications	3 / 4
ARTS 164	Digital Illustration	3 / 4
ARTS 173	Web Design I	3 / 4
ARTS 183	Design History	3 / 3
ARTS 195	Employ/Busn Issues for Artists	1 / 1
ARTS 226	Storyboards & Animatics	3 / 4
ARTS 232	Comp Graphics/2D Animation	3 / 4
ARTS 266	Figure Drawing II	3 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 71 billing hours

Recommended Course Sequence

Semester I
Gen Ed - English Composition or Applied English
Gen Ed - English Composition (second course)/ Communication or Applied Communication
ACAD 100
ARTS 102
ARTS 103 – Milestone course
ARTS 131 – Milestone course

Semester II
Gen Ed - Mathematics or Applied Mathematics
Gen Ed - Natural Sciences Lab or Applied Science and Technology Lab
ARTS 151
ARTS 153
ARTS 171

Semester III
ARTH 216
ARTS 132
ARTS 200
PHOT 120

Semester IV
ARTS 201
ARTS 202
Limited Choice as needed for minimum credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Surgical Technology A.A.S.

Career Community: Health and Human Service Careers

Curriculum Code: 1021

Effective: Fall 2024 – Summer 2026

Description

The Surgical Technologist is the person who stands elbow-to-elbow with the surgeon and passes the instruments. It is their job to maintain the sterile field and to respond to the surgeon's needs. The Surgical Technologist prepares the operating room for surgical procedures, prepares all sterile areas and instruments for use, gowns and gloves other personnel, assists with sterile draping of the patient, and hands sterile instrumentation to the surgeon and/or assistant. Surgical Technologists are generally employed by a hospital to work in an operating room. They may also be hired in a surgeon's office, an out-patient clinic, a central processing department, or they may choose to explore sales or teaching. The Surgical Technologist may become certified by successfully passing a national certification examination offered by the National Board for Surgical Technology and Surgical Assisting (NBSTSA®). An Associate Degree in Surgical Technology is strongly recommended by the Association of Surgical Technologists (AST®/1990). This program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP®), 25400 U.S. Highway 19 North, Suite 158, Clearwater, FL 33756, upon the recommendation of the Accreditation Review Committee on Education in Surgical Technology and Surgical Assisting (ARC-STSA®).

Milestone

In addition to the required General Education courses in Math and English, completion of SURG 121 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

This is a selective admission program. In order to be considered as a candidate for this program, students must meet admission requirements beyond those required for admission to the college. All courses listed in Semesters I and II must be completed or in progress by the May 1st Surgical Technology admission application deadline. Students must achieve a minimum grade of 2.5 in BIOL 201, BIOL 202, CHSE 120, CHSE 117 or PFHW 163, and SURG 103 or BIOL 203, and a minimum grade of 2.0 in all other courses. Once admitted, a student may not begin a new semester in the Surgical Technology Program until they have successfully completed all of the SURG courses listed in the previous sequenced semester with a minimum grade of 2.5.

Contact Information

The admission and/or graduation requirements for this program may change each academic year. The program requirements below apply only to those students who have been admitted to the program for the 2024/2025 academic year. For further information, including career options, admission requirements, course substitutions and waivers, etc., contact the Surgical Technology Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English
Program of Study Required Course for Admission – English Composition will meet this requirement
- English Composition (second course)/Communication or Applied Communication
Program of Study Required Course for Admission – English (second course)/Communication will meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
PSYC 200, Introduction to Psychology, 4 credits / 4 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics – *Select one, or any other course from the General Education Mathematics College Algebra category.*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
STAT 215, Intro to Probability and Stats, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses for Admission will meet this requirement.

Program of Study Required Courses for Admission – *BIOL 201 and BIOL 202 also satisfy the General Education Natural Sciences Lab or Applied Science and Technology Lab requirement.*

Course Code	Course Title	Credit / Billing Hours
BIOL 201	Human Anatomy	4 / 6
BIOL 202	Human Physiology	4 / 5
CHSE 120	Medical Terminology	4 / 4

Program of Study Required Courses for Admission, Limited Choice – Select one.

Course Code	Course Title	Credit / Billing Hours
CHSE 117	Health Law and Ethics	2 / 2
PFHW 163	Healthy Lifestyles	2 / 3

Program of Study Required Courses for Admission, Limited Choice – Select one.

Course Code	Course Title	Credit / Billing Hours
BIOL 203	Microbiology	3 / 3
SURG 103	Surgical Asepsis	2 / 2

Program of Study Required Course for Admission, Limited Choice – English

Composition – *Select one. This selection also satisfies the General Education English Composition requirement. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
ENGL 121	Composition I	4 / 4
ENGL 122	Composition II	4 / 4
ENGL 131	Honors Composition I	4 / 4
ENGL 132	Honors Composition II	4 / 4

Program of Study Required Course for Admission, Limited Choice – English

Composition (second course)/Communication or Applied Communication – *Select one. This selection also satisfies the General Education English Composition (second course)/Communication or Applied Communication requirement. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
COMM 240	Interpersonal Communication	3 / 3

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
SURG 100	Fundamentals of Surgical Tech	3 / 3
SURG 101	The Surgical Patient	2 / 2
SURG 108	Surgical Pharmacology	2 / 2
SURG 109	Basic Surgical Procedures	4 / 4
SURG 110	Advanced Surgical Procedures	4 / 4
SURG 111	Surgical Specialty/Prof Prep	4 / 4
SURG 121	Applied Surgical Techniques I	2 / 4
SURG 122	Applied Surgical Techniques II	2 / 4
SURG 123	Applied Surgical Techniq III	4 / 8
SURG 124	Applied Surgical Techniques IV	4 / 8

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

61 credits / 76 billing hours

Recommended Course Sequence for Admission

Semester I
Gen Ed - Mathematics or Applied Mathematics
BIOL 201
CHSE 120
ENGL 121, ENGL 122, ENGL 131, or ENGL 132

Semester II
Gen Ed - Humanities and Fine Arts or Social Sciences or Applied Social Sciences
BIOL 202
BIOL 203 or SURG 103
CHSE 117 or PFHW 163
COMM 110, COMM 120, COMM 130, or COMM 240

Required Course Sequence

Semester III (Fall 2023)
SURG 100
SURG 101
SURG 108
SURG 109
SURG 121 – Milestone course
SURG 122

Semester IV (Spring 2024)
SURG 110
SURG 111
SURG 123
SURG 124

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Surveying and Materials Technology C.C.

Career Community: Building and Construction Trades

Curriculum Code: 1011

Effective: Fall 2024 – Summer 2029

Description

This certificate provides students with basic instruction in surveying and materials testing used in the civil engineering industry. Students will develop skills in operating high-tech survey equipment; using computational software; and determining the properties of density, bituminous, and concrete materials used in construction. Graduates of this curriculum are prepared for entry level work in surveying and materials testing.

Milestone

Completion of CIVL 120 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Civil Technology Program at the West Campus Building, Room M103, telephone number 517-483-5338 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CIVL 101	Civil Drafting	3 / 4
CIVL 110	Density Certification	2 / 2
CIVL 120	Surveying	4 / 6
CIVL 124	Route Survey	4 / 6
CIVL 141	Site Inspection	3 / 3
DCTM 100	Intro to the Built Environment	3 / 4

Minimum Total Credit Hours

19 credits / 25 billing hours

Recommended Course Sequence

Semester I - Fall
CIVL 101
CIVL 120 – Milestone course
DCTM 100

Semester II - Spring
CIVL 110
CIVL 124
CIVL 141

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Teacher Paraprofessional A.A.S.

Career Community: Education

Curriculum Code: 1039

Effective: Fall 2024 – Summer 2029

Description

Teacher Paraprofessionals work under the direction of a classroom teacher in settings ranging from early childhood through elementary, middle school and high school. This curriculum meets federal requirements for teacher paraprofessionals. Some of the duties of the teacher paraprofessional include working with small groups of children on their reading, math, and writing development; collecting and recording data on student performance; using technology for instructional purposes; and carrying out the instructional objectives of the classroom teacher. In addition, the teacher paraprofessional must be able to communicate effectively with parents, students, and teachers; implement behavior management techniques; and recognize a range of special needs.

Milestone

In addition to the required General Education courses in Math and English, completion of EDUC 280 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

Students in this program choose one subspecialty: 1) Early Childhood, 2) Elementary Education, or 3) Special Education, to determine the courses to take each semester. The Early Childhood specialty focuses on children 0-5 years while the Elementary specialty focuses on ages 6-12 years, and the Special Education specialty includes working with those with disabilities 3 years through young adult. This program can also be a first step toward teacher certification. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Upon completion of a subspecialty, any additional subspecialty courses will not count toward the student's enrollment level for determining financial aid eligibility.

Students completing subspecialty requirements for Early Childhood will fulfill the requirements for the Science Core area.

Some transfer universities require a 3.0 or higher in EDUC courses.

CHDV courses require a 2.5 exit grade.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English
Education Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Education Career Community Courses meet this requirement.
For students in the Special Education subspecialty, SIGN 160 also fulfills this requirement and may be substituted for COMM 120, COMM 130, ENGL 122 or ENGL 132 in the Career Community block.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Education Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Education Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technologies Lab
Program of Study Required Courses meet this requirement.

Education Career Community Courses – *These courses are required for all Education (Early Childhood Development, Education, Teacher Paraprofessional). Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.)*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or ENGL 122 or ENGL 132	Dynamics of Communication Fundamentals Public Speaking Composition II Honors Composition II	3 / 3 3 / 3 4 / 4 4 / 4
CHDV 101	Child Growth/Develop: 0-12 Yrs	4 / 4
EDUC 204 or EDUC 220	Educational Psychology Introduction to Education	3 / 3 3 / 3
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or	Math – Applications for Living	4 / 4

Course Code	Course Title	Credit / Billing Hours
MATH 120 or STAT 170	College Algebra Introduction to Statistics	4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

Students following the Early Childhood Subspecialty, select EDUC 204.

For future transfer to:

- Central Michigan University (Pre-K-3, Pre-K-6, or 3-6) choose EDUC 220, ENGL 122 or 132, and MATH 120.
- Eastern Michigan University (Elementary Comprehensive or Early Childhood Comprehensive) choose EDUC 204, ENGL 122 or 132, and MATH 120.
- Ferris State University choose EDUC 220, ENGL 122 or 132, and MATH 120.
- Michigan State University (all Elementary) choose COMM 130, EDUC 204, and MATH 120.
- Grand Valley State University (all Elementary) choose EDUC 204, ENGL 122 or 132, and MATH 120.
- Western Michigan University choose EDUC 220, COMM 130, and MATH 119.

Early Childhood Subspecialty

Program of Study Required Courses – *ISCI 121 also fulfills the Natural Sciences Lab or Applied Science and Technologies Lab requirement.*

Course Code	Course Title	Credit / Billing Hours
CHDV 100	Foundations Early Childhood Ed	3 / 3
CHDV 111	Child Guidance/Communication	4 / 4
CHDV 123	Literacy and Play	1 / 1
EDUC 204	Educational Psychology	3 / 3
EDUC 226	Reading in Elementary School	3 / 3
EDUC 230	Intro to Special Education	3 / 3
EDUC 280	Teacher Education Practicum	3 / 3
ENGL 208	Children's Literature	4 / 4
ISCI 121	Physical Science Concepts	4 / 6

Note: If EDUC 204 was completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – *Select 12 credits.*

Course Code	Course Title	Credit / Billing Hours
CHDV 122	Creativity and Play	1 / 1
CHDV 124	Young Investigators: Math/Sci	1 / 1
CHDV 135	Inclusion for Every Learner	3 / 3
CHDV 215	Infant Toddler Program Dev	4 / 4
CHDV 220	Preschool Curriculum Approach	4 / 4
CHDV 222	Caring for School-Age Children	2 / 2
EDUC 228	Technology in Education	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 62 billing hours

Recommended Course Sequence

Semester I
ACAD 101
CHDV 100
EDUC 204
EDUC 280 – Milestone course
ENGL 121 or ENGL 131
MATH 119 or MATH 120 or STAT 170

Semester II
CHDV 101
CHDV 123
EDUC 230
ENGL 208

Semester III
CHDV 111
COMM 120 or COMM 130 or ENGL 122 or ENGL 132
EDUC 226
ISCI 121

Semester IV
Limited Choice
Limited Choice
Limited Choice
Limited Choice
Limited Choice

Elementary Education Subspecialty

Program of Study Required Courses – *ISCI 121 also fulfills the Natural Sciences Lab or Applied Science and Technologies Lab requirement.*

Course Code	Course Title	Credit / Billing Hours
CHDV 123	Literacy and Play	1 / 1
EDUC 204	Educational Psychology	3 / 3
EDUC 220	Introduction to Education	3 / 3
EDUC 226	Reading in Elementary School	3 / 3
EDUC 228	Technology in Education	3 / 3
EDUC 230	Intro to Special Education	3 / 3
EDUC 280	Teacher Education Practicum	3 / 3
ENGL 208	Children's Literature	4 / 4
ISCI 121	Physical Science Concepts	4 / 6

Note: If EDUC 204 or EDUC 220 were completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – *Select 16 credits. BIOL 125 is recommended for transfer.*

Course Code	Course Title	Credit / Billing Hours
BIOL 125	Introductory Biology	4 / 6
CHDV 111	Child Guidance/Communication	4 / 4
CHDV 230	Early Childhood Program Admin	3 / 3
ENGL 122	Composition II	4 / 4
HIST 211	U.S. History to 1877	4 / 4
LING 230	Introduction to Linguistics	3 / 3
POLS 120	American Political System	4 / 4
PSYC 200	Introduction to Psychology	4 / 4
PSYC 205	Human Growth and Development	3 / 3
SOCL 120	Introduction to Sociology	4 / 4

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 62 billing hours

Recommended Course Sequence

Semester I
ACAD 100
EDUC 204
EDUC 280 – Milestone course
ENGL 121 or ENGL 131
MATH 119 or MATH 120 or STAT 170
Semester II
CHDV 101
CHDV 123
EDUC 220
EDUC 230
Semester III
COMM 120 or COMM 130 or ENGL 122 or ENGL 132
EDUC 226
EDUC 228
ISCI 121
Semester IV
ENGL 208
Limited Choice
Limited Choice
Limited Choice
Limited Choice

Special Education Subspecialty

Program of Study Required Courses – *SIGN 160 also fulfills the English (second course)/Communications or Applied Communications requirement and may be substituted for COMM 120 or COMM 130 or ENGL 122 or ENGL 132 in the Career Community block. ISCI 121 also fulfills the Natural Sciences Lab or Applied Science and Technologies Lab requirement.*

Course Code	Course Title	Credit / Billing Hours
CHDV 123	Literacy and Play	1 / 1
EDUC 204	Educational Psychology	3 / 3
EDUC 220	Introduction to Education	3 / 3
EDUC 226	Reading in Elementary School	3 / 3
EDUC 230	Intro to Special Education	3 / 3
EDUC 280	Teacher Education Practicum	3 / 3
ENGL 208	Children's Literature	4 / 4
ISCI 121	Physical Science Concepts	4 / 6
PFKN 260	Growth and Motor Behavior	3 / 3
PSYC 200	Introduction to Psychology	4 / 4
SIGN 160	Intro to the Deaf Community	3 / 3

Note: If EDUC 204 or EDUC 220 were completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – *Select 9 credits.*

Course Code	Course Title	Credit / Billing Hours
HIST 211	U.S. History to 1877	4 / 4
HUSE 110	Child Abuse and Neglect	3 / 3
POLS 120	American Political System	4 / 4
PSYC 205	Human Growth and Development	3 / 3
PSYC 221	Child Psychology	3 / 3
SIGN 161	American Sign Language I	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

60 credits / 62 billing hours

Recommended Course Sequence

Semester I
ACAD 100
EDUC 204
EDUC 220
EDUC 280 – Milestone course
ENGL 121 or ENGL 131
MATH 119 or MATH 120 or STAT 170

Semester II
CHDV 101
CHDV 123
EDUC 230
ENGL 208

Semester III
EDUC 226
ISCI 121
PSYC 200
SIGN 160

Semester IV
PFKN 260
Limited Choice courses

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Teacher Paraprofessional C.C.

Career Community: Education

Curriculum Code: 0829

Effective: Fall 2024 – Summer 2029

Description

The certificate offers a foundation in educational concepts and a practical introduction to classroom management and content-area instruction. It is intended for students who may have already met federal requirements for teacher paraprofessionals by completing 60 college credits or an associate degree in a field other than education. It is also recommended as preparation for students who plan to take the state-approved exam for paraprofessionals. Courses in this certificate may also be applied toward an associate degree or transfer program leading to teacher certification.

Milestone

Completion of EDUC 280 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

- CHDV courses require a minimum grade of 2.5, all other courses require a 2.0.
- Some transfer universities require a 3.0 or higher in EDUC courses.
- A criminal background check is required for employment in this field.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Social Science and Humanities Department, Arts and Sciences Building, Room 2203, telephone number 517-483-1061, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHDV 123	Literacy and Play	1 / 1
EDUC 226	Reading in Elementary School	3 / 3
EDUC 230	Intro to Special Education	3 / 3
EDUC 280	Teacher Education Practicum	3 / 3

Program of Study Required Courses, Limited Choice - *Select a minimum of three courses and nine credits*

Course Code	Course Title	Credit / Billing Hours
ARTS 240	Art for Elementary Teachers	3 / 4
CHDV 100	Foundations Early Childhood Ed	3 / 3
CHDV 122	Creativity and Play	1 / 1
CHDV 124	Young Investigators: Math/Sci	1 / 1
EDUC 204	Educational Psychology	3 / 3
EDUC 220	Introduction to Education	3 / 3
EDUC 228	Technology in Education	3 / 3
ENGL 208	Children's Literature	4 / 4
GEOG 200	World Regional Geography	4 / 4
ISCI 121	Physical Science Concepts	4 / 6
MATH 201	Math for Elementary Teachers I	4 / 4
MATH 202	Math for Elementary Teacher II	4 / 4

Minimum Total Credit Hours

19 credits / 19 billing hours

Recommended Course Sequence

Semester I
CHDV 123
EDUC 226
EDUC 280 – Milestone course
Limited Choice

Semester II
EDUC 230
Limited Choice
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Theatre A.F.A.

Career Community: Theatre

Curriculum Code: 1849

Effective: Fall 2024 – Summer 2029

Purpose of Major

This degree provides a pathway directly to employment for students wishing to work in the field on completion of the degree and to transfer for students who wish to pursue a Bachelor's degree in this area, either through a Bachelor of Arts degree with a major in a Theatre focus or a Bachelor of Fine Arts degree with a Theatre-focused major. Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for requirements for the Bachelor's degree.

Milestone

In addition to the required General Education courses in Math and English, completion of THEA 110, 120, 131, and 143 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication, Media and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546 or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education - Recommended Courses

Select courses as indicated for specific transfer institutions. If no course is indicated, or students not planning to transfer, select any recommended course. A minimum grade of 2.0 is required for each General Education course.

- English Composition
Theatre Career Community Courses meet this requirement.
- English Composition (second course)/Communication or Applied Communication
Program of Study Required Courses meet this requirement.
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Theatre Career Community Courses meet this requirement.
- Mathematics or Applied Mathematics
Theatre Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Sciences and Technology Lab
Program of Study Required Courses meet this requirement.

Theatre Career Community Courses – *These courses are required. They should be taken before other Program Required or Limited Choice Courses. Some courses meet General Education requirements for Michigan Transfer Agreement (MTA). A minimum of 2.0 is required to meet LCC degree requirements for General Education courses and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.) Select courses as indicated for each transfer institution/major.*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
MATH 119 or MATH 120 or STAT 170	Math – Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4
THEA 110	Introduction to Theatre	3 / 3
THEA 114	Intro to Technical Theatre	3 / 3
THEA 115A or THEA 115B or THEA 115C or THEA 115D	Tech Thea II-Set/Light Design Tech Thea II-Prop Design/Const Tech Thea II-Costume Des/Const Tech Thea II-Produc/Stage Mgmt	2 / 3 2 / 3 2 / 3 2 / 3
THEA 120	Introduction to Acting	2 / 3
THEA 131	Studio Theatre Performance I	1 / 2
THEA 141	Acting I - Contemporary	2.5 / 4
THEA 143	Stage Voice for the Actor	3 / 4
THEA 171	Play Analysis	3 / 3
THEA 173	Movement for the Actor	2 / 3
THEA 181	Improvisation	2.5 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For future transfer to Western Michigan University choose MATH 119 or STAT 170.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
DANC	Any 100-level course	2 / 3
THEA 132	Studio Theatre Performance II	1 / 2
THEA 150	Acting for the Camera	3 / 4
THEA 160	Stage Combat	2 / 3
THEA 210	Theater History	4 / 4
THEA 220	Play Directing	3 / 4
THEA 225	Building a Character	2 / 2
THEA 233	Studio Theatre Performance III	2 / 4
THEA 240	Acting-Shakespeare	3 / 4
THEA 283	Audition Workshop	2 / 3
THEA 285	Stage Makeup	2 / 3

Program of Study Required Courses, Limited Choice

–English Composition (second course)/Communication or Applied

Communication– *Select one as indicated for each transfer institution. If a specific course is not recommended, choose any recommended course.*

Course Code	Course Title	Credit / Billing Hours
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
COMM 200	Small Group Communication	3 / 3
COMM 240	Interpersonal Communication	3 / 3
COMM 260	Nonverbal Communication	3 / 3
ENGL 122 or ENGL 132	Composition II Honors Composition II	4 / 4 4 / 4
SIGN 160	Intro to the Deaf Community	3 / 3

For future transfer to:

- Central Michigan University or Grand Valley State University choose COMM 120 or 130.
- Eastern Michigan University, Ferris State University, and Michigan State University choose COMM 130.
- University of Michigan Flint and Western Michigan University choose ENGL 122 or 132.

Program of Study Required Courses, Limited Choice – Natural Sciences or Applied Sciences and Technology Lab

– *Select one as indicated for each transfer institution. If a specific course is not recommended, choose any recommended course or select from the list: [LCC General Education Applied Degrees: Natural Sciences or Applied Science and Technology Lab](#)*

Course Code	Course Title	Credit / Billing Hours
BIOL 120	Environmental Science	4 / 6
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 145	Intro Anatomy and Physiology	4 / 6

Note: For future transfer to Central Michigan University choose BIOL 120.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

65 credits / 85 billing hours

Recommended Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
THEA 110 – Milestone Course
THEA 114
THEA 120 – Milestone Course
THEA 173
THEA 181

Semester II
MATH 119 or MATH 120 or STAT 170
THEA 115 A or 115B or 115C or 115D
THEA 131 – Milestone Course
THEA 141
THEA 143 – Milestone Course
THEA 171

Semester III
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132 or SIGN 160
DANC (any 100-level DANC course)
THEA 132
THEA 160
THEA 210
THEA 220
THEA 283

Semester IV
THEA 150
THEA 225
THEA 240
THEA 285
Limited Choice, Natural Sciences Lab or Applied Sciences and Technology Lab
Semester V (Summer)
THEA 233

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Transfer Studies A.A.

Curriculum Code: 1779

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a bachelor's degree in one of the subject areas below. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482). Transfer students are strongly encouraged to apply for this certificate along with their degree. General education and subject area requirements may vary from one college or university to another. A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).

Milestone

Completion of the required Math and English courses with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

Prior to beginning this program, students should meet with an academic advisor in the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education - Transfer Degrees (MTA)

Complete a minimum of 30 credits from the [General Education](#) for Transfer Degrees

- English Composition – *Select one course*
- English Composition (second course) or Communication – *Select one course*
- Humanities and Fine Arts – Select two courses, each from a different discipline
- Mathematics – Select one course
- Natural Sciences – Select two courses, each from a different discipline; one must be a lab course
- Social Sciences – Select two courses, each from a different discipline

Program of Study Required Courses – Option A

Select 12 credits from the course codes list below and numbered 120 to 294, unless otherwise indicated below. Credits may come from a combination of these course codes, or a combination of Option A and Option B courses. These courses should be from an area you expect to pursue as a major in your bachelor's degree program. For course selections, speak with an advisor or consult the program website at the institution you are considering for transfer.

- ANTH (except 275, 280)
- ARTH
- COMM
- ECON
- EDUC
- ENGL
- FREN
- GEOG (except 220, 221)
- GRMN
- HIST
- HUMS
- JAPN
- JRNL
- LING
- PHIL
- POLS
- PSYC
- RELG
- SOCL
- SPAN
- THEA

Program of Study Required Courses – Option B

Select 12 credits from the course codes listed below. Credits may come from a combination of these course codes, or a combination of Option A and Option B courses.

- ARTS numbered 102 to 294 (except ARTS 232, 253, 269, and 281)
- CHDV numbered 100, 101, 111, 135, 215, 230, and 284
- CJUS numbered 101, 102, 103, 106, 126, 131, 133, 134, 135, 201, 204, 205, 210, and 288
- MUSC 101-294 and 298 (except MUSC 255)
- SOWK 101

Elective Courses

Complete courses as needed from the list of [AA and AS Elective Courses](#) to reach the 60-credit minimum for this degree. Courses used to fulfill the requirements above cannot be used as Elective courses. For course selections, speak with an advisor or consult the program website at the institution you are considering for transfer.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Mathematics
Program of Study Required Course
Elective
Elective

Semester II
MTA English Comp (second course) or Communication
MTA Natural Sciences
Program of Study Required Course
Elective
Elective

Semester III
MTA Humanities and Fine Arts
MTA Natural Sciences
MTA Social Sciences
Program of Study Required Course
Elective

Semester IV
MTA Humanities and Fine Arts
MTA Social Sciences
Program of Study Required Course (if needed)
Elective (if needed)

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Transfer Studies A.S.

Curriculum Code: 1782

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a bachelor's degree in one of the subject areas below. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan and qualify for an LCC Transfer Studies Certificate of Achievement (1482). Transfer students are strongly encouraged to apply for this certificate along with their degree. General education and subject area requirements may vary from one college or university to another. A minimum of 2.0 is required to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course).

Milestone

Completion of the required Math and English courses with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

Prior to beginning this program, students should meet with an academic advisor in the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education - Transfer Degrees (MTA)

Complete a minimum of 30 credits from the [General Education](#) for Transfer Degrees

- English Composition – *Select one course*
- English Composition (second course) or Communication – *Select one course*
- Humanities and Fine Arts – *Select two courses, each from a different discipline*
- Mathematics – *Select one course*
- Natural Sciences – *Select two courses, each from a different discipline; one must be a lab course*
- Social Sciences – *Select two courses, each from a different discipline*

Program of Study Required Courses – Option A

Select 12 credits from the course codes list below and numbered 120 to 294. Credits may come from a combination of these course codes, or a combination of Option A and Option B courses. These courses should be from an area you expect to pursue as a major in your bachelor's degree program. For course selections, speak with an advisor or consult the program website at the institution you are considering for transfer.

- ASTR
- BIOL
- CHEM
- CITN
- CPSC
- GEOL
- ISCI
- PHYS
- STAT

Program of Study Required Courses – Option B

Select 12 credits from the course codes listed below. Credits may come from a combination of these course codes, or a combination of Option A and Option B courses.

- ANTH 275 and 280
- CITP courses numbered 110, 130, 150, 180, 190, 230, 235, 250, 280, and 290
- GEOG 220 and 221
- MATH courses numbered 119 to 294
- PFKN courses numbered 170, 200, 205, 208, 210, 250, and 260
- PFHW 123

Elective Courses

Complete courses as needed from the list of [AA and AS Elective Courses](#) to reach the 60-credit minimum for this degree. Courses used to fulfill the requirements above cannot be used as Elective courses. For course selections, speak with an advisor or consult the program website(s) at the institution(s) you are considering for transfer.

Minimum Total Credit Hours

60 credits / 60 billing hours

Recommended Course Sequence

Semester I
MTA English Composition
MTA Mathematics
Program of Study Required Course
Elective
Elective

Semester II
MTA English Composition (second course) or Communication
MTA Natural Sciences
Program of Study Required Course
Elective
Elective

Semester III
MTA Humanities and Fine Arts
MTA Natural Sciences
MTA Social Sciences
Program of Study Required Course
Elective

Semester IV
MTA Humanities and Fine Arts
MTA Social Sciences
Program of Study Required Course (if needed)
Elective(s) as needed for the total credits

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Transfer Studies C.A.

Curriculum Code: 1482

Effective: Fall 2024 – Summer 2029

Description

This degree is designed for students who intend to transfer to a four-year college or university to pursue a bachelor's degree in this subject area. Students completing this curriculum will also satisfy the Michigan Transfer Agreement (MTA) between two-year and four-year institutions in Michigan.

Milestone

Completion of the English and Math courses with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

Prior to beginning this program, students should meet with an academic advisor in the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

General Education – Transfer (MTA) Courses, Recommended Choices

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
- English Composition (second course) or Communication – *Select one*
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
COMM 120, Dynamics of Communication, 3 credits / 3 billing hours
COMM 130, Fundamentals Public Speaking, 3 credits / 3 billing hours
- Humanities and Fine Arts – *Select two, each from a different discipline*
ARTH 211, Art History to the Renaissance, 4 credits / 4 billing hours
ARTH 212, Art Hist from the Renaissance, 4 credits / 4 billing hours
ENGL 211, World Literature I, 4 credits / 4 billing hours
ENGL 212, World Literature II, 4 credits / 4 billing hours
HIST 211, U.S. History to 1877, 4 credits / 4 billing hours
HIST 212, U.S. History: 1877 to Present, 4 credits / 4 billing hours
HUMS 223, The Western World to 1500, 4 credits / 4 billing hours
HUMS 224, The Western World since 1500, 4 credits / 4 billing hours
PHIL 151, Intro to Logic & Critical Think, 4 credits / 4 billing hours
RELG 150, Intro to World Religions, 4 credits / 4 billing hours
SPAN 121, Elementary Spanish I, 4 credits / 4 billing hours

- Mathematics – *Select one*
MATH 119, Math - Applications for Living, 4 credits / 4 billing hours
MATH 120, College Algebra, 4 credits / 4 billing hours
MATH 126, Precalculus, 5 credits / 5 billing hours
STAT 170, Introduction to Statistics, 4 credits / 4 billing hours
STAT 215, Intro to Probability and Stats, 4 credits / 4 billing hours
- Natural Sciences – *Select two, each from a different discipline; one must be a **lab** course*
ASTR 201, Introductory Astronomy, 4 credits / 5 billing hours
BIOL 120, Environmental Science, 4 credits / 6 billing hours
BIOL 125, Introductory Biology, 4 credits / 6 billing hours
BIOL 127, Cell Biology, 4 credits / 6 billing hours
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours
CHEM 151 and **161**, General Chemistry I Lecture/Lab, 5 credits / 7 billing hours
GEOG 221, Physical Geography, 4 credits / 4 billing hours
GEOL 221, Physical Geology, 4 credits / 6 billing hours
GEOL 230, Environmental Geology, 4 credits / 6 billing hours
ISCI 131, Integrated Physical Science, 4 credits / 6 billing hours
PFHW 123, Human Nutrition, 3 credits / 3 billing hours
PHYS 120, The Art of Physics, 4 credits / 5 billing hours
PHYS 251, Physics I with Calculus, 5 credits / 7 billing hours
- Social Sciences – *Select two, each from a different discipline*
ANTH 270, Cultural Anthropology, 3 credits / 3 billing hours
ECON 120, Power, Authority and Exchange, 4 credits / 4 billing hours
ECON 201, Principles of Economics - Micro, 4 credits / 4 billing hours
GEOG 200, World Regional Geography, 4 credits / 4 billing hours
POLS 120, American Political System, 4 credits / 4 billing hours
PSYC 200, Introduction to Psychology, 4 credits / 4 billing hours
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours

Minimum Total Credit Hours

33 credits / 33 billing hours

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for this Certificate of Achievement may select any course(s) from the [General Education Transfer Degrees \(MTA\)](#) to reach the 30 credits. Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Recommended Course Sequence

Semester I
MTA English Composition
MTA Mathematics
MTA Natural Sciences
Semester II
MTA English Composition (second course) or Communication
MTA Humanities and Fine Arts
MTA Social Sciences
Semester III
MTA Humanities and Fine Arts
MTA Natural Sciences
MTA Social Sciences

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Ultrasound: Diagnostic Medical Sonography A.A.S.

Career Community: Health and Human Service Careers

Curriculum Code: 0790

Effective: Summer 2024 – Summer 2026

Description

A Diagnostic Medical Sonographer provides patient services in a variety of medical settings using medical ultrasound under the supervision of a physician. Sonographers assist the physician in gathering sonographic data necessary to diagnose a variety of conditions and diseases. Sonographers obtain, review, and integrate patient history and supporting clinical data to facilitate optimum diagnostic results. They perform appropriate procedures and record anatomical, pathological, and/or physiological data as well as sonographic data and other pertinent observations made during the procedure for interpretation by a physician. They provide patient education related to medical ultrasound and promote principles of good health.

Milestone

In addition to the required General Education courses in Math and English, completion of IDMS 201 and IDMS 234 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

The D.M.S. curriculum is an integrated six-semester program that incorporates didactic and clinical training designed to prepare the student for employment in the field of diagnostic medical sonography. The program is aligned with the standards and guidelines of the Joint Review Commission on Diagnostic Medical Sonography and is accredited by the Commission on Accreditation of Allied Health Education Programs (JRCDEMS-CAAHEP), 1361 Park Street, Clearwater, FL 33756. Graduates of the program are prepared for either the examination by the American Registry of Diagnostic Medical Sonographers (ARDMS) or the American Registry of Radiologic Technologists (ARRT).

This is a selective admission program. In order to be considered as a candidate for this program, students must meet basic admission requirements beyond those required for admission to the college. All the courses in Semesters I and II are required for admission and must be completed by December 31st of the year prior to the April 1st D.M.S. Program admission application deadline. This includes: BIOL 145 or BIOL 201 and BIOL 202; MATH 120 (or higher) or STAT 170 or STAT 215; PHYS 120 or PHYS 200; and the General Education requirements including English Composition or Applied English, English Composition (second course)/Communications or Applied Communications, and Humanities and Fine Arts or Social Sciences or Applied Social Sciences requirements.

A 2.5 minimum grade is required in all courses in this curriculum, including the General Education requirements, with the exception of PHYS 120 or PHYS 200 which requires a minimum 2.0 grade.

Contact Information

The admission and/or graduation requirements for this program may change each academic year. The program requirements below apply only to those students who have been admitted to the program for the 2024/2025 academic year. For further information, including about career options, admission requirements, course substitutions and waivers, etc., contact the Diagnostic Medical Sonography program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building – StarZone, telephone number 517-483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*
ENGL 121, Composition I, 4 credits / 4 billing hours
ENGL 122, Composition II, 4 credits / 4 billing hours
ENGL 127, Business Writing, 3 credits / 3 billing hours
ENGL 131, Honors Composition I, 4 credits / 4 billing hours
ENGL 132, Honors Composition II, 4 credits / 4 billing hours
- English Composition (second course)/Communications or Applied Communications
Program of Study Required Courses for Admission will meet this requirement
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*
SOCL 120, Introduction to Sociology, 4 credits / 4 billing hours
- Mathematics or Applied Mathematics
Program of Study Required Courses for Admission will meet this requirement
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses for Admission will meet this requirement

Program of Study Required Course for Admission, Limited Choice – English

Composition (second course)/Communication – *Select one. This course will satisfy the General Education English Composition (second course)/Communication or Applied Communication requirement. This requirement can be waived with proof of an earned associate degree (or higher) from an accredited college or university.*

Course Code	Course Title	Credit / Billing Hours
COMM 110	Communication in the Workplace	3 / 3
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3
COMM 240	Interpersonal Communication	3 / 3
SIGN 160	Intro to the Deaf Community	3 / 3

Program of Study Required Course for Admission, Limited Choice - Mathematics

– *Select one. This course will satisfy the General Education Mathematics or Applied Mathematics requirement. (Any course from the College Algebra area of the General Education Mathematics category may also be selected.)*

Course Code	Course Title	Credit / Billing Hours
MATH 120	College Algebra	4 / 4
STAT 170	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability and Stats	4 / 4

Program of Study Required Course for Admission, Limited Choice – Natural

Sciences Lab – *Select BIOL 145 or, BIOL 201 and BIOL 202. This course will satisfy the General Education Natural Sciences Lab or Applied Science and Technology Lab requirement.*

Course Code	Course Title	Credit / Billing Hours
BIOL 145	Intro Anatomy and Physiology	4 / 6
BIOL 201 and 202	Human Anatomy and Human Physiology	8 / 11 (total)

Program of Study Required Course for Admission, Limited Choice – Select one

Course Code	Course Title	Credit / Billing Hours
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CHSE 120	Medical Terminology	4 / 4
IDMS 170	Intro to Ultrasound Knobology	2 / 3
IDMS 200	Sonographic Introduction	2 / 2
IDMS 201	General Sonography I: Abdomen	4 / 4
IDMS 202	OB/GYN Sonography I	4 / 4
IDMS 234	Sonographic Physics	2 / 2
IDMS 245	Sonographic Instrumentation	2 / 2
IDMS 265	General Sonography II	4 / 4

Course Code	Course Title	Credit / Billing Hours
IDMS 266	OB/GYN Sonography II	4 / 4
IDMS 270	Sonographic Positioning I	2.5 / 4
IDMS 271	Sonographic Positioning II	1.5 / 2
IDMS 280	Clinical Experience I	6 / 6
IDMS 281	Clinical Experience II	8 / 8
IDMS 282	Clinical Experience III	7.5 / 7.5

Minimum Total Credit Hours

75.5 credits / 81.5 billing hours

Recommended Course Sequence

Semester I (Fall)
Gen Ed – English Composition or Applied English
Program of Study Required Course for Admission – Mathematics
BIOL 145 or (BIOL 201 and BIOL 202)

Semester II (Spring)
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
COMM 110, 120, 130, 240, or SIGN 160
PHYS 120 or PHYS 200

Semester III (Summer)
CHSE 120
IDMS 170
IDMS 200
IDMS 270

Semester IV (Fall)
IDMS 201 – Milestone course
IDMS 202
IDMS 234 – Milestone course
IDMS 271
IDMS 280

Semester V (Spring)
IDMS 245
IDMS 265
IDMS 266
IDMS 281

Semester VI (Summer)
IDMS 282

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Vascular Technology C.C.

Career Community: Health and Human Service Careers

Curriculum Code: 1604

Effective: Fall 2024 – Summer 2026

Description

This certificate provides the didactic and applied instruction necessary for students to be competent in the specialty of Vascular Sonography. It includes the instructional component of the preparation that students need to take either the examination by the American Registry for Diagnostic Medical Sonography (ARDMS) or the American Registry of Radiologic Technologists (ARRT). Students must also seek clinical verification in order to sit for the registry exam.

Milestone

Completion of IDMS 250 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

Students must complete all courses with a minimum grade of 2.5 to receive this certificate.

To be eligible to participate in this curriculum students must have graduated from an accredited Diagnostic Medical Sonography program, or have RDMS (Registered Diagnostic Medical Sonographer) or R.T.(S)(ARRT) (Registered Technologist, Sonography) credentials.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Diagnostic Medical Sonography Program, Health and Human Services Building, Room 108, telephone number 517-483-1410, or the Academic Advising Department, Gannon Building - StarZone, telephone number 517-483-1904.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
IDMS 250	Vascular Technology I	6 / 6
IDMS 251	Vascular Technology II	6 / 6
IDMS 255	Vascular Scan Lab I	2.5 / 4
IDMS 256	Vascular Scan Lab II	2.5 / 4

Minimum Total Credit Hours

17 credits / 20 billing hours

Required Course Sequence

Semester I (Fall)
IDMS 250 – Milestone course
IDMS 255
Semester II (Spring)
IDMS 251
IDMS 256

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Veterinary Nursing A.A.S.

Career Community: Science and Mathematics

Curriculum Code: 0287

Effective: Fall 2024 – Summer 2029

Description

Veterinary nurses are professionals dedicated to animal health care. They are vital members of the veterinary medical team and are trusted with diverse medical responsibilities, including animal nursing care, life support, laboratory specimen analysis, physical therapy, surgical assistance, anesthesia, dental hygiene, X-ray imaging, nutritional management, and client education. The variety in veterinary nursing makes it a challenging medical career for those who enjoy working with animals and people. Career opportunities exist with veterinary hospitals, biomedical research institutions, zoological parks, and other animal care facilities.

This program is offered through a joint agreement between Lansing Community College (LCC) and Michigan State University (MSU), with Major courses taught by MSU and General Education courses taught by LCC.

Milestone

Completion of the required General Education Math, English, and Science courses are key components for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses. See Additional Information below regarding MSU's grade requirements.

Additional Information

To be considered for admission to MSU's Certificate or Bachelors program, an applicant must have a minimum cumulative GPA of 2.75, a minimum Math and Science GPA of 2.5 (with a minimum of 2.0 in all prerequisite Math and Science courses), and a minimum GPA of 2.5 for the applicant's most recent 12 credits.

Additionally, a minimum grade of 2.0 is required for the Program of Study Required Course, Limited Choice areas of English Composition or Applied English, English Composition (second course)/Communication or Applied Communication, and Humanities and Fine Arts or Social Sciences or Applied Social Sciences.

MSU's admission is competitive. Please consult MSU College of Veterinary Medicine for application deadlines. Successful applicants would start attending classes at the MSU Veterinary School the following fall semester. Students are advised to have a strong background in biology, chemistry, algebra and writing. Students must seek at least 80 hours of experience in the veterinary clinical setting. This experience will help students form the foundation for career development and is part of MSU's admission requirements. Students planning to transfer should see an academic advisor before enrolling in any course.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Science Department, Arts & Sciences Building, Room 3203, telephone number (517) 483-1092 or the [MSU Veterinary Nursing Program](#), or the Center for Academic and Career Pathways – GB StarZone, telephone number (517) 483-1904.

General Education – Applied Degrees, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English
Program of Study Required Courses will meet this requirement.
- English Composition (second course) or Communication or Applied Communication
Program of Study Required Courses will meet this requirement.
- Humanities and Fine Arts or Social Science or Applied Social Science
Program of Study Required Courses will meet this requirement.
- Mathematics or Applied Mathematics
Program of Study Required Courses will meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab
Program of Study Required Courses will meet this requirement.

Program of Study Required Course, Limited Choice - English Composition or Applied English – *Select one*

Course Code	Course Title	Credit / Billing Hours
ENGL 121	Composition I	4 / 4
ENGL 131	Honors Composition I	4 / 4
ENGL 122	Composition II	4 / 4
ENGL 132	Honors Composition II	4 / 4

Program of Study Required Course, Limited Choice - English Composition (second course)/Communication or Applied Communication – *Select one*

Course Code	Course Title	Credit / Billing Hours
COMM 120	Dynamics of Communication	3 / 3
COMM 130	Fundamentals Public Speaking	3 / 3

Program of Study Required Course, Limited Choice, Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*

Course Code	Course Title	Credit / Billing Hours
ECON 120	Power, Authority and Exchange	4 / 4
GEOG 200	World Regional Geography	4 / 4
HUMS 160	Mythology	4 / 4
HUMS 223	The Western World to 1500	4 / 4
HUMS 224	The Western World since 1500	4 / 4
MUSC 240	Musical Cultures to 1750	4 / 4
MUSC 241	Musical Cultures 1750-Present	4 / 4

Course Code	Course Title	Credit / Billing Hours
PHIL 211	Philosophy: Ancient & Medieval	4 / 4
PHIL 212	Philosophy: Modern & Contemporary	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

Program of Study Required Course, Limited Choice, Mathematics or Applied Mathematics – Select one

Course Code	Course Title	Credit / Billing Hours
MATH 120	College Algebra	4 / 4
MATH 126	Precalculus	5 / 5
MATH 151	Calculus I	4 / 4

Program of Study Required Course, Limited Choice, Natural Sciences Lab or Applied Sciences and Technology Lab – Select one

Course Code	Course Title	Credit / Billing Hours
BIOL 121	Biol Foundation for Physiology	4 / 6
BIOL 127	Cell Biology	4 / 6

Note: BIOL 127 is highly recommended for this degree.

MSU Veterinary Nursing Courses

Forty-three (43) credits from the Veterinary Nursing Certificate of Completion from Michigan State University

Institutional Requirements

Choose an appropriate Lansing Community College course or courses so the total number of credits taken at LCC is 15 or more per college policy, and so at least 60 credits are earned toward the degree. Part of this requirement may automatically be fulfilled if a student completes 15 or more credits of the Program of Study Required Courses at LCC.

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

62 credit hours/ 21 billing hours

Recommended Course Sequence

(Sequence may be determined based on prerequisites for the courses. To obtain current prerequisite information, search for the course in Banner and select "View Catalog Entry".)

Semester I
Limited Choice English Composition or Applied English Limited Choice Mathematics or Applied Mathematics Limited Choice Natural Sciences Lab or Applied Sciences or Technology Lab
Semester II
Limited Choice English Composition (second course) or Communication or Applied Communication Limited Choice Humanities and Fine Arts or Social Science or Applied Social Science
Semester III
Veterinary Nursing courses from MSU
Semester IV
Veterinary Nursing courses from MSU
Semester V
Veterinary Nursing courses from MSU
Semester VI
Veterinary Nursing courses from MSU
Semester VII
Internship

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Web Site Developer C.C.

Career Community: Computer Technology and Networking

Curriculum Code: 0843

Effective: Fall 2024 – Summer 2029

Description

The Web Site Developer certificate provides students with the technical skills necessary to use the internet as an effective business resource, including building and maintaining commercial websites. This program of study is designed for students who already have basic computer skills and want to specialize in internet technology and, web site design and development. This certificate can be completed entirely online. The course work can be applied toward completion of the E-Business Associate of Business Degree (0839).

Milestone

Completion of CITW 160 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Computer Information Technologies Program at the West Campus Building, Room M103, telephone number 517-267-6406 or Student Services West Campus, West Campus Building, Room M016, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
CITW 150	Internet Literacy	3 / 3
CITW 160	Web Development HTML & CSS	3 / 3
CITW 165	Web Development JavaScript	3 / 3
CITW 175	Web Site Management	3 / 3

Program of Study Required Courses, Limited Choice – *Select four credits*

Course Code	Course Title	Credit / Billing Hours
ARTS 102	2D Design	3 / 4
CITP 110	Intro to Programming-Python	4 / 4
CITP 130	Intro to Mobile App Devel	3 / 3
CITW 185	Web Development PHP & MySQL	4 / 4

Minimum Total Credit Hours

16 credits / 16 billing hours

Recommended Course Sequence

Semester I
CITW 150
CITW 160 – Milestone course
Limited Choice

Semester II
CITW 165
CITW 175

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Welding Technology A.A.S.

Career Community: Electrical and Manufacturing

Curriculum Code: 0186

Effective: Fall 2024 – Summer 2029

Description

Welding is many processes of fusion, adhesion, and cutting to fabricate or repair products used in manufacturing, research and application. A welding technician could also qualify for welding inspection where welding codes are applied. A welder is a skilled craftsperson with a basic knowledge of metals, applied mathematics, blueprint reading, good eyesight, self-discipline and a respect for safety. A welder also needs to work well with his/her hands and have good manual coordination. Many hours of practice and proper training in the basics of MIG, TIG, shielded metal arc, brazing and oxy-fuel cutting, and plasma cutting are necessary. Welders can be found in tool and die industries, automakers, construction, oil refineries, pipelines and pressure vessels, aircraft industries and many more metal-related industries. Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

Milestone

In addition to the required General Education courses in Math and English, completion of WELD 103 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in the courses.

Additional Information

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for METS 140 and ELTE 108 and ELTE 109.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degree, Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
Program of Study Required Courses will meet this requirement.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
METM 108	Machine Tool Operations	4 / 6
METM 190	Metallurgy and Heat Treatment	4 / 6
METS 140	Rigging	3 / 4.5
TECH 102	General Industry Safety	2 / 3
WELD 103	Combination Welding	4 / 6
WELD 105	Advanced ARC Welding	4 / 6
WELD 110	Gas Metal ARC Welding	4 / 6
WELD 111	Gas Tungsten ARC Welding	4 / 6
WELD 125	Structural Print Reading/ Weld	2 / 2
WELD 201	Tool and Die Welding	3 / 4.5
WELD 205	Pipe Welding	4 / 6
WELD 220	Structural Fab & Inspection	4 / 6

Program of Study Required Courses – Limited Choices Courses – *Select a minimum of two courses and 6 credits*

Course Code	Course Title	Credit / Billing Hours
ELTE 110	Practical Electricity	4 / 6
METM 100	Manufacturing Processes	3 / 4.5
WELD 115	Robotic MIG Welding	4 / 6
WELD 250	Welding Internship	3 / 3

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

61 credits / 82.5 billing hours

Recommended Course Sequence

Semester I
METM 108
METS 140
TECH 102
WELD 103 – Milestone course
WELD 110

Semester II
METM 190
WELD 105
WELD 111
WELD 125

Semester III
Gen Ed – English Composition or Applied English
Gen Ed – Mathematics or Applied Mathematics
WELD 201
WELD 220
Limited Choice

Semester IV
Gen Ed – English Composition (second course)/ Communication or Applied Communication
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
WELD 205
Limited Choice

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Welding Technology C.A.

Career Community: Electrical and Manufacturing

Curriculum Code: 0156

Effective: Fall 2024 – Summer 2029

Description

Students receive hands-on instruction in the basics of MIG, TIG, shielded metal arc, brazing and oxy-fuel cutting, and plasma cutting to prepare them for entry-level positions.

Milestone

Completion of WELD 103 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement. Any of these courses will fulfill the prerequisite for METS 140.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
METM 190	Metallurgy and Heat Treatment	4 / 6
METS 140	Rigging	3 / 4.5
TECH 102	General Industry Safety	2 / 3
WELD 103	Combination Welding	4 / 6
WELD 105	Advanced ARC Welding	4 / 6
WELD 110	Gas Metal ARC Welding	4 / 6
WELD 111	Gas Tungsten ARC Welding	4 / 6
WELD 125	Structural Print Reading/Weld	2 / 2
WELD 220	Structural Fab & Inspection	4 / 6

Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

Minimum Total Credit Hours

31 credits / 45.5 billing hours

Recommended Course Sequence

Semester I
TECH 102
WELD 103 – Milestone course
WELD 110
Semester II
WELD 105
WELD 111
WELD 125
Semester III
METM 190
METS 140
WELD 220

LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.



Welding Technology C.C.

Career Community: Electrical and Manufacturing

Curriculum Code: 1356

Effective: Fall 2024 – Summer 2029

Description

This certificate is designed to provide the basic skills needed for entry-level welding. Students following this program will learn how to perform Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (MIG) and Gas Tungsten Arc Welding (TIG). Welders can be found in tool and die industries, automobile manufacturing, construction industries, oil refineries, pipeline and pressure vessel industries, aircraft industries, and many more metal-related industries. All of the coursework may be applied toward the Welding Technology Certificate of Achievement and the Welding Technology Associate of Applied Science Degree.

Milestone

Completion of WELD 103 with a 2.5 or higher is a key component for success in completing this program. Knowledge obtained in this course is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in this course.

Additional Information

A student must earn a minimum grade of 2.0 in all courses.

If students have already completed DCTM 102, ELTE 102, HVAC 102, METS 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the TECH 102 requirement.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338, email manufacturing@lcc.edu or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
TECH 102	General Industry Safety	2 / 3
WELD 103	Combination Welding	4 / 6
WELD 105	Advanced ARC Welding	4 / 6
WELD 110	Gas Metal ARC Welding	4 / 6
WELD 111	Gas Tungsten ARC Welding	4 / 6

Minimum Total Credit Hours

18 credits / 27 billing hours

Recommended Course Sequence

Semester I
TECH 102
WELD 103 – Milestone course
WELD 110
Semester II
WELD 105
WELD 111

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World Language A.A.

Career Community: Communication, Journalism, and Language

Curriculum Code: 0132

Effective: Fall 2024 – Summer 2029

Purpose of Major:

This degree is designed for students who plan to transfer to a four-year institution to pursue a baccalaureate degree in the area of World Language in a variety of concentrations or who plan to pursue secondary education certification in a World Language to teach in Michigan public schools. Students completing this degree will also satisfy the Michigan Transfer Agreement (MTA) requirements for General Education between two and four-year institutions in Michigan and will qualify for an LCC Transfer Studies Certificate of Achievement (1482).

Not all courses in this pathway transfer to all colleges. Students who wish to transfer to a four-year institution should select coursework indicated for that institution and may also complete coursework for a Communication and Language, Enhanced AAA degree. The Communication and Language, Enhanced AAA option allows students to transfer additional credits toward the Bachelor's degree.

Milestone

In addition to the required Math and English courses, completion of 100-level World Language classes with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

Additional Information

A minimum grade of 2.0 is required in all courses.

Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Communication and the Arts Department, Gannon Building, Room 1222, telephone number 517-483-1546.

General Education – Transfer Degrees - Recommended Courses

(For the full list of options, see [General Education](#))

- English Composition
Career Community Courses meet this requirement.
- English Composition (second course) or Communication
Career Community Courses meet this requirement.
- Humanities and Fine Arts – *Select two courses from different disciplines*
Program of Study Required Courses meet this requirement.
- Mathematics
Career Community Courses meet this requirement.

- Natural Sciences – *Select two courses from different disciplines; one must be a lab course*
Program of Study Required Courses meet this requirement.
- Social Sciences – *Select two courses from different disciplines*
Program of Study Required Courses meet this requirement.

Communication and Language Career Community Courses – *These courses are required for all Communication and Language programs (Communication, Sign Language Interpreter, World Language). They should be taken before other Program Required or Limited Choice Courses.*

Course Code	Course Title	Credit / Billing Hours
ACAD 100	First-Year Experience	1 / 1
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132 or SIGN 160	Dynamics of Communication Fundamentals Public Speaking Small Group Communication Interpersonal Communication Nonverbal Communication Composition II Honors Composition II Intro to the Deaf Community	3 / 3 3 / 3 3 / 3 3 / 3 3 / 3 4 / 4 4 / 4 3 / 3
DMAC 260 or ENGL 200 or ENGL 261 or JAPN 121 or SIGN 162 or SPAN 121 or THEA 110	World Cinema Introduction to Literature Creative Writing I Elementary Japanese I American Sign Language II Elementary Spanish I Introduction to Theater	4 / 4 3 / 3 3 / 3 4 / 4 3 / 3 4 / 4 3 / 3
ENGL 121 or ENGL 131	Composition I Honors Composition I	4 / 4 4 / 4
LING 230 or SIGN 161	Introduction to Linguistics American Sign Language I	3 / 3 3 / 3
MATH 119 or MATH 120 or STAT 170	Math - Applications for Living College Algebra Introduction to Statistics	4 / 4 4 / 4 4 / 4

Notes:

ACAD 100 may be waived when students meet one of the following College-approved waiver criteria:

- Completion of 12 college-level credits with minimum grades of 2.0 shown on the LCC transcript (including transfer, if applicable), or
- Employment in the field of, or a field related to, the degree being sought, or
- For Health Careers students, successful completion of CHSE 100.

Students wishing to waive ACAD 100 should contact their advisor.

For World Language, select LING 230, and JAPN 121 or SPAN 121.

For future transfer to:

- Central Michigan University choose COMM 130, LING 230, MATH 119 or MATH 120, and SPAN 121.
- Eastern Michigan University choose ENGL 122 or ENGL 132, LING 230, JAPN 121 or SPAN 121, and MATH 120.
- Ferris State University choose COMM 130, LING 230, MATH 119 or MATH 120, and SPAN 121.
- Grand Valley State University choose COMM 130, LING 230, SPAN 121, and MATH 120.
- Michigan State University choose COMM 130, LING 230, JAPN 121 or SPAN 121, and MATH 119 or MATH 120.
- Western Michigan University choose ENGL 122 or ENGL 132, LING 230, JAPN 121 or SPAN 121, and MATH 119.

Program of Study Required Courses – LING 230, and JAPN 121 or SPAN 121 will meet Humanities and Fine Arts and Career Community requirements.

Course Code	Course Title	Credit / Billing Hours
LING 230	Introduction to Linguistics	3 / 3
JAPN 121 or SPAN 121	Elementary Japanese I Elementary Spanish I	4 / 4 4 / 4
JAPN 122 or SPAN 122	Elementary Japanese II Elementary Spanish II	4 / 4 4 / 4
JAPN 201 or SPAN 201	Intermediate Japanese I Intermediate Spanish I	4 / 4 4 / 4
JAPN 202 or SPAN 202	Intermediate Japanese II Intermediate Spanish II	4 / 4 4 / 4

Notes:

- Choose courses of the same language chosen for the Communication and Language Career Community course.
- If LING 230, JAPN 121, or SPAN 121 was completed as part of the Career Community block, do not repeat enrollment.

Program of Study Required Courses, Limited Choice – Natural Sciences or Applied Sciences and Technology Lab – *Select 2 courses from different disciplines, as indicated for each transfer institution and major. One must be a lab course. If specific courses are not indicated, select any two courses from different disciplines from [LCC General Education: MTA, Natural Sciences](#).*

Course Code	Course Title	Credit / Billing Hours
ASTR 201	Introductory Astronomy	4 / 5
BIOL 120	Environmental Science	4 / 6

Course Code	Course Title	Credit / Billing Hours
BIOL 125	Introductory Biology	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOG 220	Weather, Forecasting & Climate	4 / 4
GEOG 221	Physical Geography	4 / 4
GEOL 221	Physical Geology	4 / 6
GEOL 222	Historical Geology	4 / 6
GEOL 230	Environmental Geology	4 / 6
ISCI 121	Physical Science Concepts	4 / 6
PFHW 123	Human Nutrition	3 / 3
PHYS 120	The Art of Physics	4 / 5

Note: For future transfer to Central Michigan University choose BIOL 120 and any non-BIOL course.

Program of Study Required Courses, Limited Choice – Social Sciences - *Select two courses from two different disciplines as indicated for each major and institution. If specific courses are not indicated, select any two courses from two different disciplines. Students considering the possibility of adding World Language K-12 Certification at some point in the future are strongly encouraged to select the courses indicated for each transfer institution. These selections will satisfy requirements for admission to the Teacher Education program, required for certification, as well as satisfying Social Science General Education requirements and will prevent possible delay in degree completion.*

Course Code	Course Title	Credit / Billing Hours
ANTH 271	Medical Anthropology	3 / 3
COMM 270	Mass Communication	3 / 3
COMM 280	Intercultural Communication	3 / 3
EDUC 204	Educational Psychology	3 / 3
EDUC 220	Introduction to Education	3 / 3
POLS 201	Intro to Political Science	3 / 3
POLS 260	Comparative Political Systems	3 / 3
POLS 270	International Relations	3 / 3
PSYC 200	Introduction to Psychology	4 / 4
SOCL 120	Introduction to Sociology	4 / 4

For future transfer to:

- Eastern Michigan University (Japanese with Language and International Trade Concentration; Spanish with Language and International Careers Concentration) choose ANTH 271 and one from POLS 201, POLS 260, or POLS 270.
- Eastern Michigan University (K-12 Certification in Japanese or Spanish) choose EDUC 204 and PSYC 200.
- Ferris State University (Spanish for the Professions) choose POLS 270 and SOCL 120.

- Grand Valley State University (K-12 Certification in Spanish) choose EDUC 220 and PSYC 200.
- Michigan State University (K-12 Certification in Japanese or Spanish) choose EDUC 204 and PSYC 200.
- Western Michigan University (Pre-teacher education for K-12 Certification in Japanese or Spanish) choose EDUC 220 and PSYC 200.

Elective Courses, Recommended Choices – *Select courses as needed to reach the 60 credits required for the degree. See notes below for specific courses for each transfer institution and future minor. Choose courses from areas like English, Communication, Business, Political Science (areas that are often paired with a World Language major) which may include up to 16 hours in a second World Language. A minimum of 2.0 is required to meet degree requirements for General Education and for all courses to transfer to other colleges (some colleges, and some programs within colleges, require a higher grade in a course.) For the full list of options, see [AA and AS Degree Electives](#).*

Course Code	Course Title	Credit / Billing Hours
COMM 260	Nonverbal Communication	3 / 3
COMM 280	Intercultural Communication	3 / 3
EDUC 230	Intro to Special Education	3 / 3
ENGL 122 or ENGL 132	Composition II Honors Composition II	4 / 4 4 / 4
GRMN 121 or JAPN 121 or SPAN 121	Elementary German I Elementary Japanese I Elementary Spanish I	4 / 4 4 / 4 4 / 4
GRMN 122 or JAPN 122 or SPAN 122	Elementary German II Elementary Japanese II Elementary Spanish II	4 / 4 4 / 4 4 / 4
JAPN 201 or SPAN 201	Intermediate Japanese I Intermediate Spanish I	4 / 4 4 / 4
JAPN 202 or SPAN 202	Intermediate Japanese II Intermediate Spanish II	4 / 4 4 / 4
PSYC 205	Human Growth and Development	3 / 3
PSYC 221	Child Psychology	3 / 3

For future transfer to:

- Central Michigan University (BA in Spanish) choose ENGL 122 or ENGL 132 and twelve credits from any Limited Choice.
- Eastern Michigan University (Japanese with Language and International Trade Concentration; Spanish with Language and International Careers Concentration) choose COMM 260 or COMM 280 and 12 credits from any combination of World Language courses.
- Eastern Michigan University (K-12 Certification in Japanese or Spanish) choose EDUC 230, PSYC 205, and 9 credits from any combination of World Language courses.

- Ferris State University (Spanish for the Professions) choose COMM 280, ENGL 122 or ENGL 132, and 9 credits from any combination of World Language courses.
- Grand Valley State University choose PSYC 221 and 9 credits from any combination of World Language courses.
- Michigan State University (Japanese or Spanish or K-12 Certification in Japanese or Spanish) choose 16 credits from any combination of World Language courses.
- Western Michigan University (Japanese or Spanish or Pre-teacher education for K-12 Certification in Japanese or Spanish) choose 16 credits from any combination of World Language courses.

Minimum Total Credit Hours

60 credit hours / 60 billing hours

Recommend Course Sequence

Semester I
ACAD 100
ENGL 121 or ENGL 131
JAPN 121 or SPAN 121 – Milestone course
LING 230

Semester II
COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
JAPN 122 or SPAN 122 – Milestone course
MATH 119 or MATH 120 or STAT 170
Limited Choice – Social Sciences

Semester III
JAPN 201 or SPAN 201
Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab
Limited Choice – Social Sciences
Electives as needed

Semester IV
JAPN 202 or SPAN 202
Limited Choice – Natural Sciences Lab or Applied Sciences and Technology Lab
Electives as needed

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
ACAD 100	First-Year Experience	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
ACCG 100	Practical Accounting Non-Major	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ACCG 101	Accounting Info for Management	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ACCG 160	Payroll Systems and Taxes	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
ACCG 161	Accounting with Quickbooks	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
ACCG 210	Principles of Financial Accg	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$112	\$0
ACCG 211	Principles of Managerial Accg	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$92	\$0
ACCG 215	Financial Data Analytics	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ACCG 220	Intermediate Accounting I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ACCG 221	Intermediate Accounting II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ACCG 230	Cost/Managerial I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ACCG 240	Federal Income Tax I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$60	\$0
ACCG 241	Federal Income Tax II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$60	\$0
ACCG 245	Accounting Internship	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
ACCG 260	Accounting Systems	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ACCG 271	Principles of Finance	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ACCG 280	Governmental Accounting	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ACCG 290	Auditing	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
AEET 275	Sustainable Building Design	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$145	\$0

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AEET 280	Alternative Energy Practicum	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
AERO 110	USAF Heritage & Values I-Lab	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
AERO 111	USAF Heritage & Values I	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
AERO 112	USAF Heritage & Values II	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
AERO 113	USAF Heritage & Values II-Lab	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
AERO 210	USAF Team & Ldrshp Fund I-Lab	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
AERO 211	USAF Team & Leadership Fund I	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
AERO 212	USAF Team & Leadership Fund II	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
AERO 213	USAF Team/Leadrsdp Fund II-Lab	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
ANTH 120	Introduction to Anthropology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ANTH 270	Cultural Anthropology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ANTH 271	Medical Anthropology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ANTH 272	Food and Sustainability	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ANTH 275	Biological Anthropology	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ANTH 276	Introduction to Archaeology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ANTH 280	Forensic Anthropology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ANTH 300	Applied Field Survey Methods	4 to 8	\$480-\$960	\$960-\$1,920	\$1,440-\$2,880	\$1,680-\$3,360	\$240-\$480	\$25	\$60-\$120		

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Tuition and Course Fee Schedule

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
APPR 170	Inside Wireman Apprentice 1-A	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 171	Inside Wireman Apprentice 1-B	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 172	Inside Wireman Apprentice 1-C	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 173	Inside Wireman Apprentice 2-A	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 174	Inside Wireman Apprentice 2-B	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 175	Inside Wireman Apprentice 2-C	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 176	Inside Wireman Apprentice 3-A	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 177	Inside Wireman Apprentice 3-B	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 178	Inside Wireman Apprentice 3-C	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 179	Inside Wireman Apprentice 4-A	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 180	Inside Wireman Apprentice 4-B	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
APPR 181	Inside Wireman Apprentice 4-C	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 182	Inside Wireman Apprentice 5-A	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 183	Inside Wireman Apprentice 5-B	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
APPR 184	Inside Wireman Apprentice 5-C	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ARCH 105	Architecture Appreciation	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$85	\$0
ARCH 107	Sustainable Site Design	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$75	\$0
ARCH 110	Visual Communications I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$70	\$0
ARCH 111	Arch Design Fundamentals	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$95	\$0
ARCH 113	Materials & Methods of Constr.	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$158	\$0
ARCH 114	Architectural Drawing/CAD I	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$155	\$0
ARCH 118	Architecture Design/Planning	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$95	\$0
ARCH 120	Visual Communications II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$70	\$0
ARCH 124	Architectural Drawing/CAD II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$155	\$0
ARCH 125	Environmental Systems	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$50	\$0
ARCH 126	Architecture Model Building	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$100	\$0
ARCH 141	History of Architecture I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$45	\$0
ARCH 142	History of Architecture II	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$45	\$0

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
ARCH 146	Preservation/Adaptive Use Arch	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$55	\$0
ARCH 218	Commercial Arch Planning	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$155	\$0
ARCH 220	Commercial Arch Drawing	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$165	\$0
ARCH 233	Revit Architecture BIM I	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$180	\$0
ARCH 235	Arch AutoCAD Independent Study	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
ARCH 243	Revit Architecture BIM II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$180	\$0
ARCH 275	Sustainable Building Design	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$135	\$0
ARCH 290	Architectural Internship	2 to 4	\$240-\$480	\$480-\$960	\$720-\$1,440	\$840-\$1,680	\$120-\$240	\$25	\$30-\$60		
ARCH 295	Arch Independent Study	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
ARTH 120	Masterpieces of Art & Music	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ARTH 211	Art History to the Renaissance	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ARTH 212	Art Hist from the Renaissance	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ARTH 216	Contemporary Art	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ARTS 102	2D Design	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$20	\$0
ARTS 103	3D Design	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$35	\$0
ARTS 131	Drawing I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$8	\$0
ARTS 132	Figure Drawing	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$53	\$0
ARTS 151	Color	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$30	\$0

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2024 – 2025
Tuition and Course Fee Schedule

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
ARTS 153	Drawing II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$19	\$0
ARTS 162	Type Communications	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$80	\$0
ARTS 164	Digital Illustration	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$40	\$0
ARTS 171	Adobe Photoshop	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$24	\$0
ARTS 173	Web Design I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$29	\$0
ARTS 175	Creative Design and Publishing	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$79	\$0
ARTS 179	Web Design II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$35	\$0
ARTS 183	Design History	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$30	\$0
ARTS 195	Employ/Busn Issues for Artists	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$3	\$0
ARTS 200	Painting I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$15	\$0
ARTS 201	Painting II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$15	\$0
ARTS 202	Design for Innovation	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ARTS 226	Storyboards & Animatics	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$30	\$0
ARTS 229	Web Design III	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$40	\$0
ARTS 232	Comp Graphics/2D Animation	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$40	\$0
ARTS 234	Comp Graphics/3D Animation I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$45	\$0
ARTS 235	Comp Graphics/3D Animation II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$45	\$0

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2024 – 2025 Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
ARTS 240	Art for Elementary Teachers	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$30	\$0
ARTS 251	Graphic Design Communications	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$60	\$0
ARTS 252	Graphic Design Publications	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$60	\$0
ARTS 253	Graphic Design Branding	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$60	\$0
ARTS 266	Figure Drawing II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$53	\$0
ARTS 267	Adv Drawing Digital Sketchbook	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ARTS 269	The Portfolio	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$70	\$0
ARTS 281	Art Internship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ASTR 201	Introductory Astronomy	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$50	\$0
AUTM 102	Automotive/Collision Safety	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$100	\$16
AUTM 111	Automotive Electrical I	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$659	\$35
AUTM 113	Automotive Electrical II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$649	\$35
AUTM 125	Manual Drive Train and Axles	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$684	\$35
AUTM 126	Automatic Transmissions	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$703	\$35
AUTM 131	Automotive Engine Repair	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$774	\$35
AUTM 141	Braking Systems and ABS	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$734	\$35
AUTM 151	Suspension and Steering	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$744	\$35
AUTM 161	Auto Heating/Air Conditioning	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$768	\$35

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AUTM 180	Intro to Alternative Fuels	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
AUTM 185	Automotive Special Topics	0.25 to 11	\$30-\$1,320	\$60-\$2,640	\$90-\$3,960	\$105-\$4,620	\$15-\$660	\$25	\$3.75-\$165		
AUTM 211	Automotive Electrical III	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$686	\$35
AUTM 270	Gas Eng Drivability Diagnosis	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$728	\$35
AUTM 273	Lt. Diesel Drivability Diag.	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$750	\$45
AUTM 275	Ignition/Emission Sys Diag.	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$727	\$35
AUTM 280	Electric/Fuel Cell Technology	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$689	\$40
AUTM 282	Gaseous Fuels	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$654	\$40
AUTM 284	Hybrid Systems & Maintenance	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$704	\$0
AUTM 286	High Voltage Battery Tech	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$754	\$0
AUTM 288	High Voltage Management	7	\$840	\$1,680	\$2,520	\$2,940	\$420	\$25	\$105	\$756	\$0
AUTM 290	Automotive Internship	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
AUTM 296	Automotive Independent Study	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
AUTM 298	Automotive Service Laboratory	4 to 9	\$480-\$1,080	\$960-\$2,160	\$1,440-\$3,240	\$1,680-\$3,780	\$240-\$540	\$25	\$60-\$135	\$280	\$0
AVAF 125	Aircraft Systems I	2.75	\$330	\$660	\$990	\$1,155	\$165	\$25	\$41	\$207	\$0
AVAF 126	Aircraft Systems II	8.25	\$990	\$1,980	\$2,970	\$3,465	\$495	\$25	\$124	\$377	\$0
AVAF 127	Aircraft Systems III	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$257	\$0

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
AVAF 134	Aircraft Instruments	2.75	\$330	\$660	\$990	\$1,155	\$165	\$25	\$41	\$217	\$0
AVAF 140	Aircraft Welding	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$395	\$0
AVAF 208	Aircraft Structures I	5.5	\$660	\$1,320	\$1,980	\$2,310	\$330	\$25	\$83	\$417	\$0
AVAF 209	Aircraft Structures II	5.75	\$690	\$1,380	\$2,070	\$2,415	\$345	\$25	\$86	\$384	\$0
AVAF 210	Aircraft Structures III	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$594	\$0
AVAF 211	Aircraft Electrical I	5.75	\$690	\$1,380	\$2,070	\$2,415	\$345	\$25	\$86	\$407	\$0
AVAF 212	Aircraft Electrical II	5.75	\$690	\$1,380	\$2,070	\$2,415	\$345	\$25	\$86	\$407	\$0
AVAF 246	Airframe Certification	1.5	\$180	\$360	\$540	\$630	\$90	\$25	\$23	\$164	\$0
AVAU 100	Drone Flight Orient.-FAA Exam	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$60	\$90
AVAU 150	Drone Maintenance	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$70	\$230
AVAU 200	Advanced Drone Flight-Capstone	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$75
AVEL 202	Flight Line Testing	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$459	\$0
AVGM 111	Aviation General I	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$277	\$0
AVGM 112	Aviation General II	8	\$960	\$1,920	\$2,880	\$3,360	\$480	\$25	\$120	\$352	\$0
AVGM 113	Aviation General III	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$417	\$0
AVGM 114	Materials and Processes	7	\$840	\$1,680	\$2,520	\$2,940	\$420	\$25	\$105	\$447	\$0

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AVPP 241	Reciprocating Engine	11.25	\$1,350	\$2,700	\$4,050	\$4,725	\$675	\$25	\$169	\$564	\$0
AVPP 251	Reciprocating Engine Systems	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$239	\$0
AVPP 253	Reciprocating Ignition Systems	6.75	\$810	\$1,620	\$2,430	\$2,835	\$405	\$25	\$101	\$489	\$0
AVPP 255	Reciprocating Induction Sys	5.5	\$660	\$1,320	\$1,980	\$2,310	\$330	\$25	\$83	\$424	\$0
AVPP 257	Aircraft Propeller Systems	5.5	\$660	\$1,320	\$1,980	\$2,310	\$330	\$25	\$83	\$324	\$0
AVPP 259	Turbine Engine I	5.5	\$660	\$1,320	\$1,980	\$2,310	\$330	\$25	\$83	\$354	\$0
AVPP 261	Turbine Engine II	5.5	\$660	\$1,320	\$1,980	\$2,310	\$330	\$25	\$83	\$454	\$0
AVPP 263	Turbine Engine Systems	2.75	\$330	\$660	\$990	\$1,155	\$165	\$25	\$41	\$234	\$0
AVPP 265	Powerplant Instruments	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$214	\$0
AVPP 267	Powerplant Certification	1.5	\$180	\$360	\$540	\$630	\$90	\$25	\$23	\$254	\$0
BIOL 120	Environmental Science	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$91	\$0
BIOL 121	Biol Foundation for Physiology	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$42	\$0
BIOL 125	Introductory Biology	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$77	\$0
BIOL 127	Cell Biology	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$64	\$0
BIOL 128	Organismal Biology	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$59	\$0
BIOL 145	Intro Anatomy and Physiology	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$42	\$0
BIOL 201	Human Anatomy	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$42	\$0
BIOL 202	Human Physiology	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$42	\$0

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BIOL 203	Microbiology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
BIOL 204	Microbiology Laboratory	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$121	\$0
BIOL 210	Natural Resource Conservation	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$53	\$0
BIOL 260	Botany	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$74	\$0
BIOL 265	Zoology	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$73	\$0
BIOL 270	Human Genetics	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
BIOL 275	Molecular Biology I	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$119	\$0
BIOL 276	Molecular Biology II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$128	\$0
BLDT 120	Structural Framing	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$290	\$0
BLDT 130	Building Exterior Construction	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$290	\$0
BLDT 140	Building Interior Construction	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$340	\$0
BLDT 150	Intro Masonry/Concrete Const	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$550	\$0
BLDT 160	Steel Framing	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$240	\$0
BLDT 180	Builder Pre-Licensure Prep	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$25	\$0
BLDT 285	Residential Bldg Internship	2 to 4	\$240-\$480	\$480-\$960	\$720-\$1,440	\$840-\$1,680	\$120-\$240	\$25	\$30-\$60		
BUSN 118	Introduction to Business	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
BUSN 150	Legal Issues: Start Small Busn	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
BUSN 201	International Business	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		

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BUSN 250	Personal Finance	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
BUSN 251	Understanding Investments	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
BUSN 260	Starting a Business	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
BUSN 285	Business Admin Internship	2 to 5	\$240-\$600	\$480-\$1,200	\$720-\$1,800	\$840-\$2,100	\$120-\$300	\$25	\$30-\$75		
CHDV 100	Foundations Early Childhood Ed	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$115	\$0
CHDV 101	Child Growth/Develop: 0-12 Yrs	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$115	\$0
CHDV 111	Child Guidance/Communication	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$597	\$0
CHDV 122	Creativity and Play	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$115	\$0
CHDV 123	Literacy and Play	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$115	\$0
CHDV 124	Young Investigators: Math/Sci	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$115	\$0
CHDV 129	Caring for Youngest Learners	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$115	\$0
CHDV 132	Leadership Early Childhood Ed	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$115	\$0
CHDV 135	Inclusion for Every Learner	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$115	\$0
CHDV 215	Infant Toddler Program Dev	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$597	\$0
CHDV 220	Preschool Curriculum Approach	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$597	\$0

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CHDV 222	Caring for School-Age Children	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$115	\$0
CHDV 230	Early Childhood Program Admin	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$115	\$0
CHDV 284	Early Childhood Practicum	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$665	\$0
CHDV 297	Child Dev Directed/Indep Study	0.25 to 4	\$30-\$480	\$60-\$960	\$90-\$1,440	\$105-\$1,680	\$15-\$240	\$25	\$3.75-\$60		
CHEM 120	Gen Organic & Biological Chem	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
CHEM 125	Basic Chemistry	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
CHEM 130	Biochemistry	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
CHEM 135	Chemistry in Society	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$70	\$0
CHEM 151	General Chemistry Lecture I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
CHEM 152	General Chemistry Lecture II	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CHEM 161	General Chemistry Lab I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$84	\$0
CHEM 162	General Chemistry Lab II	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$79	\$0
CHEM 182	Introductory Organic Chemistry	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CHEM 192	Intro Organic Chem Lab	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$84	\$0
CHEM 251	Organic Chemistry Lecture I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
CHEM 252	Organic Chemistry Lecture II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
CHEM 262	Quantitative Analysis	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$84	\$0

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CHEM 272	Organic Chemistry Laboratory	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$126	\$0
CHSE 100	Intro to Health Professions	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
CHSE 108	Long-Term Care Nurse Aide	6.5	\$780	\$1,560	\$2,340	\$2,730	\$390	\$25	\$98	\$491	\$0
CHSE 109	LTC to AC Nurse Assistant/PCT	4.75	\$570	\$1,140	\$1,710	\$1,995	\$285	\$25	\$71	\$83	\$0
CHSE 114	Pathophysiology-Allied Health	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
CHSE 117	Health Law and Ethics	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$60	\$0
CHSE 119	Community Health Career Topics	0.25 to 11	\$30-\$1,320	\$60-\$2,640	\$90-\$3,960	\$105-\$4,620	\$15-\$660	\$25	\$3.75-\$165		
CHSE 120	Medical Terminology	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$60	\$0
CHSE 123	Medical Ins Billing/Coding I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$60	\$0
CHSE 124	Medical Ins Billing/Coding II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$60	\$0
CHSE 125	Comp-Med Ins Billing/Coding	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$80	\$0
CHSE 127	Medical Ins Billing/Coding III	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$92	\$0
CHSE 130	Medical Ins Bill/Code Extern	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$64	\$0
CHSE 131	Electronic Hlth Records Intro	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$76	\$0
CHSE 136	EKG Technician	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$84	\$0
CHSE 139	Community Health Career Topics	0 to 8	\$0-\$960	\$0-\$1,920	\$0-\$2,880	\$0-\$3,360	\$0-\$480	\$25	\$0-\$120		
CHSE 143	Phlebotomy Technician	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$121	\$0

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
CHSE 144	Phlebotomy Externship	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$96	\$0
CHSE 150	CHSE Directed/Indep Study	0.25 to 7	\$30-\$840	\$60-\$1,680	\$90-\$2,520	\$105-\$2,940	\$15-\$420	\$25	\$3.75-\$105		
CHSE 151	Patient Care Technician	9.25	\$1,110	\$2,220	\$3,330	\$3,885	\$555	\$25	\$139	\$584	\$0
CHSE 235	Pharmacy Technician	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$100	\$0
CHSE 236	Pharmacy Technician Externship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$64	\$0
CITA 110	Intro to Microsoft Office	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITA 115	Microsoft PowerPoint	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITA 119	Microsoft Word	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITA 126	Microsoft Excel	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITA 133	Microsoft Access Database	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITA 140	Microsoft Outlook	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITA 219	Advanced Microsoft Word	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITA 226	Microsoft Excel-Advanced	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITC 282	Ethical Hacking	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
CITC 285	System Defense	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
CITC 287	Cybersecurity Incident Respons	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CITC 290	Cybersecurity Risk Management	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
CITD 120	SQL Concepts	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$20	\$0

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
CITD 250	Database Concepts	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$20	\$0
CITF 110	Intro Computer Info Systems	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$10	\$0
CITF 120	Operating Systems Concepts	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITF 140	Information Technology Ethics	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$20	\$0
CITF 240	IT Project Management	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$17	\$0
CITF 260	Systems Analysis and Design	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$22	\$0
CITI 100	AI Foundations	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CITI 120	Data Analysis with Python	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CITI 140	Intro to Machine Learning	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CITI 210	Natural Language Processing	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CITI 220	Computer Vision	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CITN 115	IoT & Automation Fundamentals	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$200	\$0
CITN 120	Networking Concepts	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$30	\$0
CITN 220	Introduction to Networks	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
CITN 222	Wireless Networking & Security	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$55	\$0
CITN 225	Switch Route Wireless Essentls	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
CITN 230	Linux Operating System	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		

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Tuition and Course Fee Schedule

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
CITN 240	Ent Networking Sec Automation	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$425	\$0
CITN 244	Securing Networking Devices	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$125	\$0
CITN 250	Microsoft Network Server	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
CITN 280	IT Security Foundations	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
CITO 100	Cloud Foundations with AWS	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CITO 120	Cloud Architecting with AWS	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CITO 140	Cloud Development Ops with AWS	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CITO 240	Machine Learning with AWS	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CITP 110	Intro to Programming - Python	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$22	\$0
CITP 130	Intro to Mobile App Devel	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$20	\$0
CITP 140	Software Testing	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$20	\$0
CITP 150	Intro to VB.NET Programming	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$22	\$0
CITP 180	Intro to C#.NET Programming	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$22	\$0
CITP 190	Intro to Programming in JAVA	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$22	\$0
CITP 220	Game Design & Development	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$20	\$0
CITP 230	Mobile App Devel for Android	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$20	\$0
CITP 235	Mobile App Devel for Apple	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$20	\$0
CITP 240	Advanced Software Testing	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$20	\$0

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
CITP 250	Advanced VB.NET Programming	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$22	\$0
CITP 280	Advanced C#.NET Programming	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$22	\$0
CITP 290	Adv JAVA Programming for Busn	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$25	\$0
CITP 295	Programming Internship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CITS 110	Helpdesk Support Specialist	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITS 125	Computer Support: A+ Cert Prep	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$262	\$0
CITS 170	Basic Electronic for PC Repair	7	\$840	\$1,680	\$2,520	\$2,940	\$420	\$25	\$105	\$140	\$0
CITS 172	Intro to Basic Electronics	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$140	\$0
CITS 176	Computer Troubleshooting	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$40	\$0
CITS 225	Networking for PC Technicians	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$168	\$0
CITS 230	Computer Virtualization	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITS 285	IT Professional Internship	2 to 3	\$240-\$360	\$480-\$720	\$720-\$1,080	\$840-\$1,260	\$120-\$180	\$25	\$30-\$45		
CITW 150	Internet Literacy	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$12	\$0
CITW 160	Web Development HTML & CSS	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITW 165	Web Development JavaScript	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0
CITW 175	Web Site Management	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$15	\$0

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
CITW 180	Web Development ASP.NET	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$20	\$0
CITW 185	Web Development PHP & MySQL	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$20	\$0
CIVL 101	Civil Drafting	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$75	\$0
CIVL 110	Density Certification	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
CIVL 120	Surveying	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$135	\$0
CIVL 124	Route Survey	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$135	\$0
CIVL 131	Traffic Technology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$55	\$0
CIVL 135	Soils Technology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
CIVL 141	Site Inspection	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$30	\$0
CIVL 143	Site Dsgn & Layout/Civil Techn	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$65	\$0
CIVL 225	Civil Tech Independent Study	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
CIVL 241	Statics/Strengh of Materials	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$25	\$0
CIVL 290	Civil Technology Internship	2 to 4	\$240-\$480	\$480-\$960	\$720-\$1,440	\$840-\$1,680	\$120-\$240	\$25	\$30-\$60		
CJUS 101	Intro to Criminal Justice	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 102	Crime Causes and Conditions	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 103	Criminal Law	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 104	Theory of Patrol	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 106	Intro to Juvenile Justice	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 126	Juvenile Offenders/Families	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		

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			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
CJUS 131	Introduction to Corrections	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 133	Juvenile Residential Services	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 134	Probation and Parole	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 135	Legal Issues in Corrections	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 201	Criminal Justice Org/Admin	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 203	Criminal Procedure	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 204	Criminal Investigation	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
CJUS 205	Policing into the 21st Century	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 207	Digital Evidence/1st Responder	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 210	Intro to Forensic Science	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$30	\$0
CJUS 242	Unarmed Defense	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$39	\$0
CJUS 245	Report Writing/Crim Justice	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 247	Juvenile Justice: Special Pops	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 250	Correctional Institutions	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 251	Correctional Clients	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 255	Human Relations/Crim Justice	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 270	Police Academy I	14	\$1,680	\$3,360	\$5,040	\$5,880	\$840	\$25	\$210	\$405	\$400
CJUS 271	Police Academy II	21	\$2,520	\$5,040	\$7,560	\$8,820	\$1,260	\$25	\$315	\$3,020	\$0
CJUS 272	Local Corrections Academy I	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$60	\$0

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
CJUS 273	Local Corrections Academy II	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$240	\$0
CJUS 285	Law Enforcement Internship	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
CJUS 286	Juvenile Internship I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CJUS 288	Corrections Internship	2 to 4	\$240-\$480	\$480-\$960	\$720-\$1,440	\$840-\$1,680	\$120-\$240	\$25	\$30-\$60		
COMM 110	Communication in the Workplace	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
COMM 120	Dynamics of Communication	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
COMM 130	Fundamentals Public Speaking	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
COMM 200	Small Group Communication	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
COMM 240	Interpersonal Communication	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
COMM 260	Nonverbal Communication	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
COMM 270	Mass Communication	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
COMM 280	Intercultural Communication	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CPAR 250	Community Paramedicine I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$204	\$0

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CPAR 251	Chronic Care in the Community	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$560	\$0
CPAR 252	Community Paramedicine II	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$204	\$0
CPAR 270	Community Paramedic Clinical	6.5	\$780	\$1,560	\$2,340	\$2,730	\$390	\$25	\$98	\$1,119	\$0
CPSC 101	Intro to Computer Science	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
CPSC 131	Numerical Methods and MATLAB	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$20	\$0
CPSC 230	Algorithms and Computing w/C++	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$20	\$0
CPSC 231	Computing and Data Structures		\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$20	\$0
CPSC 260	Computer Science Structures	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
DANC 100	Intro to Dance Techniques	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
DANC 102	Beginning Modern	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
DANC 103	Beginning Jazz	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
DANC 161	Dance Repertory	0.5 to 2	\$60-\$240	\$120-\$480	\$180-\$720	\$210-\$840	\$30-\$120	\$25	\$7.50-\$30		
DANC 290	Dance Studio Internship	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
DCTM 100	Intro to the Built Environment	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$215	\$0
DCTM 101	Drafting/Intro to CAD	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$265	\$0

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DCTM 102	Industrial/Construction Safety	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$83	\$0
DCTM 103	Codes and Specifications	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$140	\$0
DCTM 150	Civil Construction Materials	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$115	\$0
DCTM 200	Construction Management I	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$230	\$0
DCTM 201	Construction Management II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$230	\$0
DCTM 210	MEP Equipment for Buildings	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
DCTM 220	BIM for Construction	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$340	\$0
DENT 140	Oral Histology & Embryology	1.5	\$180	\$360	\$540	\$630	\$90	\$25	\$23	\$203	\$0
DENT 142	PreClinical Dental Hygiene	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$203	\$0
DENT 144	PreClinic Dental Hyg Practice	8	\$960	\$1,920	\$2,880	\$3,360	\$480	\$25	\$120	\$1,871	\$1,200
DENT 146	Head, Neck & Oral Anatomy	5.5	\$660	\$1,320	\$1,980	\$2,310	\$330	\$25	\$83	\$458	\$0
DENT 148	Dental Radiography	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$511	\$0
DENT 152	Dental Hygiene I	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$203	\$0
DENT 154	Clinical Dental Hygiene I	8	\$960	\$1,920	\$2,880	\$3,360	\$480	\$25	\$120	\$2,451	\$250
DENT 156	Nutrition	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$203	\$0
DENT 158	Dental Pharmacology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$203	\$0
DENT 161	Principles of Periodontics	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$203	\$0
DENT 174	Clinical Dental Hygiene II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$1,567	\$0
DENT 176	Dental Materials & Methods	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$602	\$0
DENT 240	Anxiety & Pain Control Mgmt	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$607	\$0

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
DENT 242	Dental Hygiene III	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$233	\$0
DENT 244	Clinical Dental Hygiene III	12	\$1,440	\$2,880	\$4,320	\$5,040	\$720	\$25	\$180	\$3,576	\$275
DENT 247	Oral Pathology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$203	\$0
DENT 248	Dental Public Health & Educ	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$236	\$0
DENT 252	Dental Hygiene IV	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$203	\$0
DENT 254	Clinical Dental Hygiene IV	12	\$1,440	\$2,880	\$4,320	\$5,040	\$720	\$25	\$180	\$3,602	\$0
DENT 256	Community Oral Health	1.5	\$180	\$360	\$540	\$630	\$90	\$25	\$23	\$198	\$0
DENT 270	Dental Hygiene Board Review	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$258	\$0
DENT 290	Directed Study	0.25 to 6	\$30-\$720	\$60-\$1,440	\$90-\$2,160	\$105-\$2,520	\$15-\$360	\$25	\$3.75-\$90		
DMAC 120	Intro to Audio Production	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$60	\$0
DMAC 130	Intro to Video Production	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$85	\$0
DMAC 131	Digital Cinematography I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$95	\$0
DMAC 132	Video Post-Production I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$25	\$0
DMAC 140	Pre-Production Design	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$35	\$0
DMAC 141	Ethics and Impact of the Media	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
DMAC 231	Digital Cinematography II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$100	\$0
DMAC 232	Video Post-Production II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$25	\$0
DMAC 234	Studio Production Techniques	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$55	\$0
DMAC 240	Employment Issues in Media	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		

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2024 – 2025
Tuition and Course Fee Schedule

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DMAC 246	Workshop: Video	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$35	\$0
DMAC 255	Digital Presentation & Signage	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$75	\$0
DMAC 260	World Cinema	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$25	\$0
DMAC 295	Media/Cinema Portfolio	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
DMAC 296	Media/Cinema Internship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
DTSC 200	Principles of Data Science	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
DTSC 201	Data Science with Python	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ECON 120	Power, Authority and Exchange	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ECON 201	Principles of Economics-Micro	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ECON 202	Principles of Economics-Macro	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ECON 213	U.S. Economic/Business History	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ECON 260	Comparative Economic Systems	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
EDUC 204	Educational Psychology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
EDUC 220	Introduction to Education	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
EDUC 226	Reading in Elementary School	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
EDUC 228	Technology in Education	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		

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EDUC 230	Intro to Special Education	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
EDUC 280	Teacher Education Practicum	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ELTA 105	Elect. Industry Orientation	0.5	\$60	\$120	\$180	\$210	\$30	\$25	\$8	\$10	\$0
ELTA 106	Basic Electrical Calculations	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$10	\$0
ELTA 120	AC Fundamentals - Electrician	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$57	\$8
ELTA 155	Transformer Fundamentals	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$57	\$8
ELTA 160	PLC Overview for Electricians	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$83	\$7
ELTA 180	Introduction to Fire Alarms	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$45	\$0
ELTE 104	Employee Worksite Basics	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$5	\$0
ELTE 108	Practical Electricity I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$74	\$6
ELTE 109	Practical Electricity II	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$64	\$6
ELTE 110	Practical Electricity	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$118	\$12
ELTE 111	Intro to Industrial Automation	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$115	\$15
ELTE 112	Basic Wiring Installation	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$70	\$5
ELTE 121	Electrical Mathematics	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$95	\$0
ELTE 122	Industrial Control Electronics	7	\$840	\$1,680	\$2,520	\$2,940	\$420	\$25	\$105	\$102	\$0
ELTE 123	Motors and Transformers	7	\$840	\$1,680	\$2,520	\$2,940	\$420	\$25	\$105	\$100	\$10
ELTE 129	Machine Controls I - A	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$48	\$0
ELTE 130	Machine Controls I - B	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$72	\$0
ELTE 131	Machine Controls I	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$115	\$0

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2024 – 2025 Tuition and Course Fee Schedule

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
ELTE 132	Control Panel Assembly	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$480	\$0
ELTE 136	Digital Basics	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$107	\$0
ELTE 141	National Electrical Code I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$30	\$0
ELTE 142	National Electrical Code II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$30	\$0
ELTE 145	Electrical Prints for Building	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$90	\$10
ELTE 147	National Electric Code Update	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$10	\$0
ELTE 150	Electric Motor Maintenance	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$55	\$0
ELTE 154	Utility Prints and Diagrams	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$30	\$0
ELTE 156	Lineworker/Utility Rigging	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$90	\$10
ELTE 173	Energy Industry Fundamentals I	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$20	\$0
ELTE 174	Energy Industry Fundamental II	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$20	\$0
ELTE 181	Pole Climbing I	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$125	\$0
ELTE 182	Pole Climbing II	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$130	\$0
ELTE 185	Pole Climbing Practice I	0.5	\$60	\$120	\$180	\$210	\$30	\$25	\$8	\$105	\$0
ELTE 186	Pole Climbing Practice II	0.5	\$60	\$120	\$180	\$210	\$30	\$25	\$8	\$105	\$0
ELTE 187	Pole Climbing Practice III	0.5	\$60	\$120	\$180	\$210	\$30	\$25	\$8	\$85	\$0
ELTE 188	Pole Climbing Practice IV	0.5	\$60	\$120	\$180	\$210	\$30	\$25	\$8	\$85	\$0
ELTE 232	Machine Controls II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$120	\$10

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ELTE 251	Energy Generation & Control I	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$90	\$0
ELTE 252	Energy Generation & Control II	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$90	\$0
ELTE 255	Power Instrumentation	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$90	\$0
ELTE 260	Programmable Controllers I	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$220	\$5
ELTE 261	Programmable Controllers II	8	\$960	\$1,920	\$2,880	\$3,360	\$480	\$25	\$120	\$220	\$5
ELTE 262	Programmable Controllers III	8	\$960	\$1,920	\$2,880	\$3,360	\$480	\$25	\$120	\$165	\$0
ELTE 270	Lineworker Fundamentals	1.5	\$180	\$360	\$540	\$630	\$90	\$25	\$23	\$60	\$0
ELTE 272	Electric Basic Line Climbing	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$385	\$80
ELTE 274	Ground/Utility Worker	9	\$1,080	\$2,160	\$3,240	\$3,780	\$540	\$25	\$135	\$690	\$0
ELTE 276	Energized Secondary Worker	8	\$960	\$1,920	\$2,880	\$3,360	\$480	\$25	\$120	\$595	\$0
ELTE 290	Electrical Internship	2 to 4	\$240-\$480	\$480-\$960	\$720-\$1,440	\$840-\$1,680	\$120-\$240	\$25	\$30-\$60		
ELTE 291	Electrical Project Lab	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
EMTA 100	Emergency Medical Responder	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$241	\$35
EMTA 121	EMT Medical Trauma	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$341	\$0
EMTA 122	EMT Skills	5.5	\$660	\$1,320	\$1,980	\$2,310	\$330	\$25	\$82.50	\$1,088	\$0
EMTA 125	EMT Clinical	2.25	\$270	\$540	\$810	\$945	\$135	\$25	\$33.75	\$1,290	\$0
EMTA 222	EMS Instructor-Coordinator	9	\$1,080	\$2,160	\$3,240	\$3,780	\$540	\$25	\$135	\$204	\$0

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EMTA 224	EMS Instr-Coord Student Teach	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
ENGL 098	Integrated Reading Writing I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 099	Integrated Reading Writing II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 118	Personal Writing	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ENGL 121	Composition I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 122	Composition II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 124	Technical Writing	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ENGL 127	Business Writing	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ENGL 131	Honors Composition I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 132	Honors Composition II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 200	Introduction to Literature	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ENGL 201	Introduction to Poetry	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 202	World Drama	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 208	Children's Literature	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 211	World Literature I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 212	World Literature II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 220	Science Fiction	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 240	The Film as Art	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 245	Popular Culture and Mass Media	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		

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ENGL 255	American Lit to 1865	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 256	American Lit 1865 to Present	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 260	African-American Literature	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 261	Creative Writing I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ENGL 266	British Lit to 1800	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 267	British Lit 1800 to Present	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 270	Gender and Literature	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 271	Creative Writing II	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ENGL 278	Writing the Novel	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ENGL 279	Prose Style	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ENGL 290	Shakespeare	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
ENGL 295	Independent Study in English	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
ENVR 121	Environmental Rules and Regs	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
ENVR 122	Enviro Sampl & Instrumentation	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$51	\$0
ENVR 131	Industrial Process Safety	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$51	\$0
ESOL 098	ESL Combined Skills Level 4	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90		
ESOL 099	ESL Combined Skills Level 5	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FIRE 100	Principles Emergency Services	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		

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FIRE 101	MI F.F.T.C. Basic Fire Level I	14	\$1,680	\$3,360	\$5,040	\$5,880	\$840	\$25	\$210	\$945	\$800
FIRE 102	MI F.F.T.C. Basic Fire Lev II	8	\$960	\$1,920	\$2,880	\$3,360	\$480	\$25	\$120	\$2,255	\$0
FIRE 104	Fire Behavior & Combustion	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
FIRE 105	Fire/Hydraulics/Water Supply	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FIRE 110	Fire Prevention	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
FIRE 112	Occup Health & Safety/Fire Svc	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FIRE 115	Bldg Construction/Fire Protect	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FIRE 122	Hazardous Materials Chemistry	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FIRE 125	Fire Protection Systems	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FIRE 150	Strategy and Tactics	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FIRE 210	Fire Investigation I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FIRE 215	Fire Investigation II	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
FIRE 220	Hazardous Materials/Fire Svc	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$10	\$0
FIRE 245	Fire Officer I & II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FIRE 250	Fire Administration I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FIRE 255	Fire Officer III & IV	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FIRE 260	Legal Aspects/Fire Service	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FIRE 265	Fire Service Blue Card	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$100	\$0

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			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
FIRE 270	Fire Service Career Developmnt	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
FIRE 280	Fire Directed Indep Study	0.5 to 6	\$60-\$720	\$120-\$1,440	\$180-\$2,160	\$210-\$2,520	\$30-\$360	\$25	\$7.50-\$90		
FREN 121	Elementary French I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FREN 122	Elementary French II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FREN 201	Intermediate French I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
FREN 202	Intermediate French II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
GEOG 120	Introduction to Geography	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$6	\$0
GEOG 200	World Regional Geography	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$20	\$0
GEOG202	Geography of North America	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$20	\$0
GEOG220	Weather, Forecasting & Climate	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$20	\$0
GEOG 221	Physical Geography	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$37	\$0
GEOL 221	Physical Geology	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$30	\$0
GEOL 222	Historical Geology	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$45	\$0
GEOL 230	Environmental Geology	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$45	\$0
GERO 100	Introduction to Human Aging	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$8	\$0
GERO 164	Med & Alcohol Use/Older Adults	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
GERO 169	Legal Rights of Older Adults	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
GERO 191	Special Topics in Gerontology	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
GRMN 121	Elementary German I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
GRMN 122	Elementary German II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
GRMN 201	Intermediate German I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
GRMN 202	Intermediate German II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
GSCI 100	Intro to Geospatial Tech	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$40	\$0
GSCI 110	Beginning ArcGIS	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$70	\$0
GSCI 120	Advanced ArcGIS	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$90	\$0
GSCI 150	Drone Flight for Industry	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$120	\$0
GSCI 210	Global Positioning Systems	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$130	\$0
GSCI 240	Cartography in GIS	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$40	\$0
GSCI 241	Remote Sens/AirPhoto Interpret	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$40	\$0
GSCI 250	Drone Map Analysis	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$120	\$0
GSCI 260	Automating Workflows in GIS	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$90	\$0
GSCI 264	Web GIS	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$90	\$0
GSCI 271	Parcel Mapping	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$65	\$0
GSCI2 75	GIS Proj Mgmt & Implementation	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$125	\$0

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
GSCI 290	GIS Internship	2 to 4	\$240-\$480	\$480-\$960	\$720-\$1,440	\$840-\$1,680	\$120-\$240	\$25	\$30-\$60		
HERT 110	Equipment Introduction	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$1,000	\$0
HERT 120	Heavy Engine Rebuild	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$1,740	\$0
HERT 125	Heavy Equipment Electronics	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$1,225	\$0
HERT 130	Equipment Hydraulics	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$1,374	\$0
HERT 135	Diesel Fuel Systems	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$1,024	\$0
HERT 140	Equipment Powertrain	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$1,357	\$0
HERT 145	Equipment Service Writing	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$920	\$0
HERT 160	Equipment HVAC/Cab Controls	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$743	\$35
HERT 210	Heavy Equipment Internship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
HIST 150	African-American History	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HIST 210	Historical Methods and Skills	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HIST 211	U.S. History to 1877	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HIST 212	U.S. History: 1877 to Present	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HIST 214	African History	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HIST 215	World History to 1500	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HIST 216	World History since 1500	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HIST 220	Michigan History	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HIST 235	Modern European History	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HIST 240	Latin American History	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
HIST 250	History of Modern Asia	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HIST 295	Independent Study in History	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
HONR 151	Honors Colloquy I	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
HONR 152	Honors Colloquy II	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
HONR 155	Community Service Practicum I	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
HONR 156	Community Service Practicum II	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
HONR 295	Honors Independent Study	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
HUMS 140	Art of Being Human	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HUMS 160	Mythology	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HUMS 213	World Civilizations to 1600	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HUMS 215	American Cultural Experience	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HUMS 223	The Western World to 1500	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HUMS 224	The Western World since 1500	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HUMS 260	Ancient Egypt	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
HUSE 100	Introduction to Human Services	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$2	\$0
HUSE 105	Personal Dynamics/Interviewing	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$2	\$0
HUSE 110	Child Abuse and Neglect	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$2	\$0

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Tuition and Course Fee Schedule

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
HUSE 242	The Family: Addiction/Violence	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$5	\$0
HUSE 282	Human Services Practicum I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$30	\$0
HUSE 284	Human Services Practicum II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$43	\$0
HVAC 100	Fundamentals of HVAC	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$118	\$4
HVAC 110	Applied Electricity I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$139	\$4
HVAC 111	Applied Electricity II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$133	\$4
HVAC 113	HVAC/R Piping	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$170	\$5
HVAC 115	Sheet Metal Fab & Installation	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$142	\$4
HVAC 120	Heating I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$174	\$4
HVAC 130	Air Conditioning I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$213	\$34
HVAC 140	Residential Energy	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$55	\$15
HVAC 201	Mechanical Code	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$90	\$6
HVAC 210	Solar Energy Technologies	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$135	\$0
HVAC 220	Heating II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$183	\$4
HVAC 221	Introduction to Hydronics	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$163	\$4
HVAC 230	Air Conditioning II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$208	\$4
HVAC 231	Heat Pump	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$183	\$4
HVAC 240	Refrigeration I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$223	\$4
HVAC 241	Refrigeration II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$208	\$4

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2024 – 2025
Tuition and Course Fee Schedule

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
HVAC 251	Fund of Direct Digital Control	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$213	\$5
HVAC 260	Building Commissioning	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$50	\$0
HVAC 280	EPA 608 Certification Review	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$35	\$30
HVAC 290	HVAC Internship	2 to 4	\$240-\$480	\$480-\$960	\$720-\$1,440	\$840-\$1,680	\$120-\$240	\$25	\$30-\$60		
IDMS 150	Sonographic Directed Study	1 to 8	\$120-\$960	\$240-\$1,920	\$360-\$2,880	\$420-\$3,360	\$60-\$480	\$25	\$15-\$120		
IDMS 170	Intro to Ultrasound Knobology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$525	\$127
IDMS 200	Sonographic Introduction	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$166	\$0
IDMS 201	General Sonography I: Abdomen	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$166	\$127
IDMS 202	OB/GYN Sonography I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$166	\$127
IDMS 234	Sonographic Physics	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$166	\$0
IDMS 245	Sonographic Instrumentation	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$166	\$0
IDMS 250	Vascular Technology I	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$176	\$318
IDMS 251	Vascular Technology II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$166	\$0
IDMS 255	Vascular Scan Lab I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$530	\$318
IDMS 256	Vascular Scan Lab II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$545	\$0
IDMS 265	General Sonography II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$166	\$0
IDMS 266	OB/GYN Sonography II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$166	\$0
IDMS 270	Sonographic Positioning I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$781	\$127
IDMS 271	Sonographic Positioning II	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$569	\$127

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
IDMS 280	Clinical Experience I	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$1,005	\$100
IDMS 281	Clinical Experience II	8	\$960	\$1,920	\$2,880	\$3,360	\$480	\$25	\$120	\$942	\$0
IDMS 282	Clinical Experience III	7.5	\$900	\$1,800	\$2,700	\$3,150	\$450	\$25	\$112.50	\$1,042	\$0
IDMS 295	DMS Special Topics	0.25 to 11	\$30-\$1,320	\$60-\$2,640	\$90-\$3,960	\$105-\$4,620	\$15-\$660	\$25	\$3.75-\$165		
INSU 105	Prin of Managing Evolving Risk	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
INSU 110	Personal Insurance	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
INSU 125	Commercial Insurance	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
INSU 175	Intro to Financial Advising	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
INSU 250	Claims and Underwriting	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
INSU 260	Life/Health Insur Licensing	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
INSU 270	Property/Casualty Insur Licens	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
INSU 285	Insurance Agency Operations	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
INSU 295	Insurance Internship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
IRXT 105	Introduction to Imaging	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$355	\$85
IRXT 111	Radiographic Positioning I	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$611	\$5
IRXT 112	Radiographic Positioning II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$611	\$5
IRXT 116	Patient Care in Radiography	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$353	\$40

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IRXT 123	Radiographic Independent Study	1 to 7	\$120-\$840	\$240-\$1,680	\$360-\$2,520	\$420-\$2,940	\$60-\$420	\$25	\$15-\$105		
IRXT 140	Image Analysis	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$403	\$0
IRXT 144	Digital Imaging and Exposure	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$353	\$0
IRXT 170	Clinical Practice I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$448	\$0
IRXT 172	Clinical Practice II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$373	\$0
IRXT 200	Intro to Radiologic Pathology	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$353	\$0
IRXT 214	Comprehensive Experience I	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$451	\$0
IRXT 215	Comprehensive Experience II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$373	\$0
IRXT 222	Radiobiology and Protection	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$353	\$0
IRXT 224	Radiologic Physics	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$353	\$0
IRXT 240	Sectional Anatomy	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
IRXT 280	Radiologic Tech Board Review	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$353	\$200
IRXT 295	Radiologic Tech Special Topics	0.25 to 11	\$30-\$1,320	\$60-\$2,640	\$90-\$3,960	\$105-\$4,620	\$15-\$660	\$25	\$3.75-\$165		
ISCI 121	Physical Science Concepts	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$52	\$0
ISCI 122	Integrate Sci for Education II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$51	\$0
ISCI 131	Integrated Physical Science	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$53	\$0
ISCI 245	S.T.E.M. Workplace Practices	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$53	\$0
JAPN 121	Elementary Japanese I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
JAPN 122	Elementary Japanese II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		

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JAPN 201	Intermediate Japanese I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
JAPN 202	Intermediate Japanese II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
JRNL 151	Newswriting and Reporting	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
JRNL 254	Opinion Writing	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LABR 200	Intro to Labor Relations	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LABR 204	Employment Law for Managers	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEAD 110	Leadership Development I	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
LEAD 111	Leadership Development II	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
LEGL 110	Editing Legal Documents	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
LEGL 115	Introduction to Legal Studies	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 125	Legal Research and Writing I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 160	Critical Thinking in Law	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 207	eDiscovery	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 211	Tort Law	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 212	Litigation Procedures	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 215	Business Law-Basic Principles	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 216	Commercial Transactions	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 217	Business Organizations	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 218	Litigation Specialties	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 219	Adv Busn Law for Acct Majors	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		

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2024 – 2025 Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
LEGL 221	Real Estate Transactions	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 222	Probate Law and Procedure	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 223	Domestic Relations	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 224	Administrative Law	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 225	Legal Research and Writing II	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 227	Bankruptcy and Collections	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 228	Computer Appl for the Law Ofc	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 229	Immigration Law	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 251	LegalStudies Independent Study	1 to 3	\$120-\$360	\$240-\$720	\$360-\$1,080	\$420-\$1,260	\$60-\$180	\$25	\$15-\$45		
LEGL 270	Paralegal Certification Prep	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$225	\$0
LEGL 280	Legal Studies Internship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
LEGL 295	Special Topics in Paralegal	0.25 to 11	\$30-\$1,320	\$60-\$2,640	\$90-\$3,960	\$105-\$4,620	\$15-\$660	\$25	\$3.75-\$165		
LING 230	Introduction to Linguistics	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MATH 095	Support for MATH115	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
MATH 097	Support for MATH119 or STAT170	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
MATH 098	Support for MATH120	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
MATH 106	Math Literacy with Review	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90		

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
MATH 109	Foundations of Algebra	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$55	\$0
MATH 114	Technical Math I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MATH 115	Technical Mathematics	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MATH 119	Math - Applications for Living	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MATH 120	College Algebra	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MATH 126	Precalculus	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75		
MATH 141	Calculus with Applications	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$25	\$0
MATH 151	Calculus I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MATH 152	Calculus II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MATH 201	Math for Elementary Teachers I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MATH 202	Math for Elementary Teacher II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MATH 253	Calculus III	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MATH 254	Intro to Differential Equation	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MATH 260	Linear Algebra	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MEDA 110	Intro MA Med Terms & Pathology	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$135	\$0
MEDA 110A	Intro MA Med Terms & Patho I	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$68	\$0
MEDA 110B	Intro MA Med Terms & Patho II	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$68	\$0

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
MEDA 126	MA Administrative Skills	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$245	\$0
MEDA 126A	MA Administrative Skills I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$123	\$0
MEDA 126B	MA Administrative Skills II	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$123	\$0
MEDA 135	MA Pharmacology & Med Math	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$135	\$0
MEDA 145	Legal & Ethical Concepts	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$135	\$0
MEDA 156	MA Clinical Procedures I	11	\$1,320	\$2,640	\$3,960	\$4,620	\$660	\$25	\$165	\$667	\$0
MEDA 156A	MA Clinical Procedures IA	5.5	\$660	\$1,320	\$1,980	\$2,310	\$330	\$25	\$83	\$334	\$0
MEDA 156B	MA Clinical Procedures IB	5.5	\$660	\$1,320	\$1,980	\$2,310	\$330	\$25	\$83	\$334	\$0
MEDA 166	MA Clinical Procedures II	7	\$840	\$1,680	\$2,520	\$2,940	\$420	\$25	\$105	\$338	\$0
MEDA 175	MA Certification Review	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$135	\$0
MEDA 177	MA Practicum Immersion	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$145	\$0
MEDA 177A	MA Practicum Immersion I	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$73	\$0
MEDA 177B	MA Practicum Immersion II	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$73	\$0
METD 100	Basic Mechanical Drafting	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$105	\$0

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
METD 105	PC Applications for Technology	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$90	\$0
METD 110	Mechanical CAD Drafting I	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$135	\$0
METD 111	Mechanical CAD Drafting II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$115	\$0
METD 130	Geometric Dimension/Tolerance	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$110	\$0
METD 150	Industrial Blueprint Reading	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$95	\$0
METD 170	Special Topics/Eng & Design	0.25 to 11	\$30-\$1,320	\$60-\$2,640	\$90-\$3,960	\$105-\$4,620	\$15-\$660	\$25	\$3.75-\$165		
METD 220	Basic Unigraphics/NX	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$155	\$0
METD 221	Advanced Unigraphics/NX	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$126	\$0
METD 240	Basic NX Machining	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$185	\$0
METD 250	Detailing Assembly Drawings	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$115	\$0
METD 265	Basic CAD FEA Simulation	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$120	\$0
METD 295	Engineering/Design Project Lab	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
METM 100	Manufacturing Processes	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$125	\$0
METM 108	Machine Tool Operations	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$213	\$0
METM 112	Introduction to CNC Machining	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$248	\$0

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2024 – 2025 Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
METM 150	Advanced CNC Machining	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$412	\$0
METM 170	Special Topics/Precision Mach	0.25 to 11	\$30-\$1,320	\$60-\$2,640	\$90-\$3,960	\$105-\$4,620	\$15-\$660	\$25	\$3.75-\$165		
METM 171	Special Topics/Machining	0.25 to 11	\$30-\$1,320	\$60-\$2,640	\$90-\$3,960	\$105-\$4,620	\$15-\$660	\$25	\$3.75-\$165		
METM 190	Metallurgy and Heat Treatment	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$385	\$0
METM 195	Quality/Metrology/Inspection	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$228	\$0
METM 220	Basic Mastercam	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$428	\$0
METM 221	Advanced Mastercam	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$495	\$0
METM 295	Precision Machine Project Lab	1 to 8	\$120-\$960	\$240-\$1,920	\$360-\$2,880	\$420-\$3,360	\$60-\$480	\$25	\$15-\$120		
METS 110	Mechanical Power Transmissions	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$422	\$0
METS 115	Intro to Mechanical Systems	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$352	\$0
METS 120	Industrial Pneumatics	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$387	\$0
METS 125	Intro to Hydraulics/Pneumatics	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$328	\$0

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
METS 130	Industrial Hydraulics	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$378	\$0
METS 140	Rigging	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$140	\$25
METS 145	Automated Systems	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$357	\$0
METS 160	Introduction to Robotics	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$357	\$0
METS 161	Intro to FANUC Robotics	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$357	\$0
METS 162	Intro to ABB Robotics	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$357	\$0
METS 170	Special Topics/Mechanical Sys	0.25 to 11	\$30-\$1,320	\$60-\$2,640	\$90-\$3,960	\$105-\$4,620	\$15-\$660	\$25	\$3.75-\$165		
METS 210	Lubrication and Bearings	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$412	\$0
METS 250	Gen. Prevent/Predictive Maint	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$190	\$100
METS 260	Advanced Robotics Capstone	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$397	\$20
METS 290	Manufacturing Internship	2 to 4	\$240-\$480	\$480-\$960	\$720-\$1,440	\$840-\$1,680	\$120-\$240	\$25	\$30-\$60		
METS 295	Mechanical Systems Project Lab	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
MGMT 150	Managing Customer Relations	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 200	Creative Thinking for Business	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 201	Time Management for Business	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
MGMT 202	Managing Difficult People	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
MGMT 223	Supervisory Skills	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 224	Human Resource Management	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$137	\$0
MGMT 225	Principles of Mgmt/Leadership	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$39	\$0
MGMT 227	Training/Development for Busn	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 228	Organization Behavior	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 229	Compensation Management	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 231	Developing and Leading Teams	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 234	Diversity in the Workplace	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$92	\$0
MGMT 237	Managing/Continual Improvement	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 280	Mgmt/Leadership Internship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
MGMT 300	Leading for Possibility	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 304	Organization Development	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 329	Advanced Mgmt Communication	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 332	Ethics: Assumpt for the Future	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 335	Managerial Statistics	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MGMT 337	Advanced Human Resource Mgmt	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$137	\$0
MGMT 345	Context and Transformation	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MILS 110	Introduction to the Army	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
MILS 111	Introduction to the Army-Lab	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
MILS 120	Foundations of Army Leadership	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
MILS 121	Fndtion of Army Leadership-Lab	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
MILS 210	Army Doctrine & Team Develpmnt	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		

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MILS 211	Army Doctrine/Team Develop-Lab	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
MILS 220	Mil Leadrshp & Decision Making	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
MILS 221	Mil Ldrshp/Decision Making-Lab	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
MKTG 119	Mktg/Manage Your Profess Image	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MKTG 120	Sales	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MKTG 130	Retailing	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MKTG 140	Principles of Advertising	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MKTG 200	Principles of Marketing	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MKTG 204	Marketing Research	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MKTG 210	Intro to Digital Marketing	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MKTG 229	Public Relations	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MKTG 235	Marketing Internship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MRIT 200	Professional Prospectus	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
MRIT 201	Computer Apps/Medical Imaging	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
MRIT 220	MR Physics I	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
MRIT 222	MR Physics II	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
MRIT 229	Applied Sectional Anatomy	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
MRIT 230	MR Procedures and Pathophys I	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
MRIT 232	MR Procedures and Pathophys II	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
MRIT 240	MRI Image Analysis	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
MRIT 260	MRI Pre-Clinical Preparation	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
MRIT 261	Clinical Practice I	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
MRIT 262	Clinical Practice II	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
MRIT 263	Clinical Practice III	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
MRIT 295	MRI Certification Exam Prep	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
MSGE 110	Massage for Beginners	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$82	\$0
MSGE 131	Massage I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$195	\$0
MSGE 132	Anatomy/Physiology Massage	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90		
MSGE 132A	Anatomy/Physiology Massage I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$77	\$0
MSGE 132B	Anatomy/Physiology Massage II	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$77	\$0
MSGE 137	Medical Terminology in Massage	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$77	\$0
MSGE 139	Pathology for Massage	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
MSGE 139A	Pathology for Massage I	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$77	\$0
MSGE 139B	Pathology for Massage II	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$77	\$0
MSGE 141	Massage Clinic I	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$182	\$0
MSGE 150	Masg Special Topics	0.25 to 7	\$30-\$840	\$60-\$1,680	\$90-\$2,520	\$105-\$2,940	\$15-\$420	\$25	\$3.75-\$105		
MSGE 151	Applied Massage Techniques	5.5	\$660	\$1,320	\$1,980	\$2,310	\$330	\$25	\$83		
MSGE 151A	Research Literacy	1.5	\$180	\$360	\$540	\$630	\$90	\$25	\$23	\$82	\$0
MSGE 151B	Event Massage	1.5	\$180	\$360	\$540	\$630	\$90	\$25	\$23	\$82	\$0
MSGE 151D	Special Populations	1.5	\$180	\$360	\$540	\$630	\$90	\$25	\$23	\$82	\$0
MSGE 170	Massage Directed/Indep Study	0.25 to 7	\$30-\$840	\$60-\$1,680	\$90-\$2,520	\$105-\$2,940	\$15-\$420	\$25	\$3.75-\$105		
MSGE 231	Massage II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$97	\$0
MSGE 232	Massage III	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$97	\$0
MSGE 235	Licensing Exam Prep	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$77	\$0
MSGE 241	Massage Clinic II	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$180	\$0
MSGE 242	Massage Clinic III	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$193	\$0
MSGE 253	Spa and Clinic Modalities	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$93	\$0
MSGE 254	Busn App for Massage	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$77	\$0

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
MSGE 256	Clinical Assess for Massage	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$82	\$0
MSGE 258	Career Longevity	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$82	\$0
MUSC 101	Vocal Jazz & Pop Ensemble	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$6	\$0
MUSC 106	Private Music Lesson	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$500	\$0
MUSC 108	Concert Choir	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$70	\$0
MUSC 109	Studio Class	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$30	\$0
MUSC 122	Rock Band	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$20	\$0
MUSC 123	Jazz Ensemble	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$50	\$0
MUSC 124	Multi-Instrumental Music Ensem	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$5	\$0
MUSC 134	Live Sound/Event Production	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MUSC 138	Keyboard Harmony I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MUSC 143	Beginning Piano I - Summer	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$20	\$0
MUSC 144	Beginning Piano I	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$20	\$0
MUSC 145	Beginning Piano II	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$20	\$0
MUSC 157	Applied Lesson I	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$450	\$0
MUSC 158	Applied Lesson II	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$450	\$0
MUSC 163	Aural Skills I	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
MUSC 164	Aural Skills II	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
MUSC 168	Rudiments of Music	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MUSC 171	Sound Design & Production	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$60	\$0

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
MUSC 172	Studio Recording	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$70	\$0
MUSC 193	Music Theory I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MUSC 194	Music Theory II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MUSC 197	Electronic Music Production	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
MUSC 199	Music Appreciation	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MUSC 237	Musical Theater Performance	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$40	\$0
MUSC 240	Musical Cultures to 1750	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MUSC 241	Musical Cultures 1750-Present	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
MUSC 255	Music Business & Management	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MUSC 257	Applied Lesson III	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$450	\$0
MUSC 258	Applied Lesson IV	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$450	\$0
MUSC 280	Private Composition	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$280	\$0
MUSC 296	Music Internship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
MUSC 298	Composition and Sound Design	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
NCAS 102	Noncredit Academic Supprt-ENGL	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCAS 103	Noncredit Academic Supprt-SOCL	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
NCAS 104	Noncredit Academic Supprt-PSYC	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCAS 105	Noncredit Academic Supprt-BUSN	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCBD 050	Building/Design Special Topics	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$0	\$0
NCCC 101	College Connect	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCCC 101E	College Connect - English	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCCC 101M	College Connect - Math	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCCE 200	Creative Arts	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$0	\$0
NCCE 700	Health and Wellness Seminars	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$0	\$0
NCCT 200	Noncredit Industrial Trades	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$0	\$0
NCCT 600	Noncredit Public Safety Svcs	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$0	\$0
NCCT 800	Noncredit Career Preparation	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$0	\$0
NCEL 030	Low Intermediate Accelerated	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$50	\$0
NCEL 033	Multi-Skills III	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$50	\$0
NCEL 034	ESL Combined Skills Level 3	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$700	\$0
NCEL 097	ESL Listening-Speaking	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		

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Tuition and Course Fee Schedule

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
NCEL 101	ESOL Skills Lab	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$110	\$0
NCEL 160	Health Careers for ESOL	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$425	\$0
NCEL 170	ESOL for Business	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$279	\$0
NCHE 102	AHA BLS Provider CPR	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$95	\$0
NCHE 227	Health Special Topics	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$0	\$0
NCJT 100	Non-Credit Software and Tech	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCJT 200	Business and Management	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCLD 210	Leadership Practicum I	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCLD 211	Leadership Practicum II	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCMA 101	Math Refresher	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCMA 106	NC - Math Literacy with Review	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCMA 110	Fundamentals of Mathematics	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NCRW 100	Foundations for Success	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$25	\$0
NCRW 101	Reading and Writing Refresher	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0		
NDXT 100	Neuroanatomy and Physiology	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$288	\$150
NDXT 101	Neurodiagnostic Procedures	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$195	\$200
NDXT 102	EEG Applications	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$230	\$150

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
NDXT 120	EEG Pre-Clinical Preparation	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$574	\$200
NDXT 130	Principles of EEG	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$230	\$100
NDXT 131	Electricity Principles/Safety	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$230	\$50
NDXT 132	EEG Instrumentation I	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$230	\$100
NDXT 200	EEG Procedures & Pathology I	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$230	\$50
NDXT 201	EEG Instrumentation II	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$230	\$100
NDXT 202	EEG Quality Control	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$230	\$50
NDXT 220	EEG Clinical Practice I	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$245	\$250
NDXT 221	EEG Clinical Practice II	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$421	\$150
NDXT 230	EEG Procedures & Pathology II	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$230	\$50
NDXT 231	EEG Procedures & Pathology III	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$230	\$50
NDXT 232	EEG Procedures & Pathology IV	0	\$0	\$0	\$0	\$0	\$0	\$25	\$0	\$230	\$50
NURS 101	Nursing Directed Study	0.25 to 6	\$30-\$720	\$60-\$1,440	\$90-\$2,160	\$105-\$2,520	\$15-\$360	\$25	\$3.75-\$90		
NURS 102	Nursing Directed Study	0.25 to 6	\$30-\$720	\$60-\$1,440	\$90-\$2,160	\$105-\$2,520	\$15-\$360	\$25	\$3.75-\$90		
NURS 118	Special Topics in Nursing	0.25 to 11	\$30-\$1,320	\$60-\$2,640	\$90-\$3,960	\$105-\$4,620	\$15-\$660	\$25	\$3.75-\$165		
NURS 119	Special Topics in Nursing	0.25 to 11	\$30-\$1,320	\$60-\$2,640	\$90-\$3,960	\$105-\$4,620	\$15-\$660	\$25	\$3.75-\$165		
NURS 200	Nursing Pharmacology	3.5	\$420	\$840	\$1,260	\$1,470	\$210	\$25	\$53	\$3	\$0

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
NURS 201	Patient-Centered Care	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$187	\$23
NURS 210	Transition to Prof Nursing	10.5	\$1,260	\$2,520	\$3,780	\$4,410	\$630	\$25	\$158	\$1,128	\$943
NURS 211	Intro to Nursing Practice	13.25	\$1,590	\$3,180	\$4,770	\$5,565	\$795	\$25	\$199	\$1,110	\$1,003
NURS 212	Concepts of Pharmacology	3.5	\$420	\$840	\$1,260	\$1,470	\$210	\$25	\$53	\$178	\$0
NURS 221	Nursing Practice I	10.75	\$1,290	\$2,580	\$3,870	\$4,515	\$645	\$25	\$161	\$1,098	\$173
NURS 222	Childbearing Families	5.5	\$660	\$1,320	\$1,980	\$2,310	\$330	\$25	\$83	\$679	\$0
NURS 231	Nursing Practice II	10	\$1,200	\$2,400	\$3,600	\$4,200	\$600	\$25	\$150	\$1,016	\$289
NURS 232	Children and Their Families	5.5	\$660	\$1,320	\$1,980	\$2,310	\$330	\$25	\$83	\$591	\$0
NURS 241	Nursing Practice III	11.75	\$1,410	\$2,820	\$4,230	\$4,935	\$705	\$25	\$176	\$1,365	\$75
NURS 242	Professional Practice	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$159	\$0
PARA 200	Paramedic Directed Study	1 to 7	\$120-\$840	\$240-\$1,680	\$360-\$2,520	\$420-\$2,940	\$60-\$420	\$25	\$15-\$105		
PARA 221	Paramedic Medical Trauma I	3.75	\$450	\$900	\$1,350	\$1,575	\$225	\$25	\$56.25	\$239	\$0
PARA 221A	Paramedic Medical Trauma IA	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$137	\$0
PARA 221B	Paramedic Medical Trauma IB	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
PARA 222	Paramedic Medical Trauma II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$239	\$0
PARA 222A	Paramedic Medical Trauma IIA	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
PARA 222B	Paramedic Medical Trauma IIB	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$124	\$0

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
PARA 222C	Paramedic Medical Trauma IIC	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$116	\$0
PARA 231	Paramedic Cardiology I	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$235	\$0
PARA 231A	Paramedic Cardiology IA	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$120	\$0
PARA 231B	Paramedic Cardiology IB	1.5	\$180	\$360	\$540	\$630	\$90	\$25	\$23	\$235	\$0
PARA 232	Paramedic Cardiology II	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$571	\$0
PARA 232A	Paramedic Cardiology IIA	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$120	\$0
PARA 232B	Paramedic Cardiology IIB	1.5	\$180	\$360	\$540	\$630	\$90	\$25	\$23	\$116	\$0
PARA 241	Paramedic Pharmacology I	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$235	\$0
PARA 241A	Paramedic Pharmacology IA	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15		
PARA 241B	Paramedic Pharmacology IB	1.5	\$180	\$360	\$540	\$630	\$90	\$25	\$23	\$120	\$0
PARA 242	Paramedic Pharmacology II	2.5	\$300	\$600	\$900	\$1,050	\$150	\$25	\$38	\$235	\$0
PARA 242A	Paramedic Pharmacology IIA	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$118	\$0
PARA 242B	Paramedic Pharmacology IIB	1.5	\$180	\$360	\$540	\$630	\$90	\$25	\$23	\$118	\$0

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
PARA 251	Paramedic Skills I	7.5	\$900	\$1,800	\$2,700	\$3,150	\$450	\$25	\$113	\$1,481	\$0
PARA 251A	Paramedic Skills IA	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PARA 251B	Paramedic Skills IB	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$887	\$0
PARA 252	Paramedic Skills II	7.5	\$900	\$1,800	\$2,700	\$3,150	\$450	\$25	\$113	\$1,492	\$0
PARA 252A	Paramedic Skills IIA	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$759	\$0
PARA 252B	Paramedic Skills IIB	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$759	\$0
PARA 261	Paramedic Clinical I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$1,360	\$0
PARA 262	Paramedic Clinical II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$1,493	\$0
PARA 262A	Paramedic Clinical IIA	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$545	\$0
PARA 262B	Paramedic Clinical IIB	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$545	\$0
PARA 262C	Paramedic Clinical IIC	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$477	\$0
PARA 263	Paramedic Internship	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$1,097	\$0
PFFT 100	Total Fitness A-Fitness	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
PFFT 101	Total Fitness B-Nutrition	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
PFFT 102	Total Fitness C-Weight Control	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
PFFT 109	Introduction to Fitness	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$60	\$0
PFFT 113	Core Strength & Flexiblty Trng	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$60	\$0
PFFT 114	Police Academy Fitness Trng	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
PFFT 119	Fire Academy Fitness Training	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$60	\$0
PFFT 170	Yoga: Beginning	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$60	\$0
PFFT 181	Lineworker Fitness A	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$60	\$0
PFFT 182	Lineworker Fitness B	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$60	\$0
PFFT 183	Lineworker Fitness C	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$60	\$0
PFHW 120	Health and Wellness for Police	0.5	\$60	\$120	\$180	\$210	\$30	\$25	\$8	\$15	\$0
PFHW 123	Human Nutrition	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$57	\$0
PFHW 163	Healthy Lifestyles	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$61	\$0
PFHW 181	Stress Management	1	\$120	\$240	\$360	\$420	\$60	\$25	\$15	\$51	\$0
PFKN 106	Group Fitness Instructor Prep	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$61	\$0
PFKN 170	Foundations of Kinesiology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$51	\$0
PFKN 200	Exercise Physiology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$61	\$0
PFKN 201	Exercise Physiology Lab	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$93	\$0
PFKN 205	Sport & Exercise Psychology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$51	\$0

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2024 – 2025 Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
PFKN 208	Biomechanics	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$61	\$0
PFKN 210	Athletic Training Principles	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$64	\$0
PFKN 250	Measurements in Kinesiology	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$71	\$0
PFKN 260	Growth and Motor Behavior	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$51	\$0
PFKN 270	Personal Trainer Preparation	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$94	\$0
PFKN 280	Kinesiology Internship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$51	\$0
PFWT 112	Intro to Weight Training	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$60	\$0
PFWT 123	Weight Training I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$60	\$0
PHIL 101	Introduction to Philosophy	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PHIL 151	Intro to Logic & Critcal Think	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
PHIL 152	Introduction to Ethics	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
PHIL 211	Philosophy: Ancient & Medieval	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
PHIL 212	Philosophy: Modern & Contemptry	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
PHIL 215	Philosophy of Religion	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PHIL 265	Ethical Issues in Medicine	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PHIL 295	Ind Study in Philosophy	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
PHOT 111	Digital Photography I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$37	\$0
PHOT 112	Digital Imag for Photographers	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$15	\$0

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Tuition and Course Fee Schedule

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
PHOT 113	Lighting Concepts and Applic	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$12	\$0
PHOT 114	Advanced Photographic Imaging	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$53	\$0
PHOT 119	Intermediate Lighting	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$45	\$0
PHOT 120	Still/Motion Capture & Editing	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$20	\$0
PHOT 190	Film Capture/Hybrid Imaging	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PHOT 200	Content on the Go	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PHOT 212	Advanced Still/Video Projects	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$48	\$0
PHOT 213	Portrait Photography	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$48	\$0
PHYS 120	The Art of Physics	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$52	\$0
PHYS 200	Intro to Applied Physics	5	\$600	\$1,200	\$1,800	\$2,100	\$300	\$25	\$75	\$52	\$0
PHYS 221	Introductory Physics I	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$56	\$0
PHYS 222	Introductory Physics II	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$56	\$0
PHYS 251	Physics I with Calculus	7	\$840	\$1,680	\$2,520	\$2,940	\$420	\$25	\$105	\$57	\$0
PHYS 252	Physics II with Calculus	7	\$840	\$1,680	\$2,520	\$2,940	\$420	\$25	\$105	\$57	\$0
PHYS 260	Statics for Engineers	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
POLS 120	American Political System	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
POLS 121	State and Local Government	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
POLS 201	Intro to Political Science	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
POLS 205	Government Internship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		

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2024 – 2025
Tuition and Course Fee Schedule

			Tuition^ (Bill Hrs x Tuition)							Course Fees	
Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
POLS 240	Introduction to Public Policy	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
POLS 250	Campaigns & Elections	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
POLS 260	Comparative Political Systems	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
POLS 270	International Relations	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
POLS 295	Ind Study in Political Science	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
PSYC 175	Psyc of Death: Prep for Living	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PSYC 180	Intro to Positive Psychology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PSYC 200	Introduction to Psychology	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
PSYC 202	Psychology of Personality	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PSYC 203	Social Psychology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PSYC 205	Human Growth and Development	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PSYC 209	Cognitive Psychology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PSYC 210	Brain and Behavior	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PSYC 221	Child Psychology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PSYC 222	Adolescent Psychology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PSYC 240	Psychology of Human Sexuality	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
PSYC 250	Abnormal Psychology	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
RELG 150	Intro to World Religions	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
RELG 210	Comparative Religions	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
RELG 211	Asian Religions and Traditions	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
RELG 230	Introduction to Christianity	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
RELG 232	Introduction to Islam	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
SCIN 287	Science Technology Internship	2 to 4	\$240-\$480	\$480-\$960	\$720-\$1,440	\$840-\$1,680	\$120-\$240	\$25	\$30-\$60		
SCIS 297	Independent Study in Science	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
SIGN 160	Intro to the Deaf Community	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
SIGN 161	American Sign Language I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
SIGN 162	American Sign Language II	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$10	\$0
SIGN 163	American Sign Language III	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$10	\$0
SIGN 164	American Sign Language IV	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$10	\$0
SIGN 166	Fingerspelling	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$10	\$0
SIGN 167	Beginning Sign to Voice	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$10	\$0
SIGN 170	Expressive/Receptive ASL	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$10	\$0
SIGN 200	Sign Practicum Seminar	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$50	\$0
SIGN 240	Intro to Transliterating	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$90	\$0
SIGN 250	Deaf Culture and History	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
SIGN 260	Linguistic Principles of ASL	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
SIGN 263	Intermediate Sign to Voice	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$50	\$0
SIGN 266	Post-Secondary Interpreting	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$50	\$0

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
SIGN 267	Sign Practicum I	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$50	\$0
SIGN 268	Sign Practicum II	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$50	\$0
SIGN 270	Advanced Interpreting	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$50	\$0
SIGN 271	Advanced Sign to Voice	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$50	\$0
SIGN 293	Principles of Interpreting	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$35	\$0
SIGN 296	Specialized Interpreting	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$35	\$0
SOCL 120	Introduction to Sociology	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
SOCL 254	Marriage and Family	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
SOCL 255	Contemporary Social Problems	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
SOCL 260	Race and Ethnicity	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
SOWK 101	Introduction to Social Work	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$5	\$0
SPAN 106	Spanish for Health Care	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
SPAN 121	Elementary Spanish I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
SPAN 122	Elementary Spanish II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
SPAN 201	Intermediate Spanish I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
SPAN 202	Intermediate Spanish II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
STAT 170	Introduction to Statistics	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
STAT 215	Intro to Probability and Stats	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
STPR 145	Foundations Sterile Processing	6.5	\$780	\$1,560	\$2,340	\$2,730	\$390	\$25	\$98	\$227	\$0

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Course Code	Course Title	Bill Hrs	District Resident (\$120)	In-State (\$240)	Out-of-State (\$360)	Int'l Student (\$420)	Senior Citizen (\$60)*	Registration Fee^ (Per semester, not course)	Student Support^ (Bill hrs x \$15)	Refundable	Non-Refundable
STPR 148	Sterile Processing Externship	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$53	\$0
SURG 100	Fundamentals of Surgical Tech	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$313	\$0
SURG 101	The Surgical Patient	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$313	\$0
SURG 103	Surgical Asepsis	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$308	\$0
SURG 108	Surgical Pharmacology	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$313	\$0
SURG 109	Basic Surgical Procedures	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$313	\$0
SURG 110	Advanced Surgical Procedures	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$313	\$0
SURG 111	Surgical Specialty/Prof Prep	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$640	\$0
SURG 121	Applied Surgical Techniques I	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$699	\$255
SURG 122	Applied Surgical Techniques II	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$785	\$0
SURG 123	Applied Surgical Techniq III	8	\$960	\$1,920	\$2,880	\$3,360	\$480	\$25	\$120	\$523	\$0
SURG 124	Applied Surgical Techniques IV	8	\$960	\$1,920	\$2,880	\$3,360	\$480	\$25	\$120	\$453	\$0
TECH 100	Safety-OSHA10	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$83	\$0
TECH 102	General Industry Safety	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$109	\$11
THEA 110	Introduction to Theatre	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
THEA 114	Intro to Technical Theatre	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$0	\$30
THEA 115A	Tech Thea II-Set/Light Design	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		

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THEA 115B	Tech Thea II-Prop Design/Const	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
THEA 115C	Tech Thea II-Costume Des/Const	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
THEA 115D	Tech Thea II-Produc/Stage Mgmt	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
THEA 120	Introduction to Acting	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
THEA 131	Studio Theatre Performance I	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$20	\$0
THEA 132	Studio Theatre Performance II	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$20	\$0
THEA 141	Acting I - Contemporary	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
THEA 143	Stage Voice for the Actor	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
THEA 150	Acting for the Camera	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$50	\$0
THEA 160	Stage Combat	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
THEA 171	Play Analysis	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
THEA 173	Movement for the Actor	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		
THEA 181	Improvisation	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
THEA 210	Theatre History	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
THEA 220	Play Directing	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
THEA 225	Building a Character	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30		
THEA 233	Studio Theatre Performance III	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60	\$20	\$0

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THEA 240	Acting-Shakespeare	4	\$480	\$960	\$1,440	\$1,680	\$240	\$25	\$60		
THEA 283	Audition Workshop	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$30	\$0
THEA 285	Stage Makeup	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$30	\$0
WELD 103	Combination Welding	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$465	\$0
WELD 105	Advanced ARC Welding	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$468	\$0
WELD 108	Welding for Non-Majors	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$475	\$0
WELD 110	Gas Metal ARC Welding	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$465	\$0
WELD 111	Gas Tungsten ARC Welding	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$468	\$0
WELD 115	Robotic MIG Welding	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$390	\$0
WELD 125	Structural Print Reading/Weld	2	\$240	\$480	\$720	\$840	\$120	\$25	\$30	\$35	\$0
WELD 140	Creative Welding	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45	\$465	\$0
WELD 170	Special Topics in Welding	0.25 to 11	\$30-\$1,320	\$60-\$2,640	\$90-\$3,960	\$105-\$4,620	\$15-\$660	\$25	\$3.75-\$165		
WELD 191	Welding Project Lab	1 to 4	\$120-\$480	\$240-\$960	\$360-\$1,440	\$420-\$1,680	\$60-\$240	\$25	\$15-\$60		
WELD 201	Tool and Die Welding	4.5	\$540	\$1,080	\$1,620	\$1,890	\$270	\$25	\$68	\$455	\$10
WELD 205	Pipe Welding	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$465	\$0
WELD 220	Structural Fab & Inspection	6	\$720	\$1,440	\$2,160	\$2,520	\$360	\$25	\$90	\$465	\$0
WELD 250	Welding Internship	3	\$360	\$720	\$1,080	\$1,260	\$180	\$25	\$45		

*Senior Citizen Tuition: MI residents living outside the LCC district qualify for a reduced rate of \$120 per billing hour. ^Refunds based on Teaching Period dates.
Tuition and Fees are subject to change by action of the LCC Board of Trustees.

2024-2025 Course Descriptions

ACAD 100 First-Year Experience

Credit Hours: 1 / Billing Hours: 1

First-Year Experience introduces students to college and the skills they will need for success in college. Students will learn and apply strategies for adjusting to college and improving class performance. Topics include academic and self-management issues, such as campus resources, study techniques, diversity, communication, critical thinking and problem solving, career planning, time management, goal-setting, finances and stress-management. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or concurrent enrollment in (ENGL 098 or ENGL 099 or ESOL 098 or ESOL 099).

ACCG 100 Practical Accounting Non-Major

Credit Hours: 3 / Billing Hours: 3

Students will learn the bookkeeping procedures necessary for preparation of financial statements and payroll. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Math Level 4.

ACCG 101 Accounting Info for Management

Credit Hours: 3 / Billing Hours: 3

Students will learn to interpret financial statements and use this information for analysis, budgeting, and decision-making. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Math Level 4.

2024-2025 Course Descriptions

ACCG 160 Payroll Systems and Taxes

Credit Hours: 2 / Billing Hours: 2

This course covers laws affecting payroll, calculation of payroll and payroll taxes using both manual and computer payroll systems, preparation of tax forms for payroll taxes, sales and use taxes, and personal property taxes. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Math Level 4.
- Recommended: ACCG 100 or ACCG 210.
- Course Note: Knowledge of Microsoft Excel is recommended, and access to Microsoft Excel is needed to complete required assignments.

ACCG 161 Accounting with Quickbooks

Credit Hours: 2 / Billing Hours: 2

Students will have hands-on experience in setting up an accounting system for a new or existing company using the QuickBooks general ledger accounting software. Students also will learn how to perform numerous types of accounting procedures using QuickBooks. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Math Level 4.
- Recommended: ACCG 100 or equivalent coursework or equivalent work experience.

ACCG 210 Principles of Financial Accg

Credit Hours: 4 / Billing Hours: 4

This course introduces the basic concepts of financial accounting, including the processing and reporting of business transactions throughout the accounting cycle of service and merchandising businesses. The course includes the preparation and analysis of the financial statements, including accounting for cash, internal controls, inventories, receivables, plant assets, current liabilities, long-term liabilities, bonds, equity, statement of cash flows, as well as financial statement analysis. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Math Level 4.
- Course Notes:
 - 1) Textbooks for this course are included in the course fee. Access to the textbooks will be given on the first day of class.
 - 2) Access to Microsoft Excel is needed to complete required assignments.

2024-2025 Course Descriptions

ACCG 211 Principles of Managerial Accg

Credit Hours: 4 / Billing Hours: 4

This course emphasizes developing an understanding of cost and managerial accounting. Students will learn how to use managerial accounting tools for analysis, reporting, and facilitating decision-making. They will also learn about product costing, budgeting, and cost control methods. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in ACCG 210.
- Placement Score: Reading Level 5 and Math Level 4.
- Recommended: Intermediate Algebra or higher.
- Course Notes:
 - 1) Textbooks for this course are included in the course fee. Access to the textbooks will be given on the first day of class.
 - 2) Access to Microsoft Excel is needed to complete required assignments.

ACCG 215 Financial Data Analytics

Credit Hours: 4 / Billing Hours: 4

An overview of data analytics, focusing on the application of analytical and quantitative tools in business decision-making. Introduces students to the analytical techniques and tools used in collecting, cleansing, transforming, analyzing, visualizing, and communicating data in accounting, finance, marketing, and business management. Students gain hands-on knowledge of Excel and other analytical applications and tools supporting the use of data for decision-making. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in ACCG 210.
- Placement Score: Reading Level 5 and Math Level 4.
- Corequisite Course: ACCG 211.
- Recommended: Basic knowledge of statistics.
- Course Notes:
 - 1) Knowledge of Microsoft Excel recommended, and access to Microsoft Excel is needed to complete required assignments.
 - 2) Students using Apple products may not be able to complete all assignments. Students may need access to a Windows-based computer. Students using Apple products may have to checkout a computer from the library or come on campus to complete all assignments.

2024-2025 Course Descriptions

ACCG 220 Intermediate Accounting I

Credit Hours: 4 / Billing Hours: 4

Intermediate Accounting I is the first in a two-course sequence focusing on financial accounting and reporting, especially for publicly-traded corporations. Topics include the environment of financial accounting, accounting theory, financial statement preparation, time value of money concepts, and specific issues in accounting for current and long-term assets. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in ACCG 211.
- Placement Score: Reading Level 5.
- Course Note: Knowledge of Microsoft Excel recommended, and access to Microsoft Excel is needed to complete required assignments.

ACCG 221 Intermediate Accounting II

Credit Hours: 4 / Billing Hours: 4

Intermediate Accounting II is the second in a two-course sequence, focusing on financial accounting and reporting, especially for publicly-traded corporations. Topics include accounting for investments, liabilities, and shareholders' equity. In addition, the statement of cash flows and accounting changes and error correction are reviewed in depth. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in ACCG 220.
- Placement Score: Reading Level 5.
- Course Note: Knowledge of Microsoft Excel is recommended, and access to Microsoft Excel is needed to complete required assignments.

ACCG 230 Cost/Managerial I

Credit Hours: 4 / Billing Hours: 4

This course focuses on accounting for manufacturing; cost-volume-profit analysis, responsibility accounting, decision models, activity based costing and activity based management. Other topics include: Just-In-Time inventory, absorption vs. variable costing, role-responsibility and professional ethics of the accountant. Computer applications are emphasized. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in ACCG 211.
- Placement Score: Reading Level 5.
- Course Note: Knowledge of Microsoft Excel is recommended, and access to Microsoft Excel is needed to complete required assignments.

2024-2025 Course Descriptions

ACCG 240 Federal Income Tax I

Credit Hours: 4 / Billing Hours: 4

This class is the first in a two-semester sequence in federal income tax. This course deals with taxation of individuals from a historical and theoretical perspective, as well as preparation of individual income tax returns under current tax law. (Offered Spring, Summer)

- Prerequisite Course: Minimum 2.0 in ACCG 210.
- Placement Score: Reading Level 5.

ACCG 241 Federal Income Tax II

Credit Hours: 4 / Billing Hours: 4

This class is the second in a two-semester sequence in federal income tax. This course deals with the taxation of corporations, s-corporations, LLC's, partnerships, estates, and trusts from a historical and theoretical perspective, and as well as preparation of tax and information returns under current tax law. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in ACCG 240.
- Placement Score: Reading Level 5.

ACCG 245 Accounting Internship

Credit Hours: 2 / Billing Hours: 2

This course provides an opportunity to apply classroom learning to a career-related position by working a minimum of 128 hours at an approved work site. A student may do an internship at their own job only if the duties are new, accounting related, and provide an appropriate learning situation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Recommended: Minimum of 8 upper level ACCG credits.

2024-2025 Course Descriptions

ACCG 260 Accounting Systems

Credit Hours: 4 / Billing Hours: 4

Accounting Systems prepares students to work with and design information systems. Students analyze systems, work with computerized accounting systems, database design, and problem solving with spreadsheets. (Offered Fall, Spring)

- Prerequisite Courses: Minimum 2.0 in ACCG 211.
- Placement Scores: Reading Level 5.
- Course Note: Knowledge of Microsoft Excel is recommended, and access to Microsoft Excel is needed to complete required assignments.

ACCG 271 Principles of Finance

Credit Hours: 3 / Billing Hours: 3

This course emphasizes the short- and long-term decisions a financial manager may face. Topics include working capital management, risk, cost of capital, capital markets, long-term debt, stocks and dividend policy, mergers and acquisitions, and international financial markets as these topics relate to obtaining financing for a business. (Offered Spring, Summer)

- Prerequisite Course: Minimum 2.0 in ACCG 211.
- Placement Score: Reading Level 5.
- Course Note: Knowledge of Microsoft Excel recommended, and access to Microsoft Excel is needed to complete required assignments.

ACCG 280 Governmental Accounting

Credit Hours: 3 / Billing Hours: 3

Applications of fund accounting principles are applied to governmental (local and state) and not-for-profit entities. Students learn skills necessary to understand the organization, accounting functions, auditing, and financial reporting practices of governmental and non profit organizations. Governmental Accounting Standards Board (GASB) and Financial Accounting Standards Board (FASB) requirements are taught. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in ACCG 211.
- Placement Score: Reading Level 5.
- Course Note: Knowledge of Microsoft Excel recommended, and access to Microsoft Excel is needed to complete required assignments.

2024-2025 Course Descriptions

ACCG 290 Auditing

Credit Hours: 4 / Billing Hours: 4

Students will primarily learn about the audit of historical financial statements as performed by certified public accounting firms. Material covered on the CPA exam will be emphasized.

(Offered Spring)

- Prerequisite Course: Minimum 2.0 in ACCG 221 or concurrently.
- Placement Score: Reading Level 5.
- Course Note: Knowledge of Microsoft Excel recommended, and access to Microsoft Excel is needed to complete required assignments.

AEET 275 Sustainable Building Design

Credit Hours: 4 / Billing Hours: 6

This course is a capstone project lab that offers students the opportunity to apply advanced skills in sustainable energy efficient architectural design and building science at a project construction site. The course will incorporate concepts that were acquired in prior coursework. Specific content may vary based on project specific requirements. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AEET 280 Alternative Energy Practicum

Credit Hours: 4 / Billing Hours: 4

Special research projects and/or individual readings are used to apply personal and professional experience to the academic area of interest. Each accepted student will submit a plan that will be approved by the program advisor. The completion of a written project report is required. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

AERO 110 USAF Heritage & Values I-Lab

Credit Hours: 1 / Billing Hours: 2

This Lab course augments AFROTC academic curriculum by providing prospective Air Force officers the opportunities and feedback needed to develop the leadership, managerial and supervisory skills required of successful Air Force officers. Physical Training (PT) enhances fitness levels of cadets and prepares them to meet AFROTC and Air Force standards, while motivating cadets to pursue a physically fit and active lifestyle. Attendance is mandatory except as arranged with the Operations Flight Commander, through the cadet wing chain of command. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None. Department approval is required.
- Course Note: Call Aerospace Studies at MSU at 517-355-2168, for specific information regarding the Aerospace Studies program.

AERO 111 USAF Heritage & Values I

Credit Hours: 1 / Billing Hours: 1

This course provides an introduction to the U.S. Air Force today. Course topics include mission and organization, group leadership problems, and introduction to communication skills. Includes a leadership laboratory. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None. Department approval is required.
- Course Note: Call Aerospace Studies at MSU at 517-355-2168, for specific information regarding the Aerospace Studies program.

AERO 112 USAF Heritage & Values II

Credit Hours: 1 / Billing Hours: 1

This course provides an introduction to the U.S. Air Force today. Course topics include officership and professionalism, group leadership problems, and introduction to communication skills. Includes a leadership laboratory. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None. Department approval is required.
- Course Note: Call Aerospace Studies at MSU at 517-355-2168, for specific information regarding the Aerospace Studies program.

2024-2025 Course Descriptions

AERO 113 USAF Heritage & Values II-Lab

Credit Hours: 1 / Billing Hours: 2

This lab course augments AFROTC academic curriculum by providing prospective Air Force officers the opportunities and feedback needed to develop the leadership, managerial and supervisory skills required of successful Air Force officers. Physical Training (PT) enhances fitness levels of cadets and prepares them to meet AFROTC and Air Force standards, while motivating cadets to pursue a physically fit and active lifestyle. Attendance is mandatory except as arranged with the Operations Flight Commander, through the cadet wing chain of command. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None. Department approval is required.
- Course Note: Call Aerospace Studies at MSU at 517-355-2168, for specific information regarding the Aerospace Studies program.

AERO 210 USAF Team & Ldrshp Fund I-Lab

Credit Hours: 1 / Billing Hours: 2

This lab course augments AFROTC academic curriculum by providing prospective Air Force officers the opportunities and feedback needed to develop the leadership, managerial and supervisory skills required of successful Air Force officers. Physical Training (PT) enhances fitness levels of cadets and prepares them to meet AFROTC and Air Force standards, while motivating cadets to pursue a physically fit and active lifestyle. Attendance is mandatory except as arranged with the Operations Flight Commander, through the cadet wing chain of command. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None. Department approval is required.
- Course Note: Call Aerospace Studies at MSU at 517-355-2168, for specific information regarding the Aerospace Studies program.

2024-2025 Course Descriptions

AERO 211 USAF Team & Leadership Fund I

Credit Hours: 1 / Billing Hours: 1

This course focuses on Air Force heritage. Course topics include evaluation of air power concepts and doctrine, introduction to ethics and values, introduction to leadership, and the continuing application of communication skills. Includes a leadership laboratory. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None. Department approval is required.
- Course Note: Call Aerospace Studies at MSU at 517-355-2168, for specific information regarding the Aerospace Studies program.

AERO 212 USAF Team & Leadership Fund II

Credit Hours: 1 / Billing Hours: 1

Course topics include the role of technology in the growth of air power, group leadership problems, and the continuing application of communication skills. Includes a leadership laboratory. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None. Department approval is required.
- Course Note: Call Aerospace Studies at MSU at 517-355-2168, for specific information regarding the Aerospace Studies program.

AERO 213 USAF Team/Leadership Fund II-Lab

Credit Hours: 1 / Billing Hours: 2

This lab course augments AFROTC academic curriculum by providing prospective Air Force officers the opportunities and feedback needed to develop the leadership, managerial and supervisory skills required of successful Air Force officers. Physical Training (PT) enhances fitness levels of cadets and prepares them to meet AFROTC and Air Force standards, while motivating cadets to pursue a physically fit and active lifestyle. Attendance is mandatory except as arranged with the Operations Flight Commander, through the cadet wing chain of command. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None. Department approval is required.
- Course Note: Call Aerospace Studies at MSU at 517-355-2168, for specific information regarding the Aerospace Studies program.

2024-2025 Course Descriptions

ANTH 120 Introduction to Anthropology

Credit Hours: 3 / Billing Hours: 3

What does it mean to be human? This course is designed to explore this question through the study of the four sub-disciplines of anthropology: biological anthropology, archaeology, anthropological linguistics, and cultural anthropology. We will focus not on thinking of these subfields as four disparate disciplines but rather as four perspectives that, when combined, provide a holistic, comparative, and global understanding of human condition. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

ANTH 270 Cultural Anthropology

Credit Hours: 3 / Billing Hours: 3

This course is an introduction to human cultural systems from a holistic, comparative, and global perspective. It explores capabilities such as language, adaptation, family, and healing systems acquired by humans as members of their society. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

ANTH 271 Medical Anthropology

Credit Hours: 3 / Billing Hours: 3

Medical Anthropology examines the connections between culture, health, and illness. The course focuses on contemporary and alternative medicine, including traditional healing, and disease patterns in different cultures. The course prepares students to engage with the complex cultural dimensions of health and healthcare in a globalized world. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

ANTH 272 Food and Sustainability

Credit Hours: 3 / Billing Hours: 3

Students will learn about why humans eat what they eat and of the intimate relationship between culture and food economies. They will gain an understanding of the global food industry, its position of power, and its impact on non-Western cultures. This course will have an optional Service Learning Project. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ANTH 120 or ANTH 270 or SOCL 120.

ANTH 275 Biological Anthropology

Credit Hours: 4 / Billing Hours: 4

An overview of human biological evolution as evidenced in fossil records. Mechanisms of biocultural adaptation will be traced through the development of modern homo sapiens. Major theoretical approaches and methodologies within the subdisciplines of biological anthropology will be incorporated. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

ANTH 276 Introduction to Archaeology

Credit Hours: 3 / Billing Hours: 3

An introduction to the history, methods, and theoretical concepts of archaeology as a sub-discipline of anthropology. Archaeologists study preserved material remains, which are used to construct interpretations about the human past. Students will consider the social relevance archaeological discoveries might have on modern problems, including environmental degradation, conflict, and cultural identity. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

ANTH 280 Forensic Anthropology

Credit Hours: 3 / Billing Hours: 3

Forensic anthropologists apply the principles of skeletal biology and anthropological theory to medico-legal contexts. As an introduction to the methodology of forensic anthropologists and relevant themes, students will engage with current and past forensic cases. Students will be exposed to ethical issues, controversies, excavation, and treatment of the dead in forensic research. The course is designed to focus on practical applications of forensic anthropology with a focus on problem-oriented research studies. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

ANTH 300 Applied Field Survey Methods

Credit Hours: 4-8 / Billing Hours: 4-8

This course introduces the methods used to collect and analyze archaeological data in hands-on field and lab settings. Students will learn survey techniques used in archaeology, incorporating skills in geography, geology, and geospatial science. Skills emphasized include site mapping, controlled excavation, on-site documentation, artifact curation, and geospatial data analysis. The course includes a field internship at an active archaeological survey location. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in ANTH 276 or concurrently.
- Placement Score: (Reading Level 5 and Writing Level 6) or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently) and Math Level 4.

APPR 170 Inside Wireman Apprentice 1-A

Credit Hours: 4 / Billing Hours: 4

First of fifteen courses specifically for IBEW/JATC apprentices. Basic electrical safety, using state/federal standards/practices, in the home, electrical laboratory, and in construction and industry are covered. The installation of various wiring systems in wood frame and masonry construction, nonmetallic-sheathed cable, electrical metallic tubing, flexible metal and rigid conduit are also covered. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprentice.

2024-2025 Course Descriptions

APPR 171 Inside Wireman Apprenticeship 1-B

Credit Hours: 4 / Billing Hours: 4

Introduces IBEW/JATC apprentices to practical level electricity, use of meters to measure quantities, basic circuit calculations, basic household wiring installation, motor and transformer behavior investigation. Concepts in basic and vector algebra, and trigonometry to solve DC electric circuit problems, including units, Ohm's law, network analysis, series parallel and combination DC circuits inductance and capacitance, and a review of codes/standards will be covered. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprentice.

APPR 172 Inside Wireman Apprenticeship 1-C

Credit Hours: 4 / Billing Hours: 4

Basic electrical safety practices, including state/federal standards/practices, in the home, laboratory and within construction and industry, construction and interpretation of prints emphasizing standard/nonstandard symbols are covered. Calculations of branch circuits, feeders, motor circuits and service sizes using the National Electrical Code. Uninterruptible power supplies, signaling and safety systems are also covered. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprentice.

APPR 173 Inside Wireman Apprenticeship 2-A

Credit Hours: 4 / Billing Hours: 4

Structure and scope of the National Electrical Code, including how to locate Ohm's law, voltage drop, wire and conduit sizing and installation method code sections. Utilizes basic and vector algebra and trigonometry concepts to solve AC electric circuit problems. Network analysis, series parallel and combination AC circuits, inductance and capacitance are covered. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprentice.

APPR 174 Inside Wireman Apprenticeship 2-B

Credit Hours: 4 / Billing Hours: 4

Students will study the installation of nonmetallic sheathed cable, flexible metal conduit, electrical metallic tubing and rigid conduit. This is a practical introduction to AC theory. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprentice.

2024-2025 Course Descriptions

APPR 175 Inside Wireman Apprenticeship 2-C

Credit Hours: 4 / Billing Hours: 4

Practical introduction to single- and three-phase transformers, motors and alternators. Construction and interpretation of prints emphasizing standard/nonstandard symbols. National Electrical Code and State of Michigan rules are reviewed. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprenticeship.

APPR 176 Inside Wireman Apprenticeship 3-A

Credit Hours: 4 / Billing Hours: 4

This course introduces the student to solid-state circuitry used in industry. Students will study diodes, transistors, SCRs, triacs, optical isolators, transducers, power circuits, etc. Laboratory will include oscilloscope usage. The course also includes an introduction to Boolean algebra and digital circuits. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprenticeship.

APPR 177 Inside Wireman Apprenticeship 3-B

Credit Hours: 4 / Billing Hours: 4

Introduction to Boolean algebra, digital circuits and solid-state circuitry used in industry. Diodes, transistors, SCRs triacs, optical isolators, transducers, power circuits, oscilloscopes etc. are studied and used. Installation of nonmetallic sheathed cable, flexible metal conduit, electrical metallic tubing and rigid conduit are practiced. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprenticeship.

APPR 178 Inside Wireman Apprenticeship 3-C

Credit Hours: 4 / Billing Hours: 4

Interpretation and construction of prints emphasizing standard/nonstandard symbols. Calculate branch circuit, feeder, motor circuit, and service sizes using the National Electrical Code. Review of the National Electrical Code with focus on location and interpretation. Uninterruptible power supplies, signaling, safety systems and State of Michigan electrical rules are also reviewed. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprenticeship.

2024-2025 Course Descriptions

APPR 179 Inside Wireman Apprenticeship 4-A

Credit Hours: 4 / Billing Hours: 4

Relay logic and controls using industrial standards are covered. Use of correct symbols and standard construction of wiring and ladder diagrams is emphasized. Students will wire three-phase motor control circuits utilizing two- and three-wire control, and machine control circuits utilizing limit and proximity switches, timers, relays, etc. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprenticeship.

APPR 180 Inside Wireman Apprenticeship 4-B

Credit Hours: 4 / Billing Hours: 4

Covers relay logic and controls using industrial standards. Use of correct symbols and standard construction of wiring and ladder diagrams is emphasized. Wiring three-phase motor control circuits utilizing two- and three-wire control and machine control circuits utilizing limit and proximity switches, timers, relays, etc. are covered. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprenticeship.

APPR 181 Inside Wireman Apprenticeship 4-C

Credit Hours: 4 / Billing Hours: 4

Construction and interpretation of prints emphasizing standard/nonstandard symbols. State of Michigan electrical rules and National Electrical Code (NEC) review focusing on locating and interpreting codes. Use of the index method to discuss interpretation of the NEC to calculate branch circuit, feeder, motor circuit and service sizes. Uninterruptible power supplies, signaling and safety systems are covered. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprenticeship.

APPR 182 Inside Wireman Apprenticeship 5-A

Credit Hours: 4 / Billing Hours: 4

This course covers various code calculations using the NEC and state electrical code in preparation for the State of Michigan journeyman's exam. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprenticeship.

2024-2025 Course Descriptions

APPR 183 Inside Wireman Apprenticeship 5-B Credit Hours: 4 / Billing Hours: 4

For apprentices with field experience and basic electrical training. Covers security and fire alarm systems, sensors, instrumentation setup and calibration, theory of flow, pressure level, temperature, pneumatics, telephone wiring, high voltage safety and testing, heating, ventilating, air conditioning (HVAC) theory, programmable controllers, controls and troubleshooting, and uninterruptible power supplies. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprentice.

APPR 184 Inside Wireman Apprenticeship 5-C Credit Hours: 4 / Billing Hours: 4

Covers programmable logic controllers with focus on common operating principles. Includes capabilities, similarities, and differences among controllers, programming (examine on/off, timers and counters) and connecting external devices to Allen-Bradley and Modicon. Includes review of the National Electrical Code and the State of Michigan electrical rules. (Offered Fall, Spring, Summer)

- Prerequisite Course: Current IBEW Electrical Apprentice.

ARCH 105 Architecture Appreciation Credit Hours: 2 / Billing Hours: 2

This course will introduce students to the practice of architecture and its allied professions while building a foundation for further coursework within the architecture curriculum. Fundamental aesthetic, social, and environmental issues in architecture and design, including practice, creative processes and electronic media will be examined. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.

2024-2025 Course Descriptions

ARCH 107 Sustainable Site Design

Credit Hours: 3 / Billing Hours: 4

This course covers the fundamentals of landscape architecture and the reconnection of a site to its environment through the study of site analysis and design, earthwork and grading, accessibility, water conservation and supply, and landscaping. Preparation of sustainable site plan drawings will be created in accordance with course topics. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in DCTM 101 or concurrently or Architectural Drafting Placement Test 80%.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

ARCH 110 Visual Communications I

Credit Hours: 3 / Billing Hours: 4

Architectural graphics is the focus of this course and will introduce students to basic techniques of freehand sketching, drafting, and perspective drawings. Rendering skills, shading, and introductory model building will also be addressed. The production of two-dimensional black and white architectural rendering and presentation drawings will be studied. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in DCTM 101 or concurrently or Architectural Drafting Placement Test 80%.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

ARCH 111 Arch Design Fundamentals

Credit Hours: 3 / Billing Hours: 4

Examination of the principles and elements of two-dimensional design as it relates to architecture. Specific case studies of buildings that exemplify these theories as well as organization and circulation of space and form will be analyzed. Topics include basic design theory and practice, green design project application, and visual/verbal presentation techniques. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.
- Recommended: ARCH 107 or concurrently.

2024-2025 Course Descriptions

ARCH 113 Materials & Methods of Constr.

Credit Hours: 4 / Billing Hours: 6

An introduction to and evaluation of building materials that explores the implications of design realities, material capabilities, code limitations, and regulations on the construction process. Social, environmental, and economic impacts, life-cycle analysis, cost, sourcing, energy efficiency, and value engineering including a value system for selecting environmentally preferable products will be discussed. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (DCTM 102 or ELTE 102 or HVAC 102 or METS 102 or WELD 102 or concurrently).
- Placement Score: Reading Level 4 and Writing Level 4.

ARCH 114 Architectural Drawing/CAD I

Credit Hours: 4 / Billing Hours: 6

This course introduces architecture technology students to computer-aided drafting for residential application. Basic commands, drafting techniques, drawing accuracy, and industry standards will be emphasized. Lectures, in class demonstration, and lab sessions will be utilized to create two-dimensional residential drawings with value and importance placed on green design and sustainability. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in DCTM 101 or concurrently or Architectural Drafting Placement Test 80%.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

ARCH 118 Architecture Design/Planning

Credit Hours: 4 / Billing Hours: 6

One in a sequence of design studio courses focusing on programmatic green building design. Emphasis is on code, research, accessibility, and adaptive use while solving small to medium scale architecture design problems. Topics include environmental and site issues, space planning, and construction document development. Applied studio assignments build on knowledge and skills acquired. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (ARCH 110 and ARCH 114).
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.

2024-2025 Course Descriptions

ARCH 120 Visual Communications II

Credit Hours: 3 / Billing Hours: 4

A continuation of Visual Communication I. Students will gain knowledge of basic color rendering techniques using a variety of media to enhance drawing skills and realistically render surfaces two/three-dimensionally. Specific shading, texture, light and composition techniques - both freehand and computer generated - will be explored. Composition/verbal presentation of projects will be emphasized. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in ARCH 110.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.

ARCH 124 Architectural Drawing/CAD II

Credit Hours: 4 / Billing Hours: 6

As the continuation of Architectural Drawing/Basic CAD I, students will build on their computer-aided drafting skills for commercial application. Drawing accuracy and industry standards will be emphasized. Lectures, in-class demonstration, and lab sessions will be utilized to create two dimensional commercial drawings. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in ARCH 114.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 5.

ARCH 125 Environmental Systems

Credit Hours: 4 / Billing Hours: 4

This course is designed for students of both architecture and allied professions. All elements affecting interior environments of a commercial or residential structure, such as electrical and HVAC systems, water efficiency, sustainable site and material selection, and passive solar design will be studied. Energy efficient and responsible construction practices will be emphasized. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

ARCH 126 Architecture Model Building

Credit Hours: 3 / Billing Hours: 4

Students in this course will enhance their design and communication skills by developing various techniques for building three-dimensional architectural models. Projects constructed will range from the most basic of study model using readily available sustainable materials, to more sophisticated presentation models focusing on the use of responsible and earth sustaining materials. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in DCTM 101 or Architectural Drafting Placement Test 80%.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

ARCH 141 History of Architecture I

Credit Hours: 3 / Billing Hours: 3

Beginning with ancient times, this course studies the major civilizations and works of architecture, and analyzes the form and function of the built environment contributed by the most significant of the Western civilizations. A variety of visual media will be used to present the major theories, architectural works, and the significant personalities contributing to architecture up to the Italian Renaissance. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

ARCH 142 History of Architecture II

Credit Hours: 3 / Billing Hours: 3

This course is the second in a series of the study of architectural history of the western world. The works and figures of architecture and the decorative arts in western architectural history from the 1600's to contemporary times are examined. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

ARCH 146 Preservation/Adaptive Use Arch

Credit Hours: 3 / Billing Hours: 4

An overview of the principles and practices of the greenest and most sustainable type of architecture; recycling, preservation, and adaptive use of existing buildings. Students will have the opportunity to work on an actual building using material forensic investigation to determine material conditions and history, apply adaptive use design, and sustainable preservation practices. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in ARCH 110 or concurrently.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

ARCH 218 Commercial Arch Planning

Credit Hours: 4 / Billing Hours: 6

In this intermediate level course, students will use previously obtained drawing, research, and presentation skills to design, delineate, and present a light commercial project from basic schematics to presentation drawings. Students will be introduced to environmentally responsible design considerations and applications at the earliest design and planning stages of a project. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in ARCH 114.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.

ARCH 220 Commercial Arch Drawing

Credit Hours: 4 / Billing Hours: 6

In this capstone course, students will complete a set of commercial construction documents based on their schematic design developed in ARCH218 using previously obtained CAD and structural theory skills. Students will further research appropriate energy saving design systems to minimize the environmental footprint of their building design. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in ARCH 218.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.

2024-2025 Course Descriptions

ARCH 233 Revit Architecture BIM I

Credit Hours: 4 / Billing Hours: 6

This course is an introduction to Autodesk's Revit Architecture, a three-dimensional building information modeling software (BIM) that generates all phases of design from concept sketches through construction documentation. Students will develop three-dimensional parametric models and standard two-dimensional construction drawings for typical construction use. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

ARCH 235 Arch AutoCAD Independent Study Credit Hours: 1 to 4 / Billing Hours: 1 to 4

This course is intended to give advanced architectural students an opportunity to complete a special project(s) that relates to the student's curriculum. The student will research, outline, design and construct a project(s) of their own selection, with the approval and guidance of the instructor, using the AutoCAD software program. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

ARCH 243 Revit Architecture BIM II

Credit Hours: 4 / Billing Hours: 6

As the continuation of Revit Architecture BIM I, students will build on their three-dimensional building information software (BIM) and parametric modeling skills for construction drawings. Drawing accuracy and industry standards will be emphasized. Lectures, in-class demonstration, and lab sessions will be utilized to create two and three dimensional construction documents. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in ARCH 233.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 5.

2024-2025 Course Descriptions

ARCH 275 Sustainable Building Design

Credit Hours: 4 / Billing Hours: 6

This course is a capstone project lab that offers students the opportunity to apply advanced skills in sustainable energy efficient architectural design and building science at a project construction site. The course will incorporate concepts that were acquired in prior coursework. Specific content may vary based on project specific requirements. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

ARCH 290 Architectural Internship

Credit Hours: 2 to 4 / Billing Hours: 2 to 4

This course provides Architectural Technology students with practical work experience in industry. Students work for an employer in a supervised environment that provides an opportunity to apply knowledge and skills learned in the classroom and lab to an actual job situation. (Offered Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

ARCH 295 Arch Independent Study

Credit Hours: 1 to 4 / Billing Hours: 1 to 4

This course will give advanced architectural students an opportunity to complete a special project(s) that relates to their architectural curriculum. With the approval and guidance of an instructor, the students will research, outline, design, and construct a project(s) of their own selection. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

ARTH 120 Masterpieces of Art & Music

Credit Hours: 4 / Billing Hours: 4

This course is an introduction to the masterpieces of art and music from ancient to modern times. Artistic and musical innovations and contributions from Europe and America will be explored. The continuing influence and validity of art and music from the past on contemporary developments will be studied. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently).
- Course Note: No art or music background required.

ARTH 211 Art History to the Renaissance

Credit Hours: 4 / Billing Hours: 4

This course surveys the history of painting, sculpture, and architecture of world civilizations from preliterate times to the 15th century. It emphasizes analysis and comparison of artistic concepts, styles and techniques, and investigates how the arts reflect ideas, issues, and values of society and the individual. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

ARTH 212 Art Hist from the Renaissance

Credit Hours: 4 / Billing Hours: 4

Surveys the history of painting, sculpture, and architecture of world civilizations from the 15th to the 20th century. Emphasizes analysis and comparison of artistic concepts, styles and techniques; and investigates how the arts reflect ideas, issues, and values of society and the individual. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

ARTH 216 **Contemporary Art**

Credit Hours: 4 / Billing Hours: 4

This course provides an overview of contemporary art in various media and examines theoretical and cultural influences on art from the late 20th century to the present. Students will be able to recognize and interpret most important aspects of contemporary art and contemporary visual culture. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

ARTS 102 **2D Design**

Credit Hours: 3 / Billing Hours: 4

An examination of visual communications theory, process and history. Students will study the universal elements and principles of two-dimensional design and their applications in digital and traditional media. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently).
- Recommended: Computer experience.

ARTS 103 **3D Design**

Credit Hours: 3 / Billing Hours: 4

This is an introductory course exploring the elements and principles of three dimensional design. The course will examine traditional and narrative-based potentials or materials and objects. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 102 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Students purchase own art supplies and materials.

2024-2025 Course Descriptions

ARTS 131 Drawing I

Credit Hours: 3 / Billing Hours: 4

An introductory course in visual thinking, conceptual drawing, and studio practices. Students will learn to translate verbal and written concepts through creative processes into visual information by creating sketches, developmental drawings, and finished imagery. Fundamental elements of drawing and principles of perspective, with a focus on drawing from observation, are covered. (Offered Fall, Spring, Summer).

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Students will need to purchase supplies/materials for this course, costing between \$135-\$160.

ARTS 132 Figure Drawing

Credit Hours: 3 / Billing Hours: 4

An intermediate level course in visual thinking, conceptual drawing, and studio practices exploring fundamental elements of drawing, visualization, and perception of the human figure, using a variety of drawing media and methods. Live models will be used. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in ARTS 131.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Students will need to purchase supplies/materials for this course, costing between \$135-\$160.

ARTS 151 Color

Credit Hours: 3 / Billing Hours: 4

This is an introduction to additive and subtractive color theory and practice. Students explore how the color properties of hue, saturation, and value relate to design and examine color interactions, color relationships, and the physical and psychological effects of light and color. Digital and traditional color media are used. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 102 and ARTS 131.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: This course uses Photoshop CC on Macintosh computers. Online, Hybrid, and ORT students are required to have semester-long access to Adobe Photoshop CC to complete their assignments.

2024-2025 Course Descriptions

ARTS 153 Drawing II

Credit Hours: 3 / Billing Hours: 4

This is an intermediate level course in visual thinking, conceptual drawing, and perspective drawing. Students will use creative processes to express verbal and written concepts as visual information ideate through preparatory drawings and develop visualizations with a variety of media. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 102 and ARTS 131.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Students will need to purchase supplies/materials for this course, costing between \$135-\$160.

ARTS 162 Type Communications

Credit Hours: 3 / Billing Hours: 4

An introduction to the utilization of type in a variety of visual communications with an emphasis on creativity and problem solving. Students will be introduced to the tools and techniques of manual and digital type formatting in professional type layout for print and web purposes. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 102 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Online, Hybrid, and ORT students are required to have semester-long access to Adobe Illustrator CC. Students have access to this software in the LCC TLC Computer Lab.

ARTS 164 Digital Illustration

Credit Hours: 3 / Billing Hours: 4

A creative course applying/using vector-based illustration software. Students will draw by manipulation of algorithmically created arcs, lines, and curves to form shapes. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 102 and ARTS 131 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ARTS 162.
- Course Note: Online, Hybrid, and ORT students are required to have semester-long access to Adobe Illustrator CC.

2024-2025 Course Descriptions

ARTS 171 Adobe Photoshop

Credit Hours: 3 / Billing Hours: 4

This course provides an introduction to computer manipulation of digital images using Adobe Photoshop through projects, learning activities, assessments, and exploration of resources.

(Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 102 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Adobe Photoshop CC software is used. Online, Hybrid, and ORT students are required to have semester-long access to Adobe Photoshop CC to complete their assignments. Students have access to these in the LCC TLC Computer Lab.

ARTS 173 Web Design I

Credit Hours: 3 / Billing Hours: 4

An introduction to the process and principles of web design. Students will utilize a combination of imaging software and code to develop visual mockups and functional layouts. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 171 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Online, Hybrid, and ORT students are required to have semester-long access to Adobe Dreamweaver CC to complete their assignments.

ARTS 175 Creative Design and Publishing

Credit Hours: 3 / Billing Hours: 4

An introductory course concerned with creative design and layout. The focus is on using Adobe Creative Cloud and incorporating the Adobe Creative Suite for layout, prepress, and repurposing. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 102 and ARTS 162 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Online, Hybrid, and ORT students are required to have semester-long access to Adobe Creative Cloud. Face-to-face course uses Adobe Creative Cloud on Apple computers.

2024-2025 Course Descriptions

ARTS 179 Web Design II

Credit Hours: 3 / Billing Hours: 4

This course builds on the fundamentals learned in Web Design I, exploring intermediate techniques and industry standards through projects, activities, and assessments. Topics include the web design workflow, user experience, and accessibility. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in ARTS 173.
- Placement Score: Reading Level 5 and Writing Level 6.

ARTS 183 Design History

Credit Hours: 3 / Billing Hours: 3

An introductory course that examines the theory, practice, and development of modern and contemporary graphic design, typography, and imagery. The emphasis is on conceptual design and relevant styles and techniques used to achieve design, marketing and advertising goals. This course investigates how the various styles and techniques of the periods discussed reflect and affect design ideas, issues and social values. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ARTH 212 (formerly HUMS 212).
- Course Note: Online, Hybrid, and ORT students are required to have semester-long access to Adobe Illustrator or Photoshop CC.

ARTS 195 Employ/Busn Issues for Artists

Credit Hours: 1 / Billing Hours: 1

An introduction to business, legal, and marketing issues relevant to visual artists. Students will be introduced to copyright, contracts and negotiation concerns, and basic record keeping. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.

2024-2025 Course Descriptions

ARTS 200 Painting I

Credit Hours: 3 / Billing Hours: 4

An introduction to oil and/or acrylic painting. The course examines the basic materials, tools, techniques, and modes of expression of painting. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Course Note: Students purchase own art supplies and materials (approx. \$200).

ARTS 201 Painting II

Credit Hours: 3 / Billing Hours: 4

A continuation of Painting I (ARTS200) emphasizing more advanced techniques and increasingly complex problems in painting. A variety of media, techniques, and approaches is explored. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 200.
- Placement Score: None.
- Course Note: Students purchase own art supplies and materials (approx. \$200).

ARTS 202 Design for Innovation

Credit Hours: 3 / Billing Hours: 4

Students will explore Design Thinking methodology, focusing on human centered solutions through materials, language, and principles of design. Students will also examine the importance of ethnography, research, prototyping, and testing, and pursue sustainable design solutions for social consciousness. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ARTS 102 or concurrently.

ARTS 226 Storyboards & Animatics

Credit Hours: 3 / Billing Hours: 4

Focuses on applying industry-standard storyboarding and animatic techniques. Topics include the purposes and formats of storyboards and the application of storyboarding techniques to the creation of storyboards with or without a written script. Completed storyboards will be digitized and edited using various software to produce an animatic. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 151.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

ARTS 229 Web Design III

Credit Hours: 3 / Billing Hours: 4

An advanced course in interactive design and its application to online spaces. Students will focus on the conceptualization, structuring, and best practices of site design and development. Topics include digital campaigns and creative uses of web technology. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in ARTS 179.
- Placement Score: Reading Level 5 and Writing Level 6.

ARTS 232 Comp Graphics/2D Animation

Credit Hours: 3 / Billing Hours: 4

An introduction to 2D animation using computer software. Students will apply theory and principles of the medium to animated characters and infographics. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in ARTS 132 and ARTS 151 and ARTS 171.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: This course uses the Adobe Creative Suite on Macintosh computers. Online, Hybrid, and ORT students are required to have semester-long access to Adobe Creative Suite.

ARTS 234 Comp Graphics/3D Animation I

Credit Hours: 3 / Billing Hours: 4

Concepts and techniques of 3D computer animation. An introduction to the world of Digital Form, Space and Lighting. Topics covered in this course include the theories of 3-D space, surface modeling, rendering, lighting and key frame animation. Includes an overview of the history of 3D computer modeling, rendering and animation. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in ARTS 105 or ARTS 171.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: PHYS 120.

ARTS 235 Comp Graphics/3D Animation II

Credit Hours: 3 / Billing Hours: 4

This course builds upon ARTS234. It continues the approach of increasing skills and artistic practice in all areas of 3D animation: concept, modeling, animation and rendering. Course also includes topics such as: texture mapping, particle systems, dynamic simulation and basic kinematic techniques. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 234.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

ARTS 240 Art for Elementary Teachers

Credit Hours: 3 / Billing Hours: 4

Especially for elementary school teachers responsible for the student art experience. Emphasis on developing a greater art appreciation, awareness of art forms, and competency working with a variety of art media. Covers the creative and mental growth of children and their needs in an art situation. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: EDUC 201 and EDUC 220.
- Course Note: EDUC201 and EDUC220 are prerequisites for this course to transfer to Central Michigan University.

ARTS 251 Graphic Design Communications

Credit Hours: 3 / Billing Hours: 4

A comprehensive overview of design communications and the role of the digital designer. Methods, computer software, and hardware issues will be covered with the focus on persuasive design communications. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in ARTS 175.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: This course uses the Adobe CC Suite on Apple computers. Online, Hybrid, and ORT students are required to have semester-long access to Adobe Creative Suite.

ARTS 252 Graphic Design Publications

Credit Hours: 3 / Billing Hours: 4

Publication design and the graphic artist's role in design and production of longer documents is the focus of this advanced collaborative course. The emphasis is on concept, typography and visual elements in a weekly, monthly or quarterly publication. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 251.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: This course uses the Adobe CC Suite on Apple computers. Online, Hybrid, and ORT students are required to have semester-long access to Adobe Creative Suite.

2024-2025 Course Descriptions

ARTS 253 Graphic Design Branding

Credit Hours: 3 / Billing Hours: 4

This advanced class focuses on branding of products and services for mass market advertising. The course will focus on aspects relevant to a marketing campaign as well as on creating innovative concepts and developing an effective personal design style. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 251.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: This course uses the Adobe CC Suite on Apple computers. Online, Hybrid, and ORT students are required to have semester-long access to Adobe Creative Suite.

ARTS 266 Figure Drawing II

Credit Hours: 3 / Billing Hours: 4

This course further develops the skills in both observational and conceptual drawing introduced in ARTS 132, with an emphasis on the process of image-making. Students will explore topics such as treatments of subject and environment, single vs. multiple subjects, visualization of human anatomy, and digital drawing. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in ARTS 132.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).
- Recommended: Minimum 2.0 in ARTS 153.

ARTS 267 Adv Drawing Digital Sketchbook

Credit Hours: 3 / Billing Hours: 4

This course further develops the skills in both observational and conceptual drawing introduced in ARTS 131, ARTS 132, and ARTS 153, with an emphasis on the process of image-making in digital tablet format. Students will explore topics such as imaginative treatments of subject and environment, serial imaging, materiality, and digital drawing. Some figure drawing may be included. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in ARTS 131 and minimum 2.5 in (ARTS 132 or ARTS 153).
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ARTS 266.

2024-2025 Course Descriptions

ARTS 269 The Portfolio

Credit Hours: 2 / Billing Hours: 2

Under advisor supervision, students will assemble their best work into a cohesive, relevant presentation for the purpose of securing career-oriented employment. Job search/market skills content, including creative resumes, letter-writing, and self-promotion will focus on matching individual presentations to specific career goals. ARTS269 is intended as the final program course. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval is Required.
- Placement Score: None.
- Course Note: Fine Art and transfer students should see an Art, Design and Multimedia advisor before enrolling in ARTS 269. Please check with the Communication, Media and the Arts Department Office in GB 1222 for current department approval forms.

ARTS 281 Art Internship

Credit Hours: 3 / Billing Hours: 3

Students will gain pre-career experience by working in a professional environment under the supervision of a professional artist/designer. Regularly scheduled progress reports will be given and discussed with supervising faculty member. A typical internship will average 160-210 hours in a semester. (Offered Fall, Spring, Summer)

- Prerequisite Courses: None. Department Approval is required.
- Placement Scores: None.

ASTR 201 Introductory Astronomy

Credit Hours: 4 / Billing Hours: 5

A survey course of astronomy. Topics include the celestial sphere, apparent motions, and orbital mechanics; the nature of and interaction between matter and light, spectroscopy, and astronomical instrumentation; the Earth, the Moon, the Sun, the solar system and exoplanets; stellar characteristics and evolution, nucleosynthesis; and galaxies and cosmology. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 5 or (MATH 109 concurrently)].
- Course Note: It is recommended that students taking ASTR 201 have taken a High School Physics or Physical Science course.

2024-2025 Course Descriptions

AUTM 102 Automotive/Collision Safety

Credit Hours: 1 / Billing Hours: 1

This course will introduce students to automotive industry standard practices for shop safety, tool safety, and personal safety. Students will be familiarized with shop policies and procedures including hazardous waste disposal, along with laws and regulations that affect automotive repair facilities. Students will learn how to use various types of lifting equipment. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [Minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$16 of the Course Fee is non-refundable.

AUTM 111 Automotive Electrical I

Credit Hours: 4 / Billing Hours: 6

This course prepares students for ASE and State of Michigan certification testing in automotive electrical systems. Topics include electrical system theory and operation, diagnosis, and repair of automotive electrical/electronic circuits, electrical wiring, battery, and starting and charging systems. This course meets NATEF Master Automotive Service Technology (MAST) standards for electrical/electronic systems. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in [(AUTM 102 or concurrently) or AUTM 101].
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [Minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$35 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

AUTM 113 Automotive Electrical II

Credit Hours: 4 / Billing Hours: 6

This course prepares students for ASE and State of Michigan certification testing in automotive electrical systems. Topics include electrical system theory and operation, diagnosis, and repair of automotive comfort and convenience accessories, instrumentation, and lighting circuits. This course meets NATEF Master Automotive Service Technology (MAST) standards for electrical/electronics systems. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in [(AUTM 111 or concurrently) or AUTM 110].
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$35 of the Course Fee is non-refundable.

AUTM 125 Manual Drive Train and Axles

Credit Hours: 4 / Billing Hours: 6

This course prepares students for ASE and State of Michigan certification testing in manual drivetrains and axles. Topics include theory and operation, maintenance, diagnosis, disassembly, inspection, repair, and overhaul of manual transmissions/transaxles, clutch systems, differentials, four-wheel drive systems, and other driveline components. This course meets NATEF Master Automotive Service Technology (MAST) standards for manual transmissions. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in [(AUTM 102 or concurrently) or AUTM 101].
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$35 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

AUTM 126 Automatic Transmissions

Credit Hours: 4 / Billing Hours: 6

This course prepares students for ASE and State of Michigan certification testing in automatic transmissions. Topics include transmission theory and operation, maintenance, diagnosis, disassembly, inspection, repair, and overhaul of modern electronic automatic transmissions/transaxles. This course meets NATEF Master Automotive Service Technology (MAST) standards for automatic transmissions. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in [(AUTM 111 or concurrently) or AUTM 110].
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$35 of the Course Fee is non-refundable.

AUTM 131 Automotive Engine Repair

Credit Hours: 4 / Billing Hours: 6

This course prepares students for ASE and State of Michigan certification testing in automotive engine repair. Topics include theory and operation, maintenance, diagnosis, disassembly, inspection, repair, and overhaul of engines, cooling systems, lubrication systems, and in-vehicle and out-of-vehicle engine servicing. This course meets NATEF Master Automotive Service Technology (MAST) standards for engine repair. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in [(AUTM 111 or concurrently) or AUTM 110].
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$35 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

AUTM 141 Braking Systems and ABS

Credit Hours: 4 / Billing Hours: 6

This course prepares students for ASE and State of Michigan certification testing in braking systems. Topics include theory and operation, maintenance, diagnosis, disassembly, inspection, and repair of disc and drum braking systems, anti-lock brake/traction control systems, and related brake components. This course meets NATEF Master Automotive Service Technology (MAST) standards for brakes. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in [(AUTM 111 or concurrently) or AUTM 110].
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$35 of the Course Fee is non-refundable.

AUTM 151 Suspension and Steering

Credit Hours: 4 / Billing Hours: 6

This course prepares students for ASE and State of Michigan certification testing in suspension and steering. Topics include theory and operation, maintenance, diagnosis, disassembly, inspection, and repair of suspension and steering systems, wheel alignment, wheels and tires, and steering/suspension related components. This course meets NATEF Master Automotive Service Technology (MAST) standards for suspension and steering. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in [(AUTM 111 or concurrently) or AUTM 110].
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$35 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

AUTM 161 Auto Heating/Air Conditioning

Credit Hours: 4 / Billing Hours: 6

This course prepares students for ASE and State of Michigan certification testing in heating and air conditioning. Topics include theory and operation, maintenance, diagnosis, inspection and repair of automobile heating, ventilation, and air conditioning systems; and recovery, recycling, and handling of refrigerants. This course meets NATEF Master Automotive Service Technology (MAST) standards for heating, ventilation, and air conditioning. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in [(AUTM 111 or concurrently) or (HERT 125 or concurrently) or AUTM 110].
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$35 of the Course Fee is non-refundable.

AUTM 180 Intro to Alternative Fuels

Credit Hours: 2 / Billing Hours: 2

Students will use various sources in the alternative fueled vehicle industry to learn what alternative fuels are available. Students will examine the need for alternative fuels including: Propane, Natural Gas, Ethanol and Biodiesel. Students will also learn about new technologies such as Electric Drive and Hydrogen fueled vehicles as well as Fuel Economy and Idle Reduction considerations. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

AUTM 185 Automotive Special Topics

Credit Hours: 0.25 to 8 / Billing Hours: 0.25 to 11

The Automotive Special Topics series will feature topics related to the automotive industry. The lectures will allow participants to explore a wide variety of topics that will range from State of Michigan Recertification and Alternative Fuels to Advanced Drivability Diagnosis. Specific topics vary each semester; check the semester schedule book for topics to be offered. (Offered Fall, Spring, Summer)

- Prerequisite Course: Determined by Section

2024-2025 Course Descriptions

AUTM 211 Automotive Electrical III

Credit Hours: 4 / Billing Hours: 6

This course prepares students for ASE and State of Michigan certification testing in this subject area. Topics include theory and operation, diagnosis, and repair of comfort and convenience accessories, restraint systems, computer multiplexing, entertainment/navigation systems, and advanced electrical technologies. This course meets NATEF Master Automotive Service Technology (MAST) standards for electrical/electronics systems. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (AUTM 113 or concurrently)
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$35 of the Course Fee is non-refundable.

AUTM 270 Gas Eng Drivability Diagnosis

Credit Hours: 4 / Billing Hours: 6

This course prepares students for ASE and State of Michigan certification testing in this subject area. Topics include theory and operation, maintenance, diagnosis, and repair of engine mechanical integrity, fuel delivery systems, powertrain computer systems, and air induction and exhaust systems. This course meets NATEF Master Automotive Service Technology (MAST) standards for engine performance. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in [(AUTM 211 or concurrently) or AUTM 210].
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$35 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

AUTM 273 Lt. Diesel Drivability Diag.

Credit Hours: 4 / Billing Hours: 6

This course covers engine management of a light duty diesel engine, including diagnosis and repair of electronic diesel fuel injection systems, air induction systems, particulate filter systems and oxidation catalyst systems. This course meets NATEF Automotive Service Technology (AST) and Master Automotive Service Technology (MAST) standards for light diesel engine control systems. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (AUTM 270 or concurrently).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$35 of the Course Fee is non-refundable.

AUTM 275 Ignition/Emission Sys Diag.

Credit Hours: 4 / Billing Hours: 6

This course prepares students for ASE and State of Michigan certification testing in ignition and emissions systems. Topics include theory and operation, maintenance, diagnosis, and repair of ignition and emission control systems and computer devices that cause emissions failures. This course meets NATEF Master Automotive Service Technology (MAST) standards for engine performance. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (AUTM 270 or concurrently).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. Books are included as part of the course fee. \$35 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

AUTM 280 Electric/Fuel Cell Technology

Credit Hours: 2 / Billing Hours: 2.5

This course is designed to help prepare the student to enter the automotive repair and service industry in the area of alternative fuels and advanced technology vehicles. It is an intensive study of vehicle electric and fuel cell theory, application, installation, diagnosis, service and safety regulations. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in [AUTM 180 and (AUTM 270 or concurrently)].
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. See course syllabus for textbook information. \$40 of the Course Fee is non-refundable.

AUTM 282 Gaseous Fuels

Credit Hours: 3 / Billing Hours: 4

This course is designed to help prepare the student to enter the auto repair and service industry in the area of alternative fuels and advanced technology vehicles. It is an intensive study of three gaseous fuels - natural gas, propane and hydrogen. Theory, application, installation, diagnosis and safety regulations will be covered. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in [AUTM 180 and (AUTM 270 or concurrently)].
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. See course syllabus for textbook information. \$40 of the Course Fee is non-refundable.

AUTM 284 Hybrid Systems & Maintenance

Credit Hours: 4 / Billing Hours: 6

This course introduces the student to the features of the Internal Combustion Engine (ICE) as they apply to the hybrid vehicle, hybrid drive systems (transaxles and gears), brake systems, HVAC systems, and cooling systems service. First responder, predictive maintenance procedures, hybrid trucks, and Belted Alternator System (BAS) are also examined. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (AUTM 180 and AUTM 270).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. See course syllabus for textbook information.

2024-2025 Course Descriptions

AUTM 286 High Voltage Battery Tech

Credit Hours: 4 / Billing Hours: 6

This course introduces the student to high voltage battery technology: electrical service safety precautions and personal protection, high voltage tools and equipment usage, battery energy management hardware systems, battery removal and installation, and battery rebuilding.

(Offered Spring)

- Prerequisite Course: Minimum 2.0 in (AUTM 180 and AUTM 270).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. See course syllabus for textbook information.

AUTM 288 High Voltage Management

Credit Hours: 4 / Billing Hours: 7

This course introduces the student to AC induction electric machines, permanent magnet electric machines, power inverter systems, electric propulsion sensing systems, communication networks, predictive maintenance, and building an ATV. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (AUTM 286 or concurrently).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: Students need to bring their own safety glasses and dress in appropriate work clothes to start working in the lab on the first day of class. See course syllabus for textbook information.

AUTM 290 Automotive Internship

Credit Hours: 1 to 4 / Billing Hours: 1 to 4

Students are able to earn credits while employed as an intermediate/advanced level technician in an auto mechanic shop or dealership. The program coordinator must approve the training station and working conditions. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

AUTM 296 Automotive Independent Study Credit Hours: 1 to 4 / Billing Hours: 1 to 4

Special research projects and/or individual readings are used to apply personal and professional experience to the academic area of interest. A presentation or written report is required at the end of the project. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AUTM 298 Automotive Service Laboratory Credit Hours: 2 to 6 / Billing Hours: 4 to 9

This laboratory course is designed to provide work experience and develop trade-entry skills in general and light-line repair. (Offered Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVAF 125 Aircraft Systems I Credit Hours: 2 / Billing Hours: 2.75

The study of fuel management, transfer, defueling and fuel pump systems. The course covers the procedures used to inspect, check, service, troubleshoot and repair aircraft fuel systems and fuel system components. Course material emphasizes fluid quantity indicating, fluid pressure and warning systems. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVAF 126 Aircraft Systems II Credit Hours: 6 / Billing Hours: 8.25

This course covers the study, analysis and repair of aircraft landing gear and brake systems and their related warning systems. It also includes the study, inspection, servicing and repair of aircraft hydraulic and pneumatic systems and their related components. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

AVAF 127 Aircraft Systems III

Credit Hours: 3 / Billing Hours: 4

This course covers the inspection, checking, troubleshooting, servicing and repair of aircraft heating, cooling, air-conditioning, pressurization, oxygen, ice and rain control, and fire protection systems. (Offered Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVAF 134 Aircraft Instruments

Credit Hours: 2 / Billing Hours: 2.75

This course covers inspection, checking, servicing, troubleshooting, repair of electronic flight instrument systems, both mechanical and electrical speed, altitude, temperature, pressure and flow instrument systems. Also, special removal and installation techniques applicable to aircraft instruments are included. (Offered Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVAF 140 Aircraft Welding

Credit Hours: 2 / Billing Hours: 3

Presents welding applications and methods used in repairs and inspection of aircraft structures in accordance with approved aviation maintenance techniques. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: Students need to bring their own safety glasses, pliers, leather welding gloves and leather work boots to start welding on the first day of class.

AVAF 208 Aircraft Structures I

Credit Hours: 4 / Billing Hours: 5.5

This course introduces the procedures for identification, inspection, testing and repairing of wood, fabric-covered and sheet metal aircraft. The installation and removal of conventional rivets, forming of aircraft sheet metal, installation of special rivets and fasteners, and an introduction to applying finishing materials will also be covered. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

AVAF 209 Aircraft Structures II

Credit Hours: 4 / Billing Hours: 5.75

This course covers assembly and rigging of fixed wing and rotary wing aircraft control structures. It provides practical application in removal, installation and adjustment of flight controls by balancing, cable tension and motion studies. Aircraft inspection procedures to insure conformity with flight safety standards will be included. (Offered Fall)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVAF 210 Aircraft Structures III

Credit Hours: 4 / Billing Hours: 6

An advanced course covering inspection, repair, layout, bending and assembly of aircraft sheet metal. Inspection, testing and repair of fiberglass, plastics, honeycomb, composite and laminated structures are practiced. Installation and removal of special fasteners for bonded and composite structures and servicing of aircraft windows, doors and interior furnishings is included. (Offered Fall)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVAF 211 Aircraft Electrical I

Credit Hours: 4 / Billing Hours: 5.75

An intermediate aviation electrical course concentrating on theory, calculation and measurement of A.C. electrical systems. Includes reading and interpreting aircraft electrical circuit diagrams, including those with solid-state devices and logic functions. The installation, checking and servicing of airframe and engine wiring, controls, switches, indicators and protective devices are also covered. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVAF 212 Aircraft Electrical II

Credit Hours: 4 / Billing Hours: 5.75

Repair of airframe and engine electrical system components with an emphasis on the inspection, checking, servicing and repair of alternating and direct current systems. General troubleshooting techniques are practiced with special emphasis on A.C. and D.C. electrical systems. (Offered Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

AVAF 246 Airframe Certification

Credit Hours: 1 / Billing Hours: 1.5

Study of the Federal Aviation Regulations pertaining to national certification as a licensed airframe mechanic. Includes testing in all required areas of study as a prerequisite to receiving authorization to take the general and airframe national certification test administered by representatives of the Federal Aviation Administration. (Offered Fall)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVAU 100 Drone Flight Orient.-FAA Exam

Credit Hours: 2 / Billing Hours: 2.5

This course covers the fundamentals of unmanned aircraft systems (UAS) pertaining to UAS regulations, National Airspace restrictions, weather effects, UAS performance, human factors, operational pre-flight activities and in-flight control, recordkeeping, and logbooks. This course will prepare the student for the Title 14 CFR Part 107 FAA written examination. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

AVAU 150 Drone Maintenance

Credit Hours: 2 / Billing Hours: 3

This course will concentrate on the proper maintenance and repair of the components of unmanned aircraft systems (UAS). Students will learn operator maintenance, inspections, battery systems and maintenance, communication and instrumentation systems, rigging and assembly, and electrical troubleshooting. Students will gain the knowledge to identify technical problems associated with UAS. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in AVAU 100 or concurrent.
- Placement Score: Reading Level 5 and Math Level 4.

AVAU 200 Advanced Drone Flight-Capstone

Credit Hours: 2 / Billing Hours: 3

This Capstone course provides an in-depth review of the UAS program content. Students will present examples of program-related tasks to faculty and peers. Students will demonstrate skills learned throughout the program, including in a variety of drone missions for potential future clients. Drone flight is included in class laboratory sessions. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in AVAU 100.
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

AVEL 202 Flight Line Testing

Credit Hours: 3 / Billing Hours: 4

This course is a practical study of the electronics systems found aboard modern aircraft, focusing on the flight line testing of such systems as VHF communications, VHF navigation, ADF, radar, and autopilots. (Offered Fall)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVGM 111 Aviation General I

Credit Hours: 4 / Billing Hours: 5

This course is designed to develop the skills and knowledge required to weigh an aircraft and record the appropriate data. It involves mathematical and basic physics principles related to aviation, including aerodynamics, theory of flight, aircraft structural design and simple machines. (Offered Fall)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: Reading Level 3.

AVGM 112 Aviation General II

Credit Hours: 6 / Billing Hours: 8

Introduces the Federal Aviation Regulations involving the mechanic's privileges, limitations and related aviation operations. Includes the selection and use of aviation publications, maintenance forms, records, reports, aircraft drawings, graphs and charts, symbols, blueprints and system schematics. Also focuses on aircraft ground operations and servicing of related aircraft systems. (Offered Fall)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: Reading Level 3.

AVGM 113 Aviation General III

Credit Hours: 4 / Billing Hours: 5

This initial aviation electrical course offers instruction in basic electrical theory and its aviation application. It includes the calculation and measurement of voltage, current resistance, continuity and power; and the theory, inspection and servicing of aircraft lead-acid and ni-cad batteries; and the construction of a volt-ohm meter. (Offered Fall)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: Reading Level 3.

2024-2025 Course Descriptions

AVGM 114 Materials and Processes

Credit Hours: 5 / Billing Hours: 7

This course covers identification and selection of the appropriate aviation hardware, hand tools, cleaning materials, fluid lines and nondestructive testing methods. Performance of nondestructive testing, precision measurements, aircraft cleaning and corrosion control, fabrication, installation and testing of fluid lines is included. (Offered Fall)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: Reading Level 3.

AVPP 241 Reciprocating Engine

Credit Hours: 8 / Billing Hours: 11.25

Presents the theory and practices used in the removal, inspection, overhaul, service, repair and installation of reciprocating engines. This course also studies the inspection, service, repair and troubleshooting of reciprocating engine lubrication systems. (Offered Fall)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVPP 251 Reciprocating Engine Systems

Credit Hours: 2 / Billing Hours: 2.5

This course covers the inspection, servicing, troubleshooting and repair of reciprocating engine cooling and exhaust systems. In addition, the inspection requirements necessary to meet established conformity and standards of airworthiness are studied; and reciprocating engine operations and adjustments are conducted using FAA and maintenance publication procedures. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVPP 253 Reciprocating Ignition Systems

Credit Hours: 5 / Billing Hours: 6.75

This course covers the operation, analysis, inspection, service and repair of reciprocating engine ignition systems and components. This includes magnetos, ignition harnesses, spark plugs and starter systems. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

AVPP 255 Reciprocating Induction Sys

Credit Hours: 4 / Billing Hours: 5.5

Study and analysis of reciprocating engine fuel systems and components. Includes inspection, checking, servicing, troubleshooting and repair of carburetors, water injection systems, heat exchangers, superchargers, intake and induction manifolds and other engine fuel system components. Also includes carburetor overhaul procedures. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVPP 257 Aircraft Propeller Systems

Credit Hours: 4 / Billing Hours: 5.5

Covers the study, analysis, service and repair of aircraft propellers, systems and controls. Includes propeller synchronizing, ice control, lubrication, balancing, pitch control, repair procedures and removal, and installation of both fixed-pitch and variable-pitch propellers. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVPP 259 Turbine Engine I

Credit Hours: 4 / Billing Hours: 5.5

This course covers the theory of operation and design of the varied turbine engine powerplants and turbine-driven auxiliary power unit types, including the induction and cooling systems of each. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVPP 261 Turbine Engine II

Credit Hours: 4 / Billing Hours: 5.5

This course covers inspection, checking, servicing, repair, removal, installation and troubleshooting of turbine engines and systems. A detailed study of the lubrication system and inspection procedures to insure conformity with FAA specifications and standards are included. (Offered Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

AVPP 263 Turbine Engine Systems

Credit Hours: 2 / Billing Hours: 2.75

This course is a detailed study of turbine-engine ignition, pneumatic and electric starters, exhaust and thrust reverser, fire detection and protection, fuel metering and electronic fuel control systems and components. Study also includes inspection, checking, servicing, repair and troubleshooting procedures. (Offered Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVPP 265 Powerplant Instruments

Credit Hours: 2 / Billing Hours: 2.5

This course covers the inspection and repair of turbine and reciprocating engine instruments. Troubleshooting of mechanical/electrical fluid rate-of-flow, temperature, pressure, RPM and airflow indicators will be included. (Offered Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

AVPP 267 Powerplant Certification

Credit Hours: 1 / Billing Hours: 1.5

Study of the Federal Aviation Regulations pertaining to national certification as a licensed powerplant mechanic. Includes testing in all required areas of study as a prerequisite to receiving authorization to take the powerplant national certification tests administered by representatives of the Federal Aviation Administration. (Offered Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

BIOL 120 Environmental Science

Credit Hours: 4 / Billing Hours: 6

Students will develop an ecological knowledge base to allow them to understand how human actions impact the environment. They will develop applied analytical skills through laboratories, fieldwork, simulations and a discussion of contemporary issues. They will investigate and evaluate basic ecological and environmental issues. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (NCAS 102 and ENGL 121 concurrently).
- Course Notes:
 - 1) The course fee for this course includes the price of the electronic textbook and web access from Cengage publishers. You do not need to purchase an additional textbook. If you want to purchase printed loose-leaf pages of the textbook, you may purchase them at a discount from Cengage once class has started.
 - 2) An online course also has some labs requiring students to physically tour a field lab facility or to do simple experiments at home.
 - 3) Not for Biology or Pre-Medical Studies Majors: Biol 120 is not on the Pre-Medical Studies or Biology degree pathways, which means it will not count toward your major and enrolling in this course may negatively impact your financial aid. Such majors may want to consider enrolling in Biol 127 instead of Biol 120. Please contact your academic advisor if you have any questions.

BIOL 121 Biol Foundation for Physiology

Credit Hours: 4 / Billing Hours: 6

Topics include atomic structure, chemical bonding, biological molecules, metabolism, cell structure and function, harvesting energy, cell division, central dogma, and genetics. Designed for students preparing for health careers and veterinary nursing. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].
- Recommended: CHEM 120 or High School Chemistry.
- Course Note: Not for Biology or Pre-Medical Studies Majors: Biol 121 is not on the Pre-Medical Studies or Biology degree pathways, which means it will not count toward your major and enrolling in this course may negatively impact your financial aid. Such majors may want to consider enrolling in Biol 127 instead of Biol 121. Please contact your academic advisor if you have any questions.

2024-2025 Course Descriptions

BIOL 125 Introductory Biology

Credit Hours: 4 / Billing Hours: 6

This is an introductory biology course for non-science majors. Lecture and lab topics include cell theory, evolution, a survey of life, and basic plant and animal anatomy. Students will analyze scientific data and investigate current biological issues. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

BIOL 127 Cell Biology

Credit Hours: 4 / Billing Hours: 6

This course includes the biochemistry of carbohydrates, lipids, proteins, respiration, and photosynthesis. Prokaryotic and eukaryotic cell structure and function, molecular genetics, regulation of gene expression, and biotechnology are explored. Laboratory stresses techniques of cell and molecular biology and molecular genetics. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Recommended: Minimum 2.0 in (CHEM 120 or CHEM 125) or (minimum 2.0 in CHEM 151 or concurrently).

BIOL 128 Organismal Biology

Credit Hours: 4 / Billing Hours: 6

This course examines adaptations of organisms to changing environments. Major emphasis is on physiological adaptations, natural selection, and ecology. Lab topics include a survey of the kingdoms, behavior experiments, and field studies. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].
- Recommended: Minimum 2.0 in BIOL 127.

2024-2025 Course Descriptions

BIOL 145 Intro Anatomy and Physiology

Credit Hours: 4 / Billing Hours: 6

A lecture and laboratory course in anatomy and physiology focusing on structure and function of human body systems. Designed for allied health care and non-science majors. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

BIOL201 Human Anatomy

Credit Hours: 4 / Billing Hours: 6

A lecture and laboratory study of the anatomy of the human body that includes the structures of the integumentary, skeletal, muscular, nervous, cardiovascular, lymphatic, respiratory, digestive, urinary, endocrine, and reproductive systems. Designed for students preparing for allied health professions. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].
- Recommended: Minimum 2.0 in (BIOL 121 or BIOL 127 or CHEM 120 or CHEM 151).
- Course Note: This course includes on-site proctored exam(s) for all online and/or hybrid sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

BIOL 202 Human Physiology

Credit Hours: 4 / Billing Hours: 5

The physiology, regulation, biochemistry, and integration of various organ systems in the human body are presented. Emphasis is on normal function, but appropriate clinical aspects may be discussed. Laboratory topics complement the lecture. Designed for students preparing for health professions and other life sciences. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in BIOL 201 or concurrently and [Minimum 2.0 in MATH 109 or (MATH 119 or STAT 170 concurrently) or Math Level 5 noted below].
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 5 Course Note:
- Course Note: This course includes on-site proctored exam(s) for all online and/or hybrid sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

2024-2025 Course Descriptions

BIOL 203 Microbiology

Credit Hours: 3 / Billing Hours: 3

An introduction to bacteria, viruses, and other microorganisms as they relate to human health. Emphasis on bacterial and viral structure, life cycles, and genetics; antimicrobial therapy; immunology and host defenses; epidemiology, treatment, and prevention of infectious human diseases. Designed for health career and other science students. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].
- Recommended: Minimum 2.0 in (BIOL 121 or BIOL 127 or CHEM 120 or CHEM 151).
- Course Note: This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

BIOL 204 Microbiology Laboratory

Credit Hours: 1 / Billing Hours: 3

Basic laboratory principles of microbiology for allied health students. Emphasis on microscopy, aseptic cultivation and enumeration of microorganisms, differential staining, assays of antimicrobial agents, and diagnostic laboratory techniques. Students will identify unknown bacterial species. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in BIOL 203 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 5 or minimum 2.0 in (MATH 109) or (MATH 119 or STAT 170) concurrently].

BIOL 210 Natural Resource Conservation

Credit Hours: 4 / Billing Hours: 6

This course examines the renewable natural resources and the policies which govern their use in Michigan. Lecture topics include ecology, water, wildlife, forests, and soils. Laboratory investigations include measurement techniques, environmental problem solving and field studies. (Offered Fall).

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

2024-2025 Course Descriptions

BIOL 260 Botany

Credit Hours: 4 / Billing Hours: 6

An introduction to the study of plants that includes structure and function, development, and ecology. Emphasis will be placed on the diversity, adaptations, and life cycles of major plant groups. Laboratory will complement the basic concepts with emphasis on physiology, systematics, and species of value to medicine and agriculture. (Offered Fall).

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6. Recommended: One semester of college-level biology.

BIOL 265 Zoology

Credit Hours: 4 / Billing Hours: 6

Topics include principles of taxonomy; early animal development; the diversity of animal body plans; and protozoan biology. Course deals principally with taxonomy, early development, and comparative anatomy of members within the animal phyla and classes. Groups are surveyed in a phylogenetic approach. (Offered Spring).

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].
- Recommended: One semester of college-level biology.

BIOL 270 Human Genetics

Credit Hours: 3 / Billing Hours: 3

Presents general principles of genetics with specific human application. Topics include Mendelian genetics, mitosis and meiosis, chromosome structure and aberrations, sex determination and x-linkage, molecular basis of inheritance, gene mutations, genetics of immune system, cancer genes, recombinant DNA technology, and genetic screening and counseling. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)]
- Recommended: One semester of college-level biology.
- Course Note: This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

2024-2025 Course Descriptions

BIOL 275 Molecular Biology I

Credit Hours: 4 / Billing Hours: 6

Principles and current trends of molecular biology and biochemistry of DNA/RNA structure, gene expression, function, and replication are explored. Laboratory training emphasizes reagents, culturing bacteria, isolating, purifying, manipulating, and analyzing DNA using modern techniques such as PCR, bioinformatics, and CRISPR. This is the first course in a two-course sequence. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in BIOL 127 and CHEM 151 and CHEM 161.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

BIOL 276 Molecular Biology II

Credit Hours: 4 / Billing Hours: 6

Continuation of BIOL 275. Advanced lecture and laboratory topics in molecular biology and biochemistry in gene analysis, gene sequencing, and applications of molecular biotechnology. Laboratory activities include gene cloning and genome editing experiments, and molecular analysis of protein structure and function. This is the second course in a 2-course sequence. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in BIOL 275.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

BLDT 120 Structural Framing

Credit Hours: 4 / Billing Hours: 6

This course covers the key concepts for furnishing and installing various components related to floors, walls, and roofs for new and existing residential and light commercial construction according to industry standards and code specifications. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (DCTM 102 or ELTE 102 or HVAC 102 or METS 102 or WELD 102 or concurrently).
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

BLDT 130 Building Exterior Construction

Credit Hours: 4 / Billing Hours: 6

This course covers the key concepts for furnishing and installing various exterior components such as roofing, siding, doors, and windows for new and existing residential and light commercial construction according to industry standards and code specifications. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (DCTM 102 or ELTE 102 or HVAC 102 or METS 102 or WELD 102) or concurrently.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Recommended: BLDT 120 or BLDT 121.

BLDT 140 Building Interior Construction

Credit Hours: 4 / Billing Hours: 6

This course covers the key concepts for furnishing and installing various components related to floor finish, wall finish, ceilings, millwork, and interior doors for new and existing residential and light commercial construction according to industry standards and code specification. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (DCTM 102 or ELTE 102 or HVAC 102 or METS 102 or WELD 102 or concurrently).
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Recommended: (BLDT 120 or BLDT 121) and (BLDT 130 or BLDT 125).

BLDT 150 Intro Masonry/Concrete Const

Credit Hours: 4 / Billing Hours: 6

This course introduces the basic properties and practices of concrete construction and masonry construction. Upon completion of this course, students will have the knowledge and skills necessary to take the ACI (American Concrete Institute) certification exam for Flatwork Technician. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

BLDT 160 Steel Framing

Credit Hours: 4 / Billing Hours: 6

Students will learn commercial metal stud framing, step-by-step methods to master high-speed metal framing, and learn about new tools, materials and equipment. Students will be introduced to technical and practical experience with light gauge stud design and standards. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Recommended: BLDT 120 or BLDT 121 or concurrently.

BLDT 180 Builder Pre-Licensure Prep

Credit Hours: 4 / Billing Hours: 4

This course will provide the student with the information needed to pass the Michigan Builder's License Examination as well as techniques for running a successful contracting business. It is approved by the State of Michigan and satisfies the 60-hour pre-license course requirement. The program is for anyone who is interested in becoming a licensed contractor in Michigan. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: This course fulfills the State of Michigan 60-hour requirement to apply for a Residential Builder or Maintenance & Alteration Contractor license. If you need more information, call 517-483-5338.

BLDT 285 Residential Bldg Internship

Credit Hours: 2 to 4 / Billing Hours: 2 to 4

This course offers students the opportunity to work for a residential builder in an actual job situation. The students can gain experience working with tools used in the industry and applying what they learned in the classroom and laboratory. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (BLDT 120 or BLDT 121). Departmental Approval is required.
- Placement Score: None.
- Recommended: Building Construction Majors.

2024-2025 Course Descriptions

BUSN 118 Introduction to Business

Credit Hours: 3 / Billing Hours: 3

Introduction to principles, problems, and practices related to the world of business. Topics covered include: business management and organization, marketing, finance, economics, supply chain management, and international business. Application of these topics will be done through critical thinking of weekly application assignments, quizzes, and online discussion questions. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).
- Course Note: Some sections of BUSN 118 allow concurrent enrollment in ENGL 098 and NCAS 105. See an academic advisor for sections that allow concurrent enrollment with ENGL 098 and NCAS 105.

BUSN 150 Legal Issues: Start Small Busn

Credit Hours: 2 / Billing Hours: 2

This course will introduce, but not limited to, the legal aspects of starting and operating a small business. Topics will include selecting the appropriate legal structure for setting up a business, complying with employment law, protecting intellectual property, avoiding legal disputes, and other legal aspects of purchasing and operating a business. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

BUSN 201 International Business

Credit Hours: 3 / Billing Hours: 3

Students will analyze the conditions in multiple countries and develop and evaluate present and future SWOT analysis for international business activities. Students will also analyze the relationship between international businesses and institutions and the political, economic, legal, financial management, human resource, and social policies of countries to develop strategies for successful decision-making. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.
- Recommended: BUSN 118.

2024-2025 Course Descriptions

BUSN 250 Personal Finance

Credit Hours: 3 / Billing Hours: 3

Provides a broad survey of topics including budgeting, buying and leasing a car, renting, buying or selling a home, credit requirements, time value of money, insurance, and other personal financial planning topics. Not intended to be a financial planning course, but students will need basic knowledge of financial areas. A capstone group project will be used to apply the materials covered in this course. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 5.

BUSN 251 Understanding Investments

Credit Hours: 3 / Billing Hours: 3

Study of securities markets which will include an introduction to various types of investments such as mutual funds, real estate, money markets, stocks, bonds, and IRAs. Practice will be conducted to develop an understanding of terminology and application of concepts. Time Value of Money and some of the more prevalent theories, concepts, and skills of investing will be covered to aid in developing strategies for making sound investment decisions. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4 and [Math Level 5 or minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

BUSN 260 Starting a Business

Credit Hours: 4 / Billing Hours: 4

This course will introduce students to the world of entrepreneurs and their role in small business. There will be an emphasis on building a "business" which will include the elements of entrepreneurship, management, marketing, and finance. The Internet will be used as a resource and many real-life cases will be studied. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 4.

2024-2025 Course Descriptions

BUSN 285 Business Admin Internship Credit Hours: 2 to 5 / Billing Hours: 2 to 5

The Business Admin Internship is an opportunity for students to work with Lansing area businesses as a team member to explore various careers within the industry. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in BUSN 118.
- Placement Score: Reading Level 5 and Writing Level 6.

CHDV 100 Foundations Early Childhood Ed Credit Hours: 3 / Billing Hours: 3

In this course students are introduced to the field of early childhood education. Students will explore the basic principles and practices of teaching young children. Topics include professionalism, creating effective learning environments, influences on children's learning, observation and assessment, and how children learn through play. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently) and Writing Level 4.
- Recommended: Child Development and Early Education Major.
- Course Note: To complete an Associate Degree or Certificate in Child Development and Early Education in the shortest possible time, students must enroll in CHDV 100 and CHDV 111 in their first semester.

CHDV 101 Child Growth/Develop: 0-12 Yrs Credit Hours: 4 / Billing Hours: 4

This course examines the growth and development patterns of children through age twelve in physical, social, emotional, cognitive and language development. This includes the influences of environmental factors which impact development. Students acquire skills in observing and recording child behavior. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently) and Writing Level 4.

2024-2025 Course Descriptions

CHDV 111 Child Guidance/Communication

Credit Hours: 4 / Billing Hours: 4

This course includes field experience. Students learn interaction skills and environmental structures that foster social and emotional growth in children in early childhood education. Topics include positive guidance and discipline, effective communication with children, problem solving, and social skill development. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in CHDV 100 or concurrently.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently) and Writing Level 4.
- Course Note:
 - All students must register for 4 hours/week at an approved (by CHDV program) weekday daytime field experience site by [emailing](mailto:jordanh@star.lcc.edu) (jordanh@star.lcc.edu).
 - Students must pass an [ICHAT](#) criminal background check and a State of Michigan Central Registry Clearance prior to beginning field experience.
 - Students may be required to submit proof of vaccinations, including COVID, prior to beginning field experience.
 - Students who have not submitted required documentation by the 2nd week of the semester may be dropped from the course.
 - In addition to regular class time, students are required to complete training online required for field experience. Information will be distributed via the course management site.
 - To complete an Associate Degree or Certificate in Child Development and Early Education in the shortest possible time, students must enroll in CHDV 100 and CHDV 111 in their first semester.

2024-2025 Course Descriptions

CHDV 122 Creativity and Play

Credit Hours: 1 / Billing Hours: 1

This course examines curriculum and activities which enhance the creative development of children in early childhood education. Students will explore the role of play and hands-on experiences in the development of creativity. Specific information on activities in the areas of art, music, movement, and dramatic play are shared. Information on physical and sensory development is also included. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.

CHDV 123 Literacy and Play

Credit Hours: 1 / Billing Hours: 1

This course examines language and literacy development for children birth through age 5. Focus is on planning and supporting language development, emergent reading, and emergent writing through a play-based, developmentally appropriate curriculum. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.

CHDV 124 Young Investigators: Math/Sci

Credit Hours: 1 / Billing Hours: 1

This course focuses on cognitive development in early childhood, highlighting problem-solving skills, math and science experiences, and explorations of the natural world. Through hands-on activities, students will investigate developmentally appropriate experiences for children in early childhood. Appropriate questioning techniques, environments, and ways to integrate exploration and problem-solving into daily routines and other aspects of the curriculum are explored. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.
- Recommended: Experience in Early Childhood Education and Care.

2024-2025 Course Descriptions

CHDV 129 Caring for Youngest Learners

Credit Hours: 2 / Billing Hours: 2

This course explores developmentally appropriate infant and toddler caregiving practices that support and nurture development and learning for children under the age of three. It is designed as an introductory course for those who care for and work with infants and toddlers. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.

CHDV 132 Leadership Early Childhood Ed

Credit Hours: 2 / Billing Hours: 2

This course introduces students to effective leadership skills in early childhood education. Topics include leadership styles, communication skills, conflict resolution, interpersonal skills, and team-building in the workplace. Students will engage in self-reflection as they explore ethics, equity, and social justice in early childhood education. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.

CHDV 135 Inclusion for Every Learner

Credit Hours: 3 / Billing Hours: 3

This course explores inclusive educational practices in early childhood settings serving children from birth to age 8. It includes benefits of inclusion, strategies for supporting diverse learners, partnering with families and other professionals, and advocating for inclusive practices. Focus is on including and promoting learning for children with disabilities and delays. (Offered Fall, Spring).

- Prerequisite Course: Minimum 2.5 in CHDV 101.
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

CHDV 215 Infant Toddler Program Dev

Credit Hours: 4 / Billing Hours: 4

This course includes field experience. Students will explore the social-emotional and physical environments needed for quality early education and care for infants and toddlers. Focus includes developing positive interactions, building relationships, developmentally appropriate activities and materials, managing routines, and observation skills. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in [CHDV 100 and CHDV 101 and (CHDV 111 within 5 years)].
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note:
 - All students must register for 4 hours/week at an approved (by CHDV program) weekday daytime field experience site by [emailing](mailto:jordanh@star.lcc.edu) (jordanh@star.lcc.edu).
 - Students must pass an [ICHAT](#) criminal background check and a State of Michigan Central Registry Clearance prior to beginning field experience.
 - Students may be required to submit proof of vaccinations, including COVID, prior to beginning field experience.
 - Students who have not submitted required documentation by the 2nd week of the semester may be dropped from the course.
 - In addition to regular class time, students are required to complete training online required for field experience. Information will be distributed via the course management site.

2024-2025 Course Descriptions

CHDV 220 **Preschool Curriculum Approach**

Credit Hours: 4 / Billing Hours: 4

This course, with fieldwork, explores developmentally appropriate curriculum in various content areas in preschool-age early education settings. Students explore play-based learning and curriculum development that support children's individual growth and development. Other topics include learning environments and materials; observation, documentation and assessment; and planning and evaluating learning experiences. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in [CHDV 100 and CHDV 101 and (CHDV 111 within 5 years)].
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note:
 - All students must register for 4 hours/week at an approved (by CHDV program) weekday daytime field experience site by [emailing](mailto:jordanh@star.lcc.edu) (jordanh@star.lcc.edu).
 - Students must pass an [ICHAT](#) criminal background check and a State of Michigan Central Registry Clearance prior to beginning field experience.
 - Students may be required to submit proof of vaccinations, including COVID, prior to beginning field experience.
 - Students who have not submitted required documentation by the 2nd week of the semester may be dropped from the course.
 - In addition to regular class time, students may be required to complete training online required for field experience. Information will be distributed via the course management site.

CHDV 222 **Caring for School-Age Children**

Credit Hours: 2 / Billing Hours: 2

This course examines developmentally appropriate programming for school-aged children in after-school, school-age, or before and after care settings. Course topics include professionalism, development and learning needs of the school-age child, environment and program structure, individual and group management, and planning appropriate learning experiences. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.

2024-2025 Course Descriptions

CHDV 230 Early Childhood Program Admin Credit Hours: 3 / Billing Hours: 3

This course examines the administrative and leadership role of managing an early childhood education program, including state licensed child care homes, group homes and centers. The focus is on identifying effective leadership and management strategies, policies, and procedures required for the operation of a quality early childhood education program. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in CHDV 111.
- Placement Score: Reading Level 5 and Writing Level 4.

CHDV 284 Early Childhood Practicum Credit Hours: 5 / Billing Hours: 5

This course includes field experience. Students will plan and implement developmentally appropriate learning experiences to support each and every child in an early childhood setting. An emphasis is placed on the development of professional skills for working with colleagues, children, and families. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in [CHDV 215 (previously CHDV 221) and CHDV 220] and [CHDV 225 (previously CHDV 112) or concurrently].
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note:
 - All students must register for 8 hours/week at an approved (by CHDV program) weekday daytime fieldwork site by [emailing](mailto:jordanh@star.lcc.edu) (jordanh@star.lcc.edu).
 - Students must pass an [ICHAT](#) criminal background check and a State of Michigan Central Registry Clearance prior to beginning fieldwork.
 - Students must submit proof of COVID vaccination and a TB Test prior to beginning field experience.
 - Students who have not submitted proof of a completed ICHAT, Central Registry Clearance, negative TB Test, and COVID vaccination by the 2nd week of the semester may be dropped from the course.
 - In addition to regular class time, students may be required to complete training online required for field experience. Information will be distributed via the course management site.

2024-2025 Course Descriptions

CHDV 297 Child Dev Directed/Indep Study Credit Hours: 0.25 to 4 / Billing Hours: 0.25 to 4

This course includes special research, directed study, or service-learning projects in child development. It requires at least 16 hours of independent work for each credit. A learning contract specifying objectives, activities, and outcomes is required. (Offered As Needed)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: None.

CHEM 120 Gen Organic & Biological Chem Credit Hours: 4 / Billing Hours: 4

Introduces topics in general, organic, and biological chemistry that are used in health-related occupations. Included are scientific measurement, atomic structure and bonding, chemical equations and stoichiometry, solutions, acids, bases, buffers, gas behavior, nuclear radiation, organic functional groups, and the biologically important compounds: carbohydrates, lipids, and proteins. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4 and [Math Level 4 or Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

CHEM 125 Basic Chemistry Credit Hours: 4 / Billing Hours: 4

Intended for students who have not had high school chemistry or who require a refresher course. Measurement, problem solving, chemical formulas, states of matter, chemical equations, stoichiometry, atomic structure, chemical bonding, gas laws, solutions, and acids and bases are emphasized. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4 and (Math Level 5 or concurrent enrollment in MATH 109).

2024-2025 Course Descriptions

CHEM 130 Biochemistry

Credit Hours: 4 / Billing Hours: 4

This course is designed to provide an understanding of the chemistry of life processes. Topics include organic functional groups, enzymes, carbohydrates, lipids, proteins, metabolic pathways, nucleic acids, biochemical genetics, blood and respiratory chemistry, urine, electrolytes, acid-base balance, and hormones. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in CHEM 120 or CHEM 125 or CHEM 151.
- Placement Score: Reading Level 5 and Writing Level 6 and (Math Level 4 or minimum 2.0 in [MATH 105 or MATH 106] or P in [NCMA 106 or NCMA 110]).

CHEM 135 Chemistry in Society

Credit Hours: 4 / Billing Hours: 5

A general education course which presents chemistry to non-science majors who must function and make decisions in a society shaped by science and technology. Chemistry knowledge is introduced and applied on a need-to-know basis with respect to issues in society that have significant chemistry components. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

CHEM 151 General Chemistry Lecture I

Credit Hours: 4 / Billing Hours: 4

The first of two semester courses designed to provide an in-depth introduction to general chemistry for students who plan careers in the health professions, physical sciences, biological sciences, or engineering. Topics discussed include measurement, chemical formulas and equations, states of matter, aqueous solutions and reactions, stoichiometry, thermochemistry, atomic structure, bonding, chemical equilibrium, and acids and bases. (Offered Fall, Spring, Summer).

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 6 or (MATH 109 concurrently or MATH 120 concurrently)].
- Recommended: Minimum 2.0 in CHEM 125 or High School Chemistry and CHEM 161 concurrently
- Course Note: This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

2024-2025 Course Descriptions

CHEM 152 General Chemistry Lecture II

Credit Hours: 3 / Billing Hours: 3

The second of two semester courses designed to provide an in-depth introduction to general chemistry for students who plan careers in the health professions, sciences, or engineering. Topics include aqueous equilibria, kinetics, nuclear chemistry, oxidation-reduction, transition metals, coordination chemistry, thermodynamics, electrochemistry, and molecular orbitals. (Offered Fall, Spring, Summer)

- Prerequisite Course: Reading Level 5 and Writing Level 6 and (Minimum 2.0 in CHEM 151 and [Math Level 7 or minimum 2.0 in MATH 126 or concurrently]) or (Minimum 3.5 in CHEM 151 and [Math Level 7 or minimum 2.0 in Math 120 or concurrently]).
- Course Note:
 - 1). A scientific calculator capable of scientific notation and log functions is required for this course.
 - 2). This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

CHEM 161 General Chemistry Lab I

Credit Hours: 1 / Billing Hours: 3

Laboratory course designed to complement CHEM151. Stresses basic laboratory techniques, writing lab reports, and critical thinking exercises. Topics include density determination, thin layer chromatography, distillation, synthesis, empirical formulas, calorimetry, molecular geometry, gas laws, chemical equilibrium, pH, and water hardness. (Offered Fall, Spring, Summer).

- Prerequisite Course: Minimum 2.0 in CHEM 151 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 6 or (MATH 109 or MATH 112) or concurrently].

2024-2025 Course Descriptions

CHEM 162 General Chemistry Lab II

Credit Hours: 1 / Billing Hours: 3

Laboratory course designed to complement CHEM152. CHEM162 is the second semester general chemistry laboratory course. Stresses laboratory techniques and analyzing and reporting laboratory data. Topics include inorganic synthesis, chemical analysis, acid-base and solubility equilibria, oxidation-reduction reactions, and chemical kinetics. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in [CHEM 152 (or concurrently) and CHEM 161] and [(MATH 121 or MATH 126) or concurrently or Math Level 7 as noted below].
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 7.

CHEM 182 Introductory Organic Chemistry

Credit Hours: 3 / Billing Hours: 3

A survey of the principles of organic chemistry. Introduces the student to structure, nomenclature, chemical and physical properties, selected characteristics, preparations and reactions of the most common classes of organic compounds. Other topics include polymers, optical isomerism, and selected reaction mechanisms. (Offered Fall, Spring, Summer).

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: Minimum 2.0 in CHEM 151.

CHEM 192 Intro Organic Chem Lab

Credit Hours: 1 / Billing Hours: 3

Designed for students in majors such as chemical processing, packaging, agriculture, and forestry who require only one credit of organic lab. It gives students an introduction to common techniques, equipment, and chemicals found in an organic laboratory. Particular attention is given to compounds studied in CHEM182. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in CHEM 182 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: CHEM 151.

2024-2025 Course Descriptions

CHEM 251 Organic Chemistry Lecture I

Credit Hours: 4 / Billing Hours: 4

CHEM 251 is the first lecture course of a two-semester sequence in organic chemistry for chemical engineering, chemical technology, chemistry, or pre-professional majors. Topics include structure and bonding, hybridization, nomenclature, stereochemistry, thermodynamics and kinetics of organic reactions, functional groups including reactions and mechanisms, and applications of infrared spectroscopy and nuclear magnetic resonance. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in CHEM 151.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: Minimum 2.0 in CHEM 152.

CHEM 252 Organic Chemistry Lecture II

Credit Hours: 4 / Billing Hours: 4

Continuation of CHEM 251. Topics include conjugated dienes, aromatic compounds, ethers, epoxides, aldehydes and ketones, carboxylic acids and their derivatives, amines, enolates, carbohydrates, and amino acids. In addition, applications of nuclear magnetic resonance, mass spectrometry, and infrared spectroscopy will be explored. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CHEM 251.
- Placement Score: Reading Level 5 and Writing Level 6.

CHEM 262 Quantitative Analysis

Credit Hours: 3 / Billing Hours: 6

This course covers the theory and procedures of classical analytical techniques, including gravimetric analysis and titrimetric methods. Use of instruments such as spectrophotometers, pH meters, and others is also included. Designed for laboratory technician preparation, chemistry majors, or transfer students. (Offered Fall).

- Prerequisite Course: Minimum 2.0 in (CHEM 152 and CHEM 162).
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 7.

2024-2025 Course Descriptions

CHEM 272 Organic Chemistry Laboratory

Credit Hours: 2 / Billing Hours: 6

Designed for students (in majors such as chemistry, pre-med, and pre-pharmacy) who require more than one credit of organic lab. It gives students experience with the chemicals, techniques, and equipment commonly employed in organic laboratories. Particular attention is given to compounds studied in CHEM251 and 252. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CHEM 251.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: CHEM 252 concurrently.

CHSE 100 Intro to Health Professions

Credit Hours: 3 / Billing Hours: 3

This course is an overview of healthcare careers. It explores the business of healthcare, safety, and healthcare costs. It includes the introduction to concepts of leadership and management, patient teaching, communications, time management, critical thinking, and career pathways. It includes learning drug dose calculations and medical terminology. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently) and Writing Level 4.
- Course Note: In addition to regular class time, students are required to complete Bloodborne Pathogens and HIPAA training online. Information will be distributed via the course D2L site.

2024-2025 Course Descriptions

CHSE 108 Long-Term Care Nurse Aide

Credit Hours: 4 / Billing Hours: 6.5

This course will prepare an individual to be a nurse aide in a long-term care facility or home health care agency. This state-approved course will provide specific knowledge and skills required for a nurse aide to safely function in a long-term care setting. Upon successful completion, the student is eligible to take the Certified Nurse Assistant (CNA) Exam. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.
- Course Note:
 - This course provides training for CNA testing, nursing home, and Home Health Aide.
- Required for clinical:
 - Completion of Bloodborne Pathogens online training; information given first day of class.
 - Negative 2-step TB (tuberculosis) tests within the last year.
 - Students must pass an [ICHAT](#) criminal background check (credit card required), results to be submitted on first day of course.
 - Proof of required immunizations.
 - Students MUST meet physical requirements for the duration of course as specified in course syllabus.
 - Students will be charged a \$20 fee for ACEMAPP required documentation/testing.

2024-2025 Course Descriptions

CHSE 109 LTC to AC Nurse Assistant/PCT

Credit Hours: 3 / Billing Hours: 4.75

This course will prepare individuals for employment as a nurse aide/patient care technician (PCT) in hospital and rehabilitation settings who have previously completed a long-term care nurse aide training. This course will build on long-term care knowledge and skills, adding acute care and rehabilitation knowledge and skills required to deliver quality and safe basic patient care. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in CHSE 108 within 1 year or (current CNA Certification and Department Approval).
- Placement Score: Reading Level 5 and Writing Level 4
- Corequisite Course: NCHE 102.
- Course Note:
 - Students who have previously completed a long-term care nurse aide training may arrange for additional acute care training to prepare for employment as a nurse aide/patient care technician (PCT) in hospital and rehabilitation settings. Contact Sue Schneider or Mary Pacitto at 517-483-1410 for more information.
- Required:
 - Completion of Bloodborne Pathogens and HIPAA online training; information given first day of class.
 - Negative 2-step TB (tuberculosis) tests within the last year.
 - Students must pass an [ICHAT](#) criminal background check prior to the beginning of clinicals; information given at first class session.
 - Students must meet physical requirements for the duration of course as specified in the course syllabus.
 - Students will be charged a \$20 fee for ACEMAPP required documentation/testing.

CHSE 114 Pathophysiology-Allied Health

Credit Hours: 3 / Billing Hours: 3

General principles of pathophysiology are discussed in order to develop a new way of thinking about disease processes. Concepts of specific disease processes and their effect on normal structure and function of the body are presented. Disease prevention concepts are also discussed. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in [BIOL 145 or (BIOL 201 and BIOL 202)].
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

CHSE 117 Health Law and Ethics

Credit Hours: 2 / Billing Hours: 2

This course presents for discussion, legal and ethical issues arising from the organization and delivery of health care services. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

CHSE 119 Community Health Career Topics Credit Hours: 0.25 to 8 / Billing Hours: 0.25 to 11

This course offers students the opportunity to learn new community health career skills and knowledge. Specific up-to-date content will vary with each seminar and will be related to the community health careers. (Offered As Needed)

- Prerequisite Course: Determined by Section.
- Placement Score: Determined by Section.

CHSE 120 Medical Terminology

Credit Hours: 4 / Billing Hours: 4

Medical Terminology provides an in-depth knowledge of word building, use, pronunciations, spelling, term building, and the application of medical terms in relation to function, structure, and specific disease conditions. Emphasis is placed on medical terms from periodicals, textbooks, and medical care areas. This is a health careers foundational course. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

CHSE 123 Medical Ins Billing/Coding I

Credit Hours: 4 / Billing Hours: 4

This course introduces insurance billing and diagnostic and procedure coding using the International Classification of Diseases (ICD-10-CM), Current Procedural Terminology (CPT), and National Healthcare Common Procedures Coding System (HCPCS) coding systems. The course also introduces the legal and compliance issues and their relationship to insurances. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in CHSE 120 or concurrently. Computer, keyboarding, and internet skills and experience required.
- Placement Score: Reading Level 5 and Writing Level 4.
- Corequisite Course: CHSE 131.

2024-2025 Course Descriptions

CHSE 124 Medical Ins Billing/Coding II

Credit Hours: 4 / Billing Hours: 4

The course provides comprehensive billing directions for BCBS (Blue Cross Blue Shield), Medicare, Medicaid, commercial insurances including HMOs, managed care, and worker's compensation. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in [(CHSE 120 and CHSE 123) and (CHSE 131 or concurrently)].
- Placement Score: Reading Level 5 and Writing Level 4.
- Corequisite Course: CHSE 125 and CHSE 127.

CHSE 125 Comp-Med Ins Billing/Coding

Credit Hours: 2 / Billing Hours: 2

This course, in combination with CHSE 124, introduces students to software used in medical office billing and coding. Students learn to record charges/payments/information; schedule appointments; ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification), and CPT (Current Procedure Terminology) coding; produce claim forms and patient statements; and build office databases. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in [(CHSE 120 and CHSE 123) and (CHSE 124 or concurrently)].
- Placement Score: Reading Level 5 and Writing Level 4.
- Corequisite Course: CHSE 124 and CHSE 127.

CHSE 127 Medical Ins Billing/Coding III

Credit Hours: 3 / Billing Hours: 3

The focus of this course is coding and billing for inpatient and outpatient hospital-based services. Students will be introduced to the ICD-10-CM, ICD-10-PCS, CPT, and HCPCS diagnostic and procedure codes. DRGs and their impact are discussed, as are recording charges using the UB-04 and CMS 1500 claim forms. Students will post payments, review and resubmit claims, and perform account receivable follow-up and collections. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in [CHSE 120 and CHSE 123 and (CHSE 124 or concurrently) and (CHSE 125 or concurrently)].
- Placement Score: Reading Level 5 and Writing Level 4.
- Corequisite Course: CHSE 124 and CHSE 125.

2024-2025 Course Descriptions

CHSE 130 Medical Ins Bill/Code Extern

Credit Hours: 3 / Billing Hours: 3

This course provides students with worksite experience and training that is both physician office and hospital based. This experience will reinforce skills learned in CHSE 123, 124, 125, and 127, and prepare students for an entry-level position in the medical billing and coding field. Students are required to attend lectures which will include discussion of professional work-place skills, resume writing, and interviewing skills. (Offered Spring, Summer)

- Prerequisite Course: Minimum 2.5 in (CHSE 120 and CHSE 123 and CHSE 124 and CHSE 125 and CHSE 127 and CHSE 131). Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 4.
- Course Note:
 - Minimum age of 18 required to enroll in this course.
 - Completion of Bloodborne Pathogens and HIPAA Training online; information given at orientation.
 - Negative 2-step TB (tuberculosis) skin test within the last year.
 - Students must pass an [ICHAT](#) criminal background check (credit card required) prior to worksite placement; information given at orientation.
 - Students will be charged a \$20 fee for ACEMAPP required documentation/testing.
 - Contact the CHSE Externship Coordinator at 517-483-1410 to obtain program approval to enroll in this course.

CHSE 131 Electronic Hlth Records Intro

Credit Hours: 2 / Billing Hours: 2

This course introduces students to the Electronic Health Record (EHR) and its impact on health career-related job responsibilities. Through hands-on experience, students gain an awareness of how EHRs are used in different healthcare settings and how they change the nature of the work performed by individuals throughout the health care field. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in CHSE 120 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 4.
- Corequisite Course: CHSE 123.
- Course Note: Non-Medical Insurance Billing and Coding students interested in this course may contact the Health and Human Services Division Office at 517-483-1410 to request approval to enroll without enrolling in CHSE 123.

2024-2025 Course Descriptions

CHSE 136 EKG Technician

Credit Hours: 3.5 / Billing Hours: 4

This course teaches the theory and skills to perform process and explain electrocardiography and holter monitoring. Anatomy, physiology, pathology, and basic cardiac rhythm recognition is presented. Hands-on instruction and practice are included. Successful students may become certified through the American Certification Agency for Healthcare Professionals and/or the Cardiovascular Credentialing Institute. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in CHSE 120 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 4.
- Corequisite Course: Reading Level 5 and Writing Level 4.
- Course Note:
 - Required completion of Bloodborne Pathogens & HIPAA Training online; information given at first class session.
 - \$44 of the course fee is for medical supplies and is non-refundable.
 - Students will be charged a \$20 fee for ACEMAPP required documentation/testing.

CHSE 139 Community Health Career Topics Credit Hours: 0.25 to 8 / Billing Hours: 0 to 8

This course offers students the opportunity to learn new community health career skills and knowledge. Specific up-to-date content will vary with each seminar and will be related to the community health careers. (Offered As Needed)

- Prerequisite Course: Determined by Section.
- Placement Score: Determined by Section.

2024-2025 Course Descriptions

CHSE 143 Phlebotomy Technician

Credit Hours: 2 / Billing Hours: 3

This course is designed to prepare a person to function as a phlebotomy technician. It will provide the knowledge and skill necessary to safely and skillfully ensure patient identification, obtain a blood sample from a patient, and properly handle specimens after collection. The course includes lecture and campus laboratory. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently) and Writing Level 4.
- Course Note: Required:
 - Completion of Bloodborne Pathogens Training online; information will be distributed via the course D2L site and/or in class.
 - Students will be charged a \$50 fee for ACEMAPP required documentation/testing.
 - The ACEMAPP fee covers both CHSE 143 and CHSE 144 if taken within the same calendar year.

2024-2025 Course Descriptions

CHSE 144 Phlebotomy Externship

Credit Hours: 4 / Billing Hours: 4

This course is designed to enable the student to apply procedures learned in CHSE 143, Phlebotomy Technician, to a clinical laboratory setting. While at the worksite (clinical laboratory), students will be under the supervision of a preceptor. The course includes required lectures which cover professionalism, resume writing, and interviewing skills; a practical review of techniques; and worksite experience. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in CHSE 143 within 1 year. Program Approval required.
- Placement Score: Reading Level 5 and Writing Level 4.
- Course Note: Students will be charged a \$50 fee for ACEMAPP required documentation.
- Required:
 - Minimum age of 18 required to enroll in this course.
 - Completion of Bloodborne Pathogens and HIPAA training online; information given at orientation.
 - Negative 2-step TB (tuberculosis) skin test within the last year.
 - Students must pass an [ICHAT](#) criminal background check prior to worksite placement; information given at orientation.
 - Additional arranged hours are required for online discussion board.
 - Contact the CHSE Externship Coordinator at 517-483-1410 to obtain program approval to enroll in this course.

CHSE 150 CHSE Directed/Indep Study Credit Hours: 0.25 to 4 / Billing Hours: 0.25 to 7

This course is designed to update, enhance, or remediate knowledge, skills, and competencies for the returning Community Health Services Education student through evaluation of previous learning, self-study, lecture/lab sessions, and/or scheduling into a supervised clinical component. A learning contract specifying objectives, activities and outcomes is required. (Offered As Needed)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

CHSE 151 Patient Care Technician

Credit Hours: 6 / Billing Hours: 9.25

This course prepares the Certified Nurse Assistant (CNA) to be a Patient Care Technician (PCT) in a hospital or other acute care setting, adding to a student's previous training in a long-term care setting. Specific knowledge, skills, and training required to deliver safe basic patient care are covered (i.e., personal needs, phlebotomy, EKG). Successful completion of this course provides eligibility to take the National Certified Patient Care Technician (NCPCT) exam. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in (CHSE 108 within one year) or (current CNA Certification and Program Approval).
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently) and Writing Level 4.
- Corequisite Course: NCHE 102.
- Course Note: Provides training for national PCT certification and hospital. Students will be charged a \$50 fee for ACEMAPP required documentation.
- Required:
 - Minimum age of 18 required to enroll in this course.
 - Completion of Bloodborne Pathogens, HIPAA & Sparrow online training; information given first day of class.
 - Negative 2-step TB (tuberculosis) tests within the last year.
 - Students must pass an [ICHAT](#) criminal background check (credit card required). Results of ICHAT to be submitted on first day of course.
 - Proof of required immunizations.
 - Students must meet physical requirements for the duration of course as specified in course syllabus.

CHSE 235 Pharmacy Technician

Credit Hours: 4 / Billing Hours: 4

This course is designed to introduce students to the skills necessary for a pharmacy technician position in a hospital or retail pharmacy. Students will be prepared to function with knowledge and accuracy in dispensing and control of drugs in either setting. Successful completion prepares students for the technical portion of the Pharmacy Technician Certification Board National Certification Exam. Review of certification and exam requirements, along with additional prerequisites, will be needed prior to taking the exam. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 4.
- Course Note: Minimum age of 18 required to enroll in this course.

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Online courses may require students to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) for proctored exams. For more information, please visit the [Testing Services webpage](#).

2024-2025 Course Descriptions

CHSE 236 Pharmacy Technician Externship Credit Hours: 3 / Billing Hours: 3

This externship experience introduces the student to the skills necessary to perform the function of a pharmacy technician relative to prescription review, an introduction to prescription software, label preparation, and product selection during a hands-on activity in a live pharmacy environment. Students will be under preceptor supervision while at a hospital or community pharmacy. Students are required to attend lectures which cover professionalism, resume writing, and interviewing skills. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in CHSE 235 within 1 year. Program Approval required.
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 4.
- Course Note: Required:
 - Minimum age of 18 required to enroll in this course.
 - Completion of Bloodborne Pathogens and HIPAA Training online; information given at orientation.
 - Negative 2-step TB (tuberculosis) skin test within the last year.
 - Students must pass an [ICHAT](#) criminal background check (credit card required) prior to worksite placement; information given at orientation.
 - Students will be charged a \$50 fee for ACEMAPP required documentation.
 - Contact the CHSE Externship Coordinator at 517-483-1410 to obtain program approval to enroll in this course.

2024-2025 Course Descriptions

CITA 110 Intro to Microsoft Office

Credit Hours: 3 / Billing Hours: 3

This course provides an introduction to MS Office. It is designed to develop basic operational proficiency while using Microsoft Office (Word, Excel, Access, and PowerPoint). Students learn how to use word processing, spreadsheet, database, and presentation software. Topics include creating business letters, business memos, elementary spreadsheets, elementary database structures, and slide presentations. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4.
- Recommended: Windows and keyboarding experience.
- Course Note:
 - Students must be able to use web browsers and online learning tools including assignment folders, discussion boards, and e-mail.
 - They must also have Windows file management skills, including the ability to upload and download files, make folders, move and extract files.
 - This course requires the use of a PC computer running Windows 7 or higher, 4GB Ram, High Speed Internet Connection - 2 Mbit or higher, Microsoft Office 2016 and have a SAM Cengage account.
 - Mac computers are not recommended, but if they are used, desktop virtualization of the Windows environment is required.
 - Equipment and software is provided for students that wish to complete assignments at student computer labs located at Main, West, or East Campuses. Office 365 is available to LCC students at no cost using links from the College website.

2024-2025 Course Descriptions

CITA 115 Microsoft PowerPoint

Credit Hours: 3 / Billing Hours: 3

This course introduces students to the fundamental features of Microsoft PowerPoint. Topics include creating presentations using themes, graphic elements, interactive elements and animation effects. Students will prepare presentations for distribution in a variety of formats. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4.
- Recommended: Windows and keyboarding experience.
- Course Note:
 - Students must be able to use web browsers and online learning tools including assignment folders, discussion boards, and e-mail. They must also have Windows file management skills, including the ability to upload and download files, make folders, move and extract files.
 - This course requires the use of a PC computer running Windows 7 or higher, 4GB Ram, High Speed Internet Connection - 2 Mbit or higher, Microsoft Office 2016 and a MyLabIT for Office 2016 account. Mac computers are not fully compatible and are not recommended. Office 365 is available to LCC students at no cost using links from the College website.
 - ****MyLabIT:** You only need to purchase one MyLabIT 2016 account that can be used for CITA 115 PowerPoint, CITA 133 Access, CITA 126 Excel, and CITA 226 Advanced Excel. CITA 119 Word and CITA219 Advanced Word require a separate MyLabIT 2016 account. An e-book that covers all the classes listed above comes with MyLabIT from the BNC bookstore so a print book is optional if you have a second monitor or device for using your e-book while you work.

2024-2025 Course Descriptions

CITA 119 Microsoft Word

Credit Hours: 3 / Billing Hours: 3

This course introduces students to the fundamental features of Microsoft Word. Major topics include formatting text; creating footnotes, lists, tables, columns, newsletters and charts; inserting graphics; and exposure to mail merge. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4.
- Recommended: Windows and keyboarding experience.
- Course Note:
 - Students must be able to use web browsers and online learning tools including assignment folders, discussion boards, and e-mail. They must also have Windows file management skills, including the ability to upload and download files, make folders, move and extract files.
 - This course requires the use of a PC computer running Windows 7 or higher, 4GB Ram, High Speed Internet Connection - 2 Mbit or higher, Microsoft Office 2016 and a MyLabIT for Office 2016 account. Mac computers are not fully compatible and are not recommended. Equipment and software is provided for students that wish to complete assignments at student computer labs located on Main, West, and East campuses. Office 365 is available to LCC students at no cost using links from the College website.
 - **MyLabIT: You only need to purchase one MyLabIT 2016 account that can be used for CITA 119 Word and CITA 219 Advanced Word. CITA 115 PowerPoint, CITA 133 Access, CITA 126 Excel, and CITA 226 Advanced Excel courses require a separate MyLabIT 2016 account. An e-book that covers both CITA 119 and CITA 219 comes with MyLabIT from the BNC bookstore so a print book is optional if you have a second monitor or device for using your e-book while you work.

2024-2025 Course Descriptions

CITA 126

Microsoft Excel

Credit Hours: 3 / Billing Hours: 3

This course provides introductory through intermediate level training in Excel spreadsheets. Instruction includes creating worksheets and charts, using formulas and functions, creating Subtotal and PivotTable reports, and working with multiple worksheets. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.
- Recommended: Windows and keyboarding experience.
- Course Note:
 - Students must be able to use web browsers and online learning tools including assignment folders, discussion boards, and e-mail. They must also have Windows file management skills, including the ability to upload and download files, make folders, move and extract files.
 - This course requires the use of a PC computer running Windows 7 or higher, 4GB Ram, High Speed Internet Connection - 2 Mbit or higher, Microsoft Office 2016 and a MyLabIT for Office 2016 account. Mac computers are not fully compatible and are not recommended. Equipment and software is provided for students that wish to complete assignments at student computer labs located on Main, West, and East campuses. Office 365 is available to LCC students at no cost using links from the College website.
 - ****MyLabIT:** You only need to purchase one MyLabIT 2016 account that can be used for CITA 115 PowerPoint, CITA 133 Access, CITA 126 Excel, and CITA 226 Advanced Excel. CITA 119 Word and CITA 219 Advanced Word require a separate MyLabIT 2016 account. An e-book that covers all the classes listed above comes with MyLabIT from the BNC bookstore so a print book is optional if you have a second monitor or device for using your e-book while you work.

2024-2025 Course Descriptions

CITA 133

Microsoft Access Database

Credit Hours: 3 / Billing Hours: 3

This course provides introductory through intermediate level training in the creation of database management systems using Microsoft Access. Instruction includes an introduction to Microsoft Access, database creation and maintenance, database querying, the generation of custom forms and reports, and integration of Access with other programs. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4.
- Recommended: Windows and keyboarding experience.
- Course Note:
 - Students must be able to use web browsers and online learning tools including assignment folders, discussion boards, and e-mail. They must also have Windows file management skills, including the ability to upload and download files, make folders, move and extract files.
 - This course requires the use of a PC computer running Windows 7 or higher, 4GB Ram, High Speed Internet Connection - 2 Mbit or higher, Microsoft Office 2016 and have a MyLabIT for Office 2016 account. Mac computers are not recommended, but if they are used, desktop virtualization of the Windows environment is required. Equipment and software is provided for students that wish to complete assignments at the Main, West or East Campus computer labs. Office 365 is available to LCC students at no cost using links from the College website. Students may request Microsoft Access 2016 from their instructor through the Microsoft Imagine program at no additional cost.
 - **MyLabIT: You only need to purchase one MyLabIT 2016 account that can be used for CITA 115 PowerPoint, CITA 133 Access, CITA 126 Excel, and CITA 226 Advanced Excel. CITA 119 Word and CITA 219 Advanced Word require a separate MyLabIT 2016 account. An e-book that covers all the classes listed above comes with MyLabIT from the [BNC bookstore](#) so a print book is optional if you have a second monitor or device for using your e-book while you work.

2024-2025 Course Descriptions

CITA 140 Microsoft Outlook

Credit Hours: 3 / Billing Hours: 3

Students will use Outlook to manage typical business office communication needs. The course includes sending and organizing email, creating contacts, managing calendars and scheduling meetings. Students organize and archive data, and use email filters. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4.
- Recommended: Windows and keyboarding experience.
- Course Note:
 - This class requires Microsoft Outlook 2016. Students must be able to use web browsers and online learning tools including assignment folders, discussion boards, and e-mail. They must also have Windows file management skills, including the ability to upload and download files, make folders, move and extract files.
 - This course requires the use of a PC computer running Windows 7 or higher, 4GB Ram, High Speed Internet Connection - 2 Mbit or higher, and Microsoft Office 2016. Mac users are required to use Windows-based computers or desktop virtualization of the Windows environment for certain parts of the course. Equipment and software is provided for students that wish to complete assignments at student computer labs located at Main, West, and East campuses. Office 365 is available to LCC students at no cost using links from the College website.

2024-2025 Course Descriptions

CITA 219 **Advanced Microsoft Word**

Credit Hours: 3 / Billing Hours: 3

This course provides advanced level training using Microsoft Word. Topics include advanced table features, mail merge, creating forms, working with master and subdocuments, embedding and linking objects, and macros. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in CITA 119.
- Placement Score: Reading Level 4.
- Recommended: Windows and keyboarding experience.
- Course Note:
 - Students must be able to use web browsers and online learning tools including assignment folders, discussion boards, and e-mail. They must also have Windows file management skills, including the ability to upload and download files, make folders, move and extract files.
 - This course requires the use of a PC computer running Windows 7 or higher, 4GB Ram, High Speed Internet Connection - 2 Mbit or higher, Microsoft Office 2016 and have a MyLabIT for Office 2016 account. Mac computers are not recommended, but if they are used, desktop virtualization of the Windows environment is required. Equipment and software is provided for students that wish to complete assignments at student computer labs located at Main, West, and East campuses. Office 365 is available to LCC students at no cost using links from the College website.
 - ****MyLabIT:** You only need to purchase one MyLabIT 2016 account that can be used for CITA 119 Word and CITA 219 Advanced Word. CITA 115 PowerPoint, CITA 133 Access, CITA 126 Excel, and CITA 226 Advanced Excel courses require a separate MyLabIT 2016 account. An e-book that covers both CITA 119 and CITA 219 comes with MyLabIT from the [BNC bookstore](#) so a print book is optional if you have a second monitor or device for using your e-book while you work.

2024-2025 Course Descriptions

CITA 226 Microsoft Excel-Advanced

Credit Hours: 3 / Billing Hours: 3

This course introduces more complex functions and Excel tools used in financial, and statistical analysis. Additional topics include data imports, web queries, share and merge workbooks. Students customize Excel toolbars and automate tasks with macros. Data validation and auditing tools are introduced. This course, together with CITA 126, helps prepare for the Excel Microsoft Office Specialist (MOS) exams. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in CITA 126.
- Placement Score: Reading Level 5.
- Course Note:
 - Students must be able to use web browsers and online learning tools including assignment folders, discussion boards, and e-mail. They must also have Windows file management skills, including the ability to upload and download files, make folders, move and extract files.
 - This course requires the use of a PC computer running Windows 7 or higher, 4GB Ram, High Speed Internet Connection - 2 Mbit or higher, Microsoft Office 2016 and have a MyLabIT for Office 2016 account. Mac computers are not recommended, but if they are used, desktop virtualization of the Windows environment is required. Equipment and software is provided for students that wish to complete assignments at student computer labs located at Main, West, and East campuses. Office 365 is available to LCC students at no cost using links from the College website.
 - **MyLabIT: You only need to purchase one MyLabIT 2016 account that can be used for CITA 119 Word and CITA 219 Advanced Word. CITA 115 PowerPoint, CITA 133 Access, CITA 126 Excel, and CITA 226 Advanced Excel courses require a separate MyLabIT 2016 account. An e-book that covers both CITA 119 and CITA 219 comes with MyLabIT from the [BNC bookstore](#) so a print book is optional if you have a second monitor or device for using your e-book while you work.

2024-2025 Course Descriptions

CITC 282 Ethical Hacking

Credit Hours: 3 / Billing Hours: 3

This course provides an in-depth understanding of hacking phases, various attack vectors, and preventative countermeasures. Content will include how hackers think and act maliciously, allowing students to be better positioned to set up security infrastructure and defend against future attacks. This course will prepare students for the CompTIA Pentest+ certification. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITN 280.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

CITC 285 System Defense

Credit Hours: 3 / Billing Hours: 3

This course will provide students with targeted content and integrated hands-on skills for applying behavioral analytics to networks and devices to prevent, detect, and combat cybersecurity threats through continuous security monitoring. The course will prepare students for the CompTIA CySA+ certification exam. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITN 280.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

CITC 287 Cybersecurity Incident Respons

Credit Hours: 3 / Billing Hours: 3

The course addresses various underlying principles and techniques for detecting and responding to current and emerging computer security threats. Content will include how to handle various types of incidents, risk assessment methodologies, and various laws and policy related to incident handling. This will prepare students for ECIH Industry Certification. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITN 280.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

CITC 290 Cybersecurity Risk Management

Credit Hours: 4 / Billing Hours: 4

This course covers the technical knowledge and skills required to architect, engineer, integrate, and implement secure solutions across complex environments to support a resilient enterprise while considering the impact of governance, risk, and compliance requirements. The course will prepare students for the (ISC)Â² CISSP certification exam. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITN 280.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

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Online courses may require students to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) for proctored exams. For more information, please visit the [Testing Services webpage](#).

2024-2025 Course Descriptions

CITD 120 SQL Concepts

Credit Hours: 3 / Billing Hours: 3

This course introduces the student to Structured Query Language (SQL). Topics include relational database concepts, queries, special operators, and the join operation. Students will gain experience in ANSI standard SQL. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.
- Recommended: CITF 108 or CIP 110.

CITD 250 Database Concepts

Credit Hours: 3 / Billing Hours: 3

Students learn the functions of a database management system. The relational model and SQL are used. Normalization and database design are covered. The CODASYL model is discussed and emerging trends are studied. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in [CITF 110 and (CIP 110 or CIP 150)].
- Placement Score: Reading Level 5 and Writing Level 6.

CITF 110 Intro Computer Info Systems

Credit Hours: 3 / Billing Hours: 3

This course provides an introduction to computers, their role in managing business information systems, their influence on society, and their use in personal productivity. It includes a hands-on introduction to major microcomputer tools: word processors, spreadsheets, presentation software, and database management systems. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.
- Course Note:
 - Students must be able to use web browsers and online learning tools including drop boxes, discussion boards, and e-mail. They must also have Windows file management skills, including the ability to upload and download files, make folders, move and zip files.
 - This course requires the use of a PC computer running Windows 10 or higher, 4GB Ram, High Speed Internet Connection and a full version of Microsoft Office less than three years old. Students using Mac computers will need to log on to LCC virtualized PC computers to complete certain assignments. Equipment and software is provided for students that wish to complete assignments at the Main or West Campus computer labs. Office 365 is available to LCC students at no cost using links from the College website.

2024-2025 Course Descriptions

CITF 120 Operating Systems Concepts

Credit Hours: 3 / Billing Hours: 3

The course covers what operating systems are, why they exist, what they do, and how they interface with the operators and programmers. Main memory management and processor scheduling are studied along with device and file management. Case studies of current operating systems are studied. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.
- Recommended: CITF 110 and (CITP 110 or CITP 150).

CITF 140 Information Technology Ethics

Credit Hours: 3 / Billing Hours: 3

This course explores the ethical dilemmas that confront IT professionals. Ethical codes of various organizations will be studied. Students will learn to apply critical thinking skills to the discussion of ethical questions. Topics will include privacy, intellectual property rights, software development, network administration, and the use of the Internet. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

CITF 240 IT Project Management

Credit Hours: 3 / Billing Hours: 3

This course provides a comprehensive introduction to IT Project Management and covers the basic concepts of project scope, planning, execution, and closure. Students will develop project plans; track to those plans; manage ambiguity and risks; and make changes to the plan. This course covers the objectives for CompTIA Project+ certification. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITF 110 or CITS 125).
- Placement Score: Reading Level 4 and Writing Level 4.

2024-2025 Course Descriptions

CITF 260 Systems Analysis and Design

Credit Hours: 4 / Billing Hours: 4

This course presents concepts and techniques used in the development of computer business application systems. The traditional approach for systems development is presented and compared to the approach used in a 4th Generation Environment. Techniques for structured analysis and project management techniques will be used. Recent developments in analysis, including Computer Assisted Software Engineering (CASE) and Object-Oriented Analysis will be introduced. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in [CITF 110 and (CITP 110 or CITP 150)].
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

CITI 100 AI Foundations

Credit Hours: 3 / Billing Hours: 3

This course introduces the basic concepts and applications of artificial intelligence (AI). Students study the common domains of AI, tools and techniques leveraged to create learning models, project cycles, classifications of data, and the relevant ethical considerations. (Offered Fall and Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

CITI 120 Data Analysis with Python

Credit Hours: 3 / Billing Hours: 3

This course introduces data analysis with Python. Students learn to use Python libraries, frameworks, and tools required for analysis. Students also explore how to mine, clean, and prepare data; create visualizations, reports, and dashboards; and handle large datasets efficiently while adhering to governing and ethical standards. This course aligns with the CompTIA Data+ certification. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITP 110 and STAT 170 and CITD 120) or concurrently.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

CITI 140 Intro to Machine Learning

Credit Hours: 3 / Billing Hours: 3

This course introduces the basic concepts and applications of machine learning (ML), an applied branch of artificial intelligence (AI). Students study the foundations of ML, tools and techniques leveraged to create learning models, project cycles, classifications of data, and relevant ethical considerations. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in CITI 120.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

CITI 210 Natural Language Processing

Credit Hours: 3 / Billing Hours: 3

This course explores the applications of natural language processing (NLP), a branch of artificial intelligence (AI). Students study foundations of NLP, tools and techniques leveraged to create language models, data preparation, and the relevant ethical considerations throughout the design and creation of language recognition applications. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in CITI 140.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

CITI 220 Computer Vision

Credit Hours: 3 / Billing Hours: 3

This course explores the applications of computer vision (CV), a branch of artificial intelligence (AI). Students study the foundations of CV, tools and techniques leveraged to create vision models, data preparation, and the relevant ethical considerations throughout the design and creation of computer vision applications. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in CITI 140.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

CITN 115 IoT & Automation Fundamentals Credit Hours: 5 / Billing Hours: 6

This course provides an introduction to home technology integration with emphasis on the following: computer networking, audio/video, home security, industry standards, home lighting control, HVAC management, water system controls, home access controls and automated home features, low voltage wiring, and user interfaces. All topics are covered in lecture and lab experiments. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.

CITN 120 Networking Concepts Credit Hours: 3 / Billing Hours: 3

The student in this course learns the fundamentals of Local Area Networks (LANs) and Wide Area Networking (WAN). Communication standards such as the OSI 7 layer model and the Internet are introduced. Business and consumer use of these technologies will be discussed. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.
- Recommended: CITF 110.

CITN 220 Introduction to Networks Credit Hours: 3 / Billing Hours: 3

This course introduces architecture, structure, functions, components, and models of computer networks, including the Internet. Students examine networking layers, their roles and services, and learn to build and troubleshoot basic LANs. This course follows the objectives for the first course in the Cisco Networking Academy CCNA Routing and Switching curriculum. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITS 125 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: This course is the first in the three-course Cisco Networking Academy sequence preparing students to test for the CCNA-RS certification. It is an accelerated 8-week course in the first half-semester. Students should plan for the extra time required for an accelerated course. We strongly recommend that students enroll in this course at the same time as CITN 225, which takes place during the second half of the semester.

2024-2025 Course Descriptions

CITN 222 Wireless Networking & Security

Credit Hours: 3 / Billing Hours: 3

This course provides the student with the ability to understand the fundamentals of RF networks and describe the functionality of WLAN components. Students are provided with the skills to install, configure, secure, and troubleshoot WLAN hardware peripherals and protocols. This course prepares the student for the Certified Wireless Network Technician exam. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITS 125.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

CITN 225 Switch Route Wireless Essentials

Credit Hours: 3 / Billing Hours: 3

This course describes the architecture, components, and operations of devices in a small network. Students learn how to configure a router and a switch for basic functionality. This course is the second course in the Cisco Networking Academy CCNA Routing and Switching curriculum, and can lead to Cisco CCENT Certification. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITN 220 within 2 years or concurrently).
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note:
 - This course is the second in the three-course Cisco Networking Academy sequence preparing students to test for the CCNA-RS certification. It is an accelerated 8-week course in the second half-semester.
 - Students should plan for the extra time required for an accelerated course.
 - We strongly recommend that students take this course immediately following CITN 220, enrolling in both courses in the same semester.

CITN 230 Linux Operating System

Credit Hours: 3 / Billing Hours: 3

The student in this course learns to install, use and administer a Linux operating system, including user account management, network operation, and application software for Linux. Practical hands-on training is used throughout. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITF 120 or CITS 125).
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 3.

2024-2025 Course Descriptions

CITN 240 Ent Networking Sec Automation Credit Hours: 3 / Billing Hours: 3

This course describes the architecture, components, and operations of routers and switches in a larger and more complex network. Students learn how to configure routers and switches for advanced functionality. This course is the third in the Cisco Networking Academy CCNA Routing and Switching curriculum. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITN 225 within 2 years.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Course Note:
 - This course is the third in the three-course Cisco Networking Academy sequence preparing students to test for the CCNA-RS certification. It is an accelerated 8-week course in the first half-semester.
 - Students should plan for the extra time required for an accelerated course.
 - We strongly recommend that students enroll in this course at the same time as CITN 245, which takes place during the second half of the semester.

CITN 244 Securing Networking Devices Credit Hours: 3 / Billing Hours: 3

This course introduces students to basic tasks needed to secure network routers and switches. Students will gain hands-on experience securing Cisco devices. This course covers the objectives of the Cisco Certified Network Associate - Security course (CCNA-S). (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITN 225.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

CITN 250 Microsoft Network Server Credit Hours: 3 / Billing Hours: 3

The student in this course learns installation, security, and best administration techniques for Microsoft Windows Servers. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITF 120 or CITS 125).
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 3.

2024-2025 Course Descriptions

CITN 280 IT Security Foundations

Credit Hours: 3 / Billing Hours: 3

This course provides a comprehensive introduction to IT security, covering basic concepts of data integrity, confidentiality, and availability, and focusing on relevant threats and countermeasures. Students will be prepared to evaluate Information Security needs of organizations and to develop policies addressing these needs. This course covers the objectives identified for CompTIA Security+ certification. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITN 220 or CITS 225) or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 3.
- Recommended: CITN 230 or CITN 250.

CITO 100 Cloud Foundations with AWS

Credit Hours: 3 / Billing Hours: 3

This course introduces cloud computing on the Amazon Web Services (AWS) platform. Students study cloud computing principles, core services, cost models, security practices, migration options, and general management. This course aligns with the objectives for the AWS Certified Cloud Practitioner certification. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

CITO 120 Cloud Architecting with AWS

Credit Hours: 3 / Billing Hours: 3

This course introduces cloud architecting on the Amazon Web Services (AWS) platform. Students study and design architectures for workloads that must prioritize combinations of fault tolerance, availability, tiered applications, decoupling, elasticity, scalability, costs, and security. This course aligns with the objectives for the AWS Certified Solutions Architect Associate certification. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITP 110 and [CITS 125 or CITF 120]).
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

CITO 140 Cloud Development Ops with AWS Credit Hours: 3 / Billing Hours: 3

This course introduces cloud development operations on the Amazon Web Service (AWS) platform. Students develop Cloud applications for workloads that must prioritize combinations of fault tolerance, availability, tiered applications, decoupling, elasticity, scalability, costs, and security. This course aligns with the objectives for the AWS Certified Developer - Associate certification. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (CITP 110 and [CITS 125 or CITF 120]).
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

CITO 240 Machine Learning with AWS Credit Hours: 3 / Billing Hours: 3

This course introduces machine learning (ML), which is a branch of artificial intelligence (AI), on the Amazon Web Services (AWS) platform. Students study how to design, build, deploy, optimize, tune, train, and maintain ML solutions within cloud environments. This course aligns with the objectives for the AWS Certified Machine Learning - Specialty. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (CITO 120 and CITO 140 and CITI 140).
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

CITP 110 Intro to Programming - Python Credit Hours: 4 / Billing Hours: 4

Students are introduced to the fundamental techniques for understanding, designing, developing, and testing object-oriented programs through the use of scientific method. Topics include: structured program design; basic programming control structures; algorithm and logic design; functions; classes; methods; random number generators; user interface design; and working with data in files. Students are required to complete computer-based assignments using the Python programming language. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Students with little or no experience in programming are recommended to take a face-to-face version of this class rather than an online section. For further questions about the course requirements, please contact the Program office at 517-267-6406.

2024-2025 Course Descriptions

CITP 130 Intro to Mobile App Devel

Credit Hours: 3 / Billing Hours: 3

The course will introduce students to the various platforms and application (apps) in use on mobile devices. Platforms will include Apple iOS, Google Android OS, and others as appropriate. Students will create applications (apps), test, and debug for each platform using specialized development environments. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (CITP 110 or CPSC 230) or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

CITP 140 Software Testing

Credit Hours: 3 / Billing Hours: 3

This course is an introduction to software testing and quality assurance. The fundamentals of software testing are covered including test planning, test case design, the types of testing, such as performance and regression. Also covered are test management, automation, and how people and organizational issues affect testing. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITP 110 or concurrently).
- Placement Score: Reading Level 5 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

CITP 150 Intro to VB.NET Programming

Credit Hours: 4 / Billing Hours: 4

This course introduces students to programming concepts through the use of the Visual Basic.NET programming environment. Students learn to develop business applications by designing and creating a user interface and writing the necessary procedures. Students also learn and use logic development tools and object oriented programming terminology and techniques. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITP 110 or CPSC 230).
- Placement Score: Reading Level 5 and Math Level 4.

2024-2025 Course Descriptions

CITP 180 Intro to C#.NET Programming

Credit Hours: 4 / Billing Hours: 4

Students will use Microsoft Visual Studio .NET to become familiar with the C# .NET programming language by designing, implementing, and testing programming projects. Topics include creating and using methods and classes; inheritance; exception handling, and using controls. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITP 110 or CPSC 230).
- Placement Score: Reading Level 5 and Math Level 4.
- Course Note: This course includes on-site proctored exam(s). Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

CITP 190 Intro to Programming in JAVA

Credit Hours: 4 / Billing Hours: 4

This course introduces students to basic programming concepts using the Java Programming language. It introduces object-oriented programming methodology and features provided by the Java language. During the course, students will review sound programming practices and learn accepted Java programming procedures. Students will create and modify simple Java applications and applets. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITP 110 or CPSC 230).
- Placement Score: Reading Level 5 and Math Level 4.
- Course Note: This course includes on-site proctored exam(s). Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

CITP 220 Game Design & Development

Credit Hours: 2 / Billing Hours: 4

This course provides a hands-on introduction to special research and projects utilizing Web development and programming skills. Student may enroll to update or enhance knowledge, mastery, and competencies. Specific content may vary with each offering and will be related to gaming, simulation, and software development industries. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in CITP 180.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Recommended: CITP 150.

2024-2025 Course Descriptions

CITP 230 Mobile App Devel for Android

Credit Hours: 4 / Billing Hours: 4

This course teaches students to develop applications (Apps) for mobile devices using either a Windows or an Apple computer. Programming language (SDK Software Development Kit) taught will feature Java for Android Development. Students will create several mobile applications via a popular IDE (Integrated Development Environment) to run on Android devices. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITP 130.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

CITP 235 Mobile App Devel for Apple

Credit Hours: 4 / Billing Hours: 4

This course teaches students to develop applications (Apps) for mobile devices using an Apple computer. Programming language (SDK Software Development Kit) taught will feature C/Objective-C and/or Swift for iOS Development. Students will create several mobile applications via Apple's Xcode (IDE) to run on Apple mobile devices. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITP 130.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
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CITP 240 Advanced Software Testing

Credit Hours: 3 / Billing Hours: 3

This course is the second in a sequence of software testing classes. It covers in more detail testing procedures, test management, and testing techniques. Also included are test tools and automation as well as people skills and team composition for a successful quality assurance team. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in CITP 140.
- Placement Score: Reading Level 5 and Math Level 4.

2024-2025 Course Descriptions

CITP 250 Advanced VB.NET Programming Credit Hours: 4 / Billing Hours: 4

This course is a second course in the VB.NET programming sequence and leads to the creation of functional Windows and Web based application programs. Topics include writing user requirements, creating test scenarios and test plans, advanced form design, error handlers, data validation, object oriented programming concepts, database access and programming, use of collections and developing help systems. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in CITP 150.
- Placement Score: Reading Level 5 and Math Level 4.

CITP 280 Advanced C#.NET Programming Credit Hours: 4 / Billing Hours: 4

Students will use Microsoft Visual Studio .NET to become familiar with advanced C#.NET programming concepts including database and web programming. Topics include using threads, database interaction using ADO.Net, interfacing to Crystal Reports, and creating web applications. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITP 180 within the last two years.
- Placement Score: Reading Level 5 and Math Level 4.
- Course Note: This course includes on-site proctored exam(s). Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

CITP 290 Adv JAVA Programming for Busn Credit Hours: 4 / Billing Hours: 4

This course introduces advanced Java Programming concepts. Students will use sound programming practices and accepted Java programming procedures. Students will create and modify computer programs as might be encountered in creating Java applications for industry. Topics covered in this course provide a strong preparation for the Sun Certified Programmer Certification. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in [CITP 190 and (CITW 160 or concurrently)] within the last two years.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

2024-2025 Course Descriptions

CITP 295 Programming Internship

Credit Hours: 3 / Billing Hours: 3

This internship provides the student with on-the-job experience as a computer programmer. The student is expected to write or maintain programs, test programs, create documentation, and perform analysis. It is designed to be the culmination of the Computer Programmer/Analyst Associate Degree and as final preparation for entering the job market. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

CITS 110 Helpdesk Support Specialist

Credit Hours: 3 / Billing Hours: 3

This course will teach self-management and soft-skills to provide helpdesk customer service and support including processes and associated technologies in a technical or non-technical environment. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110)].
- Course Note: This course includes on-site proctored exam(s). Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

CITS 125 Computer Support: A+ Cert Prep

Credit Hours: 6 / Billing Hours: 6

This course provides students with the skills to diagnose and correct problems that computer users encounter. The student receives practical hands-on experience in installing, maintaining, and troubleshooting computer hardware and software while developing their communication skills and professionalism. This course includes the current CompTIA A+ certification exams that are required to receive CompTIA A+ certification. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110)].
- Course Note: Students will receive vouchers during the class for the CompTia A+ Certification exams.

2024-2025 Course Descriptions

CITS 170 Basic Electronic for PC Repair

Credit Hours: 6 / Billing Hours: 7

This course begins with basic electricity concepts and discusses basic electricity, basic electronics, electric circuits, diodes, transistors, digital devices, and digital circuits. Course work includes lab exercises each week. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 2 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Recommended: Math Level 5.

CITS 172 Intro to Basic Electronics

Credit Hours: 4 / Billing Hours: 4.5

This course equips students with foundational knowledge and experience in low-voltage electronic circuits. Students study electricity, properties of components, and the functionality of microcontrollers, actuators, and sensors. By the end of the course, students will possess the skills to design simple yet innovative solutions integrating a broad range of electronic components. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 4, Writing Level 2, and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

CITS 176 Computer Troubleshooting

Credit Hours: 4 / Billing Hours: 4

This course provides students with the skills necessary to troubleshoot and repair desktop and laptop computers. Students will be instructed in the proper selection and use of the tools needed to perform diagnostics and preventative maintenance on personal computers. The course also stresses the importance of following proper safety and ESD procedures. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (CITS 125 or concurrently).
- Placement Score: Reading Level 5 and Writing Level 2 and Math Level 4.

2024-2025 Course Descriptions

CITS 225 Networking for PC Technicians

Credit Hours: 3 / Billing Hours: 3

This course provides students with the practical skills to setup, maintain, and manage Local Area Networks. Students will receive a comprehensive introduction to networking standards and protocols, networking hardware and software, transmission basics, Internet connectivity, wireless networking, network security, and convergence technologies. This course includes the CompTIA Network+ certification exam. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITS 125.
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 3.
- Course Note: Students will receive vouchers during the class for the CompTia Network+ Certification exams.

CITS 230 Computer Virtualization

Credit Hours: 3 / Billing Hours: 3

This course presents the concepts and techniques used in computer virtualization. The course describes virtualization, hypervisors and virtual machines. Hands-on activities will cover the installation and management of virtual machines in a variety of computing environments. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in CITS 125.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 3.
- Recommended: Minimum 2.0 in CITS 225 or CITN 230.

CITS 285 IT Professional Internship

Credit Hours: 2 to 3 / Billing Hours: 2 to 3

Designed to be the culmination of information systems students' associate degree program. It is intended to give the student live work experiences as a specialist in computer systems or support. It is to be taken at the end of the student's curriculum as final preparation for entering the job market. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

CITW 150 Internet Literacy

Credit Hours: 3 / Billing Hours: 3

This course teaches hands-on skills and builds knowledge for Internet professionals. It is designed to explore the potential uses of the Internet for business and communication including the use of email, search engines, discussion boards, and other Internet applications including web page development. This course also discusses the rapidly changing world of the Internet. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: Familiarity with Windows.

CITW 160 Web Development HTML & CSS

Credit Hours: 3 / Billing Hours: 3

This course explores techniques of web page construction using HTML and CSS languages. Students will construct individual web pages using HTML to contain graphics, text, and web forms with presentation controlled by CSS style sheets. Students will demonstrate their understanding and application of the concepts introduced during the semester by creating an individual website project. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

CITW 165 Web Development JavaScript

Credit Hours: 3 / Billing Hours: 3

This course explores advanced techniques of web page and website construction using HTML, HTML5, CSS, CSS3, and JavaScript for website behavior. Students will create several W3C compliant web pages that will respond to user input (client-side) via browsers using these technologies. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CITW 160.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: Math Level 4.

2024-2025 Course Descriptions

CITW 175 Web Site Management

Credit Hours: 3 / Billing Hours: 3

This course presents a comprehensive introduction to web site planning, promotion, security, and legal issues associated with web site management. Students explore web-based communication tools, domain names, web site hosting, shopping cart software and manage an individual web site to demonstrate concepts presented throughout the semester. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITW 160 or ARTS 173) or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: Math Level 4.

CITW 180 Web Development ASP.NET

Credit Hours: 4 / Billing Hours: 4

This course provides instruction in building web sites using Microsoft ASP.NET. Students create dynamic, flexible, and interactive web pages that interact with a database. Students explore server controls, validation controls, security issues, user authentication, and manage an individual web site to demonstrate concepts presented throughout the semester. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in [CITW 160 and (CITP 150 or CITP 180)].
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

CITW 185 Web Development PHP & MySQL

Credit Hours: 4 / Billing Hours: 4

This course provides instruction in building web sites using PHP scripting language. Students will learn how to create dynamic, flexible, and interactive web pages, connect to and update a MySQL database as well as develop an individual web site throughout the semester. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CITW 160 or ARTS 173) or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: Math Level 4.

2024-2025 Course Descriptions

CIVL 101 Civil Drafting

Credit Hours: 3 / Billing Hours: 4

This course emphasizes plotting land surveying descriptions, traverses, contours, profiles, cross-sections, templates, and the three views required in highway work. Students will learn how to read basic highway plans and make sketches from field notes. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.

CIVL 110 Density Certification

Credit Hours: 2 / Billing Hours: 2

Students will study techniques and equipment used in determining properties of aggregates, concrete and other materials. Each student will receive a density certification card after successfully completing the course. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None.

CIVL 120 Surveying

Credit Hours: 4 / Billing Hours: 6

Introduces students to surveying technology and the use of the latest equipment. Emphasis is placed on developing skills in operation and the proper handling of high-tech equipment used in the surveying business. Good field work habits and office engineering are covered. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Minimum 2.0 in MATH 114 or Math Level 5.

CIVL 124 Route Survey

Credit Hours: 4 / Billing Hours: 6

This course includes surveying computations in such areas as horizontal curves, vertical curves, spirals and data needed for highway construction layout. Also includes work with surveying computation software and fieldwork with total stations. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in CIVL 120.
- Placement Score: Math Level 5.

2024-2025 Course Descriptions

CIVL 131 Traffic Technology

Credit Hours: 3 / Billing Hours: 3

This course introduces basic principles of traffic engineering design, signing and pavement marking, traffic signalization and how these elements are used to improve motorists' safety. Emphasis is placed on the use of these devices in and around construction zones. Basic concepts on traffic flow and capacity analysis will be presented. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.

CIVL 135 Soils Technology

Credit Hours: 3 / Billing Hours: 3

Exploring, sampling, testing and evaluating subsurface materials and their effect on construction are covered in this course. Includes an introduction to methods of subsurface drainage, soil classifications and physical properties of soils; and discussion, demonstration and performance with equipment used in density testing. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in MATH 114 or Math Level noted below.
- Placement Score: Math Level 5.

CIVL 141 Site Inspection

Credit Hours: 3 / Billing Hours: 3

This course introduces students to the principles of construction inspection including safety practices (MIOSHA), legal aspects, reporting, and applicable specifications, codes and standards. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

CIVL 143 Site Dsgn & Layout/Civil Techn

Credit Hours: 3 / Billing Hours: 4

In this course, students apply road and land development procedures, and interpret survey data in assembling sets of construction drawings. Topics include developing cross sections, road profiles, and utility layouts. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in CIVL 101.
- Placement Score: None.

2024-2025 Course Descriptions

CIVL 225 Civil Tech Independent Study Credit Hours: 1 to 4 / Billing Hours: 1 to 4

Students are allowed to undertake special research projects to apply to their professional experience and academic major. A minimum of 48 hours of work per credit is required and the completion of a written project report. This course cannot be audited. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Restriction: Civil Technology Majors.

CIVL 241 Statics/Strength of Materials Credit Hours: 4 / Billing Hours: 5

Structural terminology and concepts are introduced. General behavior of structural members in compression, stress, strain, creep, fatigue, yield, tension, shear, bending and torsion due to different loading conditions are studied. Loads and forces, conditions of stability and equilibrium in structural frames and free body analysis for reactions and member forces are considered. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Minimum 2.0 in MATH 114 or Math Level 5.

CIVL 290 Civil Technology Internship Credit Hours: 2 to 4 / Billing Hours: 2 to 4

This course provides Civil Technology students with practical work experience in industry. Students work for an employer in a supervised environment which provides an opportunity to apply knowledge and skills learned in the classroom and lab to an actual job situation. (Offered Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

CJUS 101 Intro to Criminal Justice Credit Hours: 3 / Billing Hours: 3

An orientation course designed to provide students with a current, coordinated, and comprehensive overview of criminal justice as an institution and as a system. It will emphasize historical, philosophical, constitutional, and organizational perspectives. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

CJUS 102 Crime Causes and Conditions

Credit Hours: 3 / Billing Hours: 3

Why do some individuals pursue a life of crime? This course introduces and analyzes the past, present, and future of criminology. Sociological, psychological, and biological factors are examined to determine their interaction with and impact on criminal behavior. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

CJUS 103 Criminal Law

Credit Hours: 3 / Billing Hours: 3

This course is a study of substantive criminal law. Includes the classification of crimes, common law concepts, elements of specific crimes, and discussion of current trends in criminal law nationally and locally. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in CJUS 101 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 4.

CJUS 104 Theory of Patrol

Credit Hours: 3 / Billing Hours: 3

This course is designed to introduce the student to the concepts and theories of patrol and the delivery of police services. The class will cover areas such as police field operations, community policing, basic field procedures, traffic direction and enforcement, arrest, reports and records. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.
- Recommended: CJUS 101.

CJUS 106 Intro to Juvenile Justice

Credit Hours: 3 / Billing Hours: 3

This course emphasizes the legal foundation, as defined by Michigan law, upon which the criminal justice practitioner must rely in dealing with the juvenile offender and the juvenile victim. In addition, this course will introduce the student to the juvenile offender. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

CJUS 126 Juvenile Offenders/Families

Credit Hours: 3 / Billing Hours: 3

This course takes an in-depth look at the diverse nature of juvenile offenders and their family backgrounds. Issues impacting juvenile behavior will be discussed including: family dynamics, family as a social system, behavior cycles, drugs, gender, gangs, and other elements of the social environment. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (CJUS 106 or concurrently).
- Placement Score: Reading Level 5 and Writing Level 4.

CJUS 131 Introduction to Corrections

Credit Hours: 3 / Billing Hours: 3

An introduction to the agencies and processes within the correctional system. An examination of correctional officer behavior, corrections legislation, the courts, correctional institutions and their operation, and administration. Includes overview of history sentencing, probation, parole, and community corrections. This course is required for the corrections officer vocational certificate. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

CJUS 133 Juvenile Residential Services

Credit Hours: 3 / Billing Hours: 3

All aspects of court-placement of juveniles in residential facilities will be examined. Staffing and operations of both public and private agencies will be discussed, focusing both on treatment and detention issues. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in CJUS 106 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 4.

CJUS 134 Probation and Parole

Credit Hours: 3 / Billing Hours: 3

An introductory level course in probation and parole with a strong emphasis on counseling, interviewing skills, and supervision techniques. Students will also learn the mechanics of writing violation, progress, and pre-sentence reports. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CJUS 101 or CJUS 131) or concurrently.
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

CJUS 135 Legal Issues in Corrections

Credit Hours: 3 / Billing Hours: 3

Study of current constitutional, federal and state law as it pertains to penal institutions, inmates, and correctional employees. The course will provide students with insight into policy considerations behind state and federal law, legal process, court decisions, and inmate rights. This course is required for the correctional officer vocational certificate. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (CJUS 130 or CJUS 131 or concurrently).
- Placement Score: Reading Level 5 and Writing Level 4.

CJUS 201 Criminal Justice Org/Admin

Credit Hours: 3 / Billing Hours: 3

This course examines the primary concepts of criminal justice organization and administration emphasizing processes and theories, communications, leadership, personnel, budgeting, planning, information management, and community relations. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in CJUS 101.
- Placement Score: Reading Level 5 and Writing Level 4.

CJUS 203 Criminal Procedure

Credit Hours: 3 / Billing Hours: 3

This course is a study of criminal procedural law. It will include laws of arrest, search and seizure, and admissions and confessions; suspect identification; and rules of evidence. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CJUS 103.
- Placement Score: Reading Level 5 and Writing Level 4.

CJUS 204 Criminal Investigation

Credit Hours: 4 / Billing Hours: 4

This course examines the fundamentals of criminal investigation such as crime scene procedures, collection and preservation of physical evidence, interviewing, interrogation, and latent investigation. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CJUS 101.
- Placement Score: Reading Level 5 and Writing Level 4.
- Recommended: Minimum 2.0 in CJUS 103.

2024-2025 Course Descriptions

CJUS 205 Policing into the 21st Century

Credit Hours: 3 / Billing Hours: 3

This course describes who the police are, what they do, and how they do it. It will list the jobs available in policing, how to go about getting them, what skills are needed, and what you do when you get those jobs. It will prepare students for the challenges of policing into the 21st Century. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CJUS 101.
- Placement Score: Reading Level 5 and Writing Level 4.

CJUS 207 Digital Evidence/1st Responder

Credit Hours: 3 / Billing Hours: 3

This course is designed to acquaint students with the relationship of the ever evolving world of technology and the impact it plays within our society upon crime. This course emphasizes the various uses of technology and the activity of information that can be used to engage in criminal behavior. Students will be able to identify digital evidence that can be stored, received, and transmitted on electronic devices. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.
- Recommended: Minimum 2.0 in CJUS 101.

CJUS 210 Intro to Forensic Science

Credit Hours: 3 / Billing Hours: 3

Forensic Science is the application of scientific methods in the analysis of physical evidence generated by criminal activity. This introductory course will cover four major aspects of physical evidence from actual criminal cases including crime scene investigation; the collection, preservation and value of physical evidence; the forensic analysis of physical evidence; and expert testimony. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

CJUS 242 Unarmed Defense

Credit Hours: 3 / Billing Hours: 3

Hands-on techniques to prepare students to properly and effectively handle law enforcement related physical confrontations. It will include use of force decision-making skills, pressure points, control holds, and handcuffing. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.
- Course Note: The \$39 Course Fee is non-refundable.

CJUS 245 Report Writing/Crim Justice

Credit Hours: 3 / Billing Hours: 3

This course is designed to meet the needs of criminal justice writing. Components include grammar, punctuation, sentences, paragraphs, styles of writing, and proper documentation of work effort. The course includes frequent writing practice. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CJUS 101 or CJUS 131).
- Placement Score: Reading Level 5 and Writing Level 4.

CJUS247 Juvenile Justice: Special Pops

Credit Hours: 3 / Billing Hours: 3

The course provides an in-depth examination of special populations of juvenile delinquents. Attention will be focused on the issues and practices of providing treatment to female delinquents, juveniles in the mental health system, youthful offenders, and juvenile sexual offenders. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (CJUS 101 and CJUS 106).
- Placement Score: Reading Level 5 and Writing Level 4.
- Recommended: Minimum 2.0 in (CJUS 126 and HUSE 110 and PSYC 200).

CJUS 250 Correctional Institutions

Credit Hours: 3 / Billing Hours: 3

This course examines the historical development of corrections institutions in the United States. The organizational structure, purpose, programs, security aspects, and prisoner due-process rights, as well as the future of institutions will be examined. This course is required for the correctional officer vocational certificate. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (CJUS 131 or concurrently).
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

CJUS 251 Correctional Clients

Credit Hours: 3 / Billing Hours: 3

This course emphasizes the needs, identities, and development of special needs offenders. It will also allow students to gain insight into the behaviors and motivations of, as well as intervention strategies for, these offenders. This course is required for the correctional officer certificate. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (CJUS 130 or CJUS 131 or concurrently).
- Placement Score: Reading Level 5 and Writing Level 4.

CJUS 255 Human Relations/Crim Justice

Credit Hours: 3 / Billing Hours: 3

This course focuses on understanding those aspects of interpersonal relations most directly linked to attainment of organizational and individual goals in work settings. This course is required for the correctional officer vocational certificate. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (CJUS 101 or CJUS 130 or CJUS 131) or concurrently.
- Placement Score: Reading Level 5 and Writing Level 4.

CJUS 270 Police Academy I

Credit Hours: 11 / Billing Hours: 14

Police Academy I is the basic training required for all police officers in the State of Michigan. The training is certified through the Michigan Commission on Law Enforcement Standards. (Offered Fall, Spring)

- Prerequisite Course: Admission to the Police Academy.
- Corequisite Course: CJUS 271 and PFFT 114 and PFHW 120.
- Course Note: \$400 of the Course Fee is non-refundable.

CJUS 271 Police Academy II

Credit Hours: 14 / Billing Hours: 21

Police Academy II is the basic training required for all police officers in the State of Michigan. The training is certified through the Michigan Commission on Law Enforcement Standards. (Offered Fall, Spring)

- Prerequisite Course: Admission to the Police Academy.
- Corequisite Course: CJUS 270 and PFFT 114 and PFHW 120.

2024-2025 Course Descriptions

CJUS 272 Local Corrections Academy I

Credit Hours: 5 / Billing Hours: 5

This course is designed to provide entry level skills for the person who wishes to enter the job market as a Local Correctional Officer at a Sheriff's Department or Local Police Detention Center. Topics include prisoner admittance, diversity, ethics, security, and correction report writing. This meets the Michigan Sheriff Coordinating and Training Council requirements. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Corequisite Course: CJUS 273.
- Course Note: The \$60 Course Fee is non-refundable.

CJUS 273 Local Corrections Academy II

Credit Hours: 3 / Billing Hours: 5

This course is designed to provide entry level skills for the person who wishes to enter the job market as a Local Correctional Officer at a Sheriff's Department or Local Police Detention Center. Topics will include fire response, mental reactions, and prisoner resistance and restraint. This meets the Michigan Sheriff Coordinating and Training Council requirements. (Offering Fall, Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Corequisite Course: CJUS 272.
- Course Note: The \$240 Course Fee is non-refundable.

CJUS 285 Law Enforcement Internship

Credit Hours: 2 / Billing Hours: 2

Students are required to complete 128 hours of work in an approved law enforcement environment. Written reports are required describing their experiences. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: Department approval requires a completed application submitted to the Public Service Careers Office. Students must bring their driver's license and medical insurance card with application. Worksite placement must be discussed and assigned by instructor. Students will be notified by phone upon approval to register for class.

2024-2025 Course Descriptions

CJUS 286 Juvenile Internship I

Credit Hours: 3 / Billing Hours: 3

The student will be placed in a local program dealing with young people from at risk populations. A classroom component includes preparation for job interviews and other skill-building exercises for working in the juvenile justice field. Written reports are required.

(Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in CJUS 106 or concurrently and Department Approval.
- Placement Score: None.
- Course Note: Department approval requires a completed application submitted to the Public Service Careers Office. Students must bring their driver's license and medical insurance card with application. Worksite placement must be discussed and assigned by instructor. Students will be notified by phone upon approval to register for class.

CJUS 288 Corrections Internship

Credit Hours: 2 to 4 / Billing Hours: 2 to 4

The student will be placed in a local or state corrections facility that will allow him or her to experience many facets of correction operations. Weekly written reports are required and periodic meetings are mandatory. A minimum of 160 hours is required. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: Department approval requires a completed application submitted to the Public Service Careers Office. Students must bring their driver's license and medical insurance card with application. Worksite placement must be discussed and assigned by instructor. Students will be notified by phone upon approval to register for class.

2024-2025 Course Descriptions

COMM 110 Communication in the Workplace

Credit Hours: 3 / Billing Hours: 3

Introduction to oral communication skills in business and technology. Students will learn to interact effectively in diverse workplace situations. Students will learn how to interview for jobs, work effectively in a group, and enhance their use of technology in presentations.

(Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Internet access may be needed for quizzes or other assessments in the course.

COMM 120 Dynamics of Communication

Credit Hours: 3 / Billing Hours: 3

This course is a survey of communication theories and concepts related to interpersonal, small group, public speaking, mediated communication, and could include topics in mass and social media, etc. Students will learn about media and channels used to interact, the influence of technology on those channels, and sociological, psychological, and practical applications of the communication discipline. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

COMM 130 Fundamentals Public Speaking

Credit Hours: 3 / Billing Hours: 3

Through practical experience, students will develop essential skills to feel confident researching, organizing, drafting, and delivering oral presentations. Attention will be given to accurate outlining, source citation, and appropriate integration of presentational aids.

Presentations will occur in informative, persuasive, ceremonial, and small group contexts.

(Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Internet access may be needed for quizzes or other assessments in the course.

2024-2025 Course Descriptions

COMM 200 Small Group Communication

Credit Hours: 3 / Billing Hours: 3

Small group theory and process is examined from a communication perspective. Topics include, goal setting, stages of group development, group roles, leadership, decision making, listening, conflict resolution, problem solving, critical thinking and argumentation. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (COMM 110 or COMM 120 or COMM 130 or ENGL 121).
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Internet access may be needed for quizzes or other assessments in the course.

COMM 240 Interpersonal Communication

Credit Hours: 3 / Billing Hours: 3

Introduction to fundamental principles and skills of interpersonal communication. Students investigate techniques for interacting effectively in family, intercultural, and other interpersonal relationships. Class discussions, learning activities, and assignments assist students in examining the impact of their communication on others and in developing effective interpersonal skills. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (COMM 110 or COMM 120 or COMM 130 or ENGL 121).
- Placement Score: Reading Level 5 and Writing Level 6.

COMM 260 Nonverbal Communication

Credit Hours: 3 / Billing Hours: 3

Introduction to the ways people communicate without words. Students investigate nonverbal communication theory and research and learn the messages that these areas communicate in Western and other cultures. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (COMM 110 or COMM 120 or COMM 130 or ENGL 121).
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Internet access may be needed for quizzes or other assessments in the course.

2024-2025 Course Descriptions

COMM 270 Mass Communication

Credit Hours: 3 / Billing Hours: 3

Introduction to broadcast, film, and print media, their convergence, and their impact on the individual and society. Students investigate, explore, and understand topics including values the media convey, media stereotypes, diversity, gender issues, violence, news, advertising, and the role of media in political campaigns. Assignments and observational projects are designed to help students become enlightened media consumers. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (COMM 110 or COMM 120 or COMM 130 or ENGL 121).
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Internet access may be needed for quizzes or other assessments in the course.

COMM 280 Intercultural Communication

Credit Hours: 3 / Billing Hours: 3

Introduction to the theory and practice of successful intercultural communication. Students investigate how communication is affected by dimensions of cultures, cultural values, world views, relationships, and social institutions. Students will become ethical and skillful intercultural communicators. A grade of 2.0 or higher fulfills the Global Perspectives and Diversity Core requirement for curricula effective Fall 2005 or later. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (COMM 110 or COMM 120 or COMM 130 or ENGL 121).
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: Internet access may be needed for quizzes or other assessments in the course.

CPAR 250 Community Paramedicine I

Credit Hours: 3 / Billing Hours: 3

This course introduces students to the scope of practice and the role of the Community Integrated Paramedic within the healthcare system. Students will obtain an understanding of various systems of Community Paramedicine, the system they function within, and the patients they serve. A valid State of Michigan Paramedic License is required through the end of program. (Offered Fall)

- Prerequisite Course: None. Program approval is required.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Corequisite Course: CPAR 251 and CPAR 252.

2024-2025 Course Descriptions

CPAR 251 Chronic Care in the Community

Credit Hours: 5 / Billing Hours: 6

This course introduces students to the management of chronic disease states commonly encountered in the community setting. Students will obtain an understanding of treatment and assessment modalities which will enable them to provide safe and efficient patient care. A valid State of Michigan Paramedic license is required through the end of program. (Offered Fall)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level of 6 and Math Level 4.
- Corequisite Course: CPAR 250 and CPAR 252.

CPAR 252 Community Paramedicine II

Credit Hours: 3 / Billing Hours: 3

This course immerses students into the various roles of a Community Paramedic where they are able to evaluate, plan, and implement care strategies specific to their scope and role. Students will engage in case studies and scenarios, developing critical thinking skills required of a Community Paramedic. A valid State of Michigan Paramedic license is required through the end of program. (Offered Fall)

- Prerequisite Course: None. Program approval is required.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Corequisite Course: CPAR 250 and CPAR 251.

CPAR 270 Community Paramedic Clinical

Credit Hours: 5 / Billing Hours: 6.5

This course immerses students into clinical rotations allowing them to experience various patient encounters. Under the supervision of a clinical preceptor and working within a healthcare team, students will perform interventions, assess and manage patients. A valid State of Michigan Paramedic license is required through the end of program. (Offered Spring)

- Prerequisite Course: Minimum 3.0 in (CPAR 250 and CPAR 251 and CPAR 252).
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

2024-2025 Course Descriptions

CPSC 101 Intro to Computer Science

Credit Hours: 3 / Billing Hours: 3

Introduction to computer science and the programming profession. Topics include an overview of number systems, relational operators, logic, Boolean algebra, professionalism and ethics, machine coding, computer components, algorithms, and foundations of computational problem solving in Python. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in MATH 109 or (MATH 120 concurrently) or Math Placement Score indicated below.
- Placement Score: [Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently)] and Math Level 5.

CPSC 131 Numerical Methods and MATLAB

Credit Hours: 3 / Billing Hours: 4

This course uses spreadsheets, MATLAB, and numerical methods for technical problem solving in engineering, mathematics and science. Develops and uses mathematical models combining computation, visualization, data representation, curve fitting, analysis, and programming to allow problem solving in many different areas with emphasis on engineering systems. Uses team-based projects to apply principles. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in MATH 151 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.

CPSC 230 Algorithms and Computing w/C++

Credit Hours: 4 / Billing Hours: 4

This course develops students' skills with using fundamental computational techniques required for continuing study in computer science. Students design, implement and test C++ programs to solve a wide range of problems. Topics include program development, functions, control structures, text file operations, data types/classes, recursion, STL string/vector classes, arrays, pointer variables, and algorithm analysis. Object orientation and data abstraction/information hiding is emphasized. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in CPSC 101 and Minimum 2.0 in (MATH 151 or MATH 161) or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

CPSC 231 Computing and Data Structures

Credit Hours: 4 / Billing Hours: 4

Data abstraction and related theory for representation and access of information using C++. Algorithms and analyses of abstract data structures such as linked lists, stack, queue, and binary trees. Analyze properties of graphs, including connectivity, spanning trees, and traversal methods. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in CPSC 230.
- Placement Score: Reading Level 5 and Writing Level 6.

CPSC 260 Computer Science Structures

Credit Hours: 4 / Billing Hours: 4

Introduction to foundational concepts for advanced studies in computer science. The course delves into mathematical proofs, discrete mathematical structures such as sets, counting methods, matrices, and relations. The course explores propositional logic, Boolean algebra, and number theory. The curriculum includes deconstruction of algorithms, understanding their efficiency and application, and mastering techniques related to trees and graphs, including traversal and searching. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in CPSC 230 and (MATH 151 or MATH 161) or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.

DANC 100 Intro to Dance Techniques

Credit Hours: 2 / Billing Hours: 3

This course is designed for students with little or no dance experience, with an overview of dance techniques, including, but not limited to, ballet, jazz, tap and modern genres. Basic dance vocabulary, steps, and combinations specific to each genre will be included. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.

2024-2025 Course Descriptions

DANC 102 Beginning Modern

Credit Hours: 2 / Billing Hours: 3

Designed for the students with no dance experience. Basic examination of the history of Modern dance, alignment techniques, spatial relationships, and elementary combinations will be explored. Some improvisation will be used throughout the course to assist in developing kinesthetic, spatial, cognitive, and physical awareness. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.

DANC 103 Beginning Jazz

Credit Hours: 2 / Billing Hours: 3

Designed for the student with no dance experience. Included are an overview of Jazz history as well as vocabulary. Basic alignment, isolations, steps, combinations, and rhythms are explored in addition to spatial relationships for the beginning student. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.

DANC 161 Dance Repertory

Credit Hours: 0.25 to 1 / Billing Hours: 0.5 to 2

This course is designed for the student who has reached a level of dance technique that will adequately support their participation in the concert process. This process includes auditions, rehearsals, and public performances in various dance genres. Concentration is on memorization, projection, musicality, dance ability, and cooperation. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None. Department Approval after successful audition.
- Corequisite Course: Approved students must be registered in one LCC Dance Technique class. Auditing only permitted for intermediate classes.

2024-2025 Course Descriptions

DANC 290 Dance Studio Internship

Credit Hours: 2 / Billing Hours: 2

Designed for dance students to work with a local professional dance company and or dance school. Opportunities may include advanced dance classes with company members, learning company choreography, experiencing teaching methodologies, and exposure to business aspects of a studio and administrative processes. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval Required.
- Placement Score: None.
- Course Note: For information, call the Business, Communication and the Arts Office at 517-483-1546.

DCTM 100 Intro to the Built Environment

Credit Hours: 3 / Billing Hours: 4

This course covers concepts in the fields of Architecture, Building Trades, Construction Management, Energy Management, and Civil Technology. Students are guided through the entire process of building construction starting with design and surveying and finishing with the completion of construction and the commissioning process. Topics include properties of air and moisture, heat flows, structural integrity, and materials. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: This course replaces the following courses: AEET 102, ARCH 100, BLDT 100 and CIVL 100.

DCTM 101 Drafting/Intro to CAD

Credit Hours: 3 / Billing Hours: 4

This course introduces manual and computer drafting used in the building, design and construction industry. Emphasis will be on industry standards of basic drafting procedures, knowledge, and accuracy using traditional manual techniques and multiple CAD software packages. Introduction and creation of two and three-dimensional images used in various disciplines. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: This course replaces the following courses: ARCH 100 and GRET 203.

2024-2025 Course Descriptions

DCTM 102 Industrial/Construction Safety

Credit Hours: 2 / Billing Hours: 3

This course covers safety in the industrial workplace and on construction worksites. Included are local, state and federal safety regulations. The focus will be on the prevention of accidents but will teach the correct response if an accident should occur. First aid, CPR/AED certificates will be issued upon successful completion. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2.
- Course Note:
 - 1) This course requires students to be certified in CPR and First Aid as part of the course grade.
 - 2) On-line students CANNOT qualify for the OSHA-10 Certification due to OSHA limitations. Students requiring OSHA-10 Certification should enroll in one of the lab/lecture sections.
 - \$11 of the Course Fee is non-refundable.

DCTM 103 Codes and Specifications

Credit Hours: 3 / Billing Hours: 3

Students will be introduced to codes for the built environment. This course will introduce the process on permits, inspections, reviews process, standards and zoning. The codes referenced will be the Michigan Residential Code and the Michigan Building Code. A basic introduction to plan reading and specification reading will be emphasized. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: This course replaces the following courses: AEET 261, BLDT 277, BLDT 281 and CIVL 142.

DCTM 150 Civil Construction Materials

Credit Hours: 3 / Billing Hours: 4

Students will study techniques and equipment used in constructing bridges, highways, industrial facilities, and pipelines to include determination of properties of soils, aggregates, concrete and other bituminous materials. This class includes coverage of methods of sampling and testing materials. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Minimum 2.0 in (MATH 114 or Math Level 5) and Reading Level 4.

2024-2025 Course Descriptions

DCTM 200 Construction Management I

Credit Hours: 4 / Billing Hours: 6

This course introduces basic concepts of construction project management. Upon completion of this course, students will have basic knowledge of construction estimating and accounting, construction planning and scheduling, and construction law. Completion of this class will help the student prepare for the Part I of the Certified Professional Constructor examination. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: Minimum 2.0 in (ACCG 101 and (ARCH 113 or ARCH 116) and ARCH 125.

DCTM 201 Construction Management II

Credit Hours: 4 / Billing Hours: 6

This course introduces advanced concepts of construction project management. Upon completion of this course, students will have functional knowledge of construction estimating and accounting, construction planning and scheduling, and construction law. Completion of this class will help the student prepare for the Part II of the Certified Professional Constructor examination. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in [DCTM 200 and (MATH 115 or Math Level noted below)].
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 6.
- Recommended: ARCH 125.

DCTM 210 MEP Equipment for Buildings

Credit Hours: 3 / Billing Hours: 3

Students will learn about mechanical, electrical, plumbing, and fire (MEP) systems in buildings. These systems are becoming increasingly complex and are occupying larger portions of building project work. Students will understand these systems and be able to schedule, estimate, and coordinate them within the general construction process. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].
- Recommended: ARCH 113 and DCTM 100.

2024-2025 Course Descriptions

DCTM 220 BIM for Construction

Credit Hours: 4 / Billing Hours: 6

This course provides practical guidance on project methods and workflows and hands-on labs for implementing Building Information Modeling (BIM) and technology in all phases of the design and construction management process. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Recommended: DCTM 210.

DENT 140 Oral Histology & Embryology

Credit Hours: 1.5 / Billing Hours: 1.5

This course provides an introduction and description of general histology and embryology with emphasis on the microscopic structures of enamel, dentin, pulp, cementum, periodontal ligament, bone, oral mucosa, epithelial attachment and orofacial structures. (Offered Fall)

- Prerequisite Course: None. Admission to Dental Hygiene Program is required.
- Placement Score: None.
- Corequisite Course: DENT 142 and DENT 144 and DENT 146 and DENT 148.

DENT 142 PreClinical Dental Hygiene

Credit Hours: 3 / Billing Hours: 3

This course is offered concurrently with DENT144 to provide dental hygiene students with the introductory knowledge, skills and attitudes to function in the clinical setting and be able to continue in clinical dental hygiene courses. Emphasis is placed on scientific principles and current theory, prevention of disease transmission, ethical and professional treatment of patients, clinical learning preparation, and comprehensive care of the patient. (Offered Fall)

- Prerequisite Course: None. Admission to Dental Hygiene Program is required.
- Placement Score: None.
- Corequisite Course: DENT 140 and DENT 144 and DENT 146 and DENT 148.

2024-2025 Course Descriptions

DENT 144 PreClinic Dental Hyg Practice

Credit Hours: 2 / Billing Hours: 8

This course is offered concurrently with DENT142 to provide clinical application to basic theories and procedures used in dental hygiene practice. The primary emphasis is on the techniques of instrumentation used in performing diagnostic, preventive and therapeutic services utilized when providing comprehensive patient care. The dental hygiene student will have an opportunity to practice these techniques on manikins and student partners in the clinic. (Offered Fall)

- Prerequisite Course: None. Admission to Dental Hygiene Program is required.
- Placement Score: None.
- Corequisite Course: DENT 140 and DENT 142 and DENT 146 and DENT 148.
- Course Note: \$1,200 of the course fee is for a dental kit and is non-refundable.

DENT 146 Head, Neck & Oral Anatomy

Credit Hours: 3.5 / Billing Hours: 5.5

This course provides a detailed study of nomenclature, morphologic characteristics, and physiologic relationships of human primary and permanent teeth. Head and neck anatomy is also studied and is related to the clinical practice of dental hygiene. Laboratory activities develop observation and dexterity skills while studying this information. (Offered Fall)

- Prerequisite Course: None. Admission to Dental Hygiene Program is required.
- Placement Score: None.
- Corequisite Course: DENT 140 and DENT 142 and DENT 144 and DENT 148.

DENT 148 Dental Radiography

Credit Hours: 3 / Billing Hours: 5

This course provides a study of radiation physics, hygiene, and safety theories. Emphasis is placed on the essentials of oral radiographic techniques and interpretation of radiographs. Course content includes exposure of intra-oral radiographs, quality assurance, patient selection criteria, anatomical landmarks, radiation characteristics, and biology. (Offered Fall)

- Prerequisite Course: None. Admission to Dental Hygiene Program is required.
- Placement Score: None.
- Corequisite Course: DENT 140 and DENT 142 and DENT 144 and DENT 146.

2024-2025 Course Descriptions

DENT 152 Dental Hygiene I

Credit Hours: 2 / Billing Hours: 2

This course is a continuation of information designed to provide an opportunity to enhance performance of procedures in a clinical setting. Emphasis will be placed on emergency care, planning dental hygiene care, health promotion and disease prevention, oral rehabilitation and care of appliances, and modifications of dental hygiene care for specific patient populations. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (DENT 140 and DENT 142 and DENT 144 and DENT 146 and DENT 148).
- Placement Score: None.
- Corequisite Course: DENT 154 and DENT 156 and DENT 158 and DENT 161.

DENT 154 Clinical Dental Hygiene I

Credit Hours: 2 / Billing Hours: 8

This course provides an introduction to the clinic and patient, clinical skills, patient assessment, treatment and appointment scheduling, preventive techniques and application of dental hygiene procedures in the clinical setting. Practical experience is simultaneously related to theory. Direct supervision is provided by clinical faculty. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (DENT 140 and DENT 142 and DENT 144 and DENT 146 and DENT 148).
- Placement Score: None.
- Corequisite Course: DENT 152 and DENT 156 and DENT 158 and DENT 161.
- Course Note: \$250 of the course fee is for a supplies and is non-refundable.

DENT 156 Nutrition

Credit Hours: 2 / Billing Hours: 2

This course discusses the identification, function, metabolism, and sources of specific nutrients required for normal growth, development, and repair of oral tissues. Application of principles to the individual's nutritional needs, providing nutritional counseling and diet information to all patients, including special needs patients, and the relationship of nutrition to oral health are emphasized. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (DENT 140 and DENT 142 and DENT 144 and DENT 146 and DENT 148).
- Placement Score: None.
- Corequisite Course: DENT 152 and DENT 154 and DENT 158 and DENT 161.

2024-2025 Course Descriptions

DENT 158 Dental Pharmacology

Credit Hours: 3 / Billing Hours: 3

A study of the importance of the pharmacologic aspects of those drugs and drug groups with which the dentist and dental hygienist are directly and indirectly concerned. Emphasis is placed on nomenclature, origin, physical and chemical properties, preparation, modes of administration, and effects upon the body systems. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (DENT 140 and DENT 142 and DENT 144 and DENT 146 and DENT 148).
- Placement Score: None.
- Corequisite Course: DENT 152 and DENT 154 and DENT 156 and DENT 161.

DENT 161 Principles of Periodontics

Credit Hours: 3 / Billing Hours: 3

This course provides a study of the normal and diseased periodontium to include the structural, functional, and environmental factors. Emphasis is placed on etiology, pathology, evaluation of disease, treatment modalities, and therapeutic and preventive periodontics relative to the hygienist's role as a co-therapist in a contemporary practice setting. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (DENT 140 and DENT 142 and DENT 144 and DENT 146 and DENT 148).
- Placement Score: None.
- Corequisite Course: DENT 152 and DENT 154 and DENT 156 and DENT 158.

DENT 174 Clinical Dental Hygiene II

Credit Hours: 1 / Billing Hours: 4

This course provides a continuation of clinical skills, patient assessment, treatment and appointment scheduling, preventive techniques and application of dental hygiene procedures. Work-based instruction helps students synthesize new knowledge, apply previous knowledge, and gain experience managing workflow. Practical experience is simultaneously related to theory. Direct supervision is provided by clinical faculty in a clinical setting. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in (DENT 152 and DENT 154 and DENT 156 and DENT 158 and DENT 161).
- Placement Score: None.
- Corequisite Course: DENT 176.

2024-2025 Course Descriptions

DENT 176 Dental Materials & Methods

Credit Hours: 3 / Billing Hours: 5

This course provides a study of the composition, chemical and physical properties, manipulation, and uses of dental materials. Laboratory experiences include the application and manipulation of various materials used in dentistry. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in (DENT 152 and DENT 154 and DENT 156 and DENT 158 and DENT 161).
- Placement Score: None.
- Corequisite Course: DENT 174.

DENT 240 Anxiety & Pain Control Mgmt

Credit Hours: 2.5 / Billing Hours: 4

This course will provide the student with basic and current concepts of local anesthetics nitrous oxide and pain control for the safe and effective administration of local anesthetics and nitrous oxide/oxygen sedation. Instruction in local anesthetic technique, nitrous oxide technique, and an introduction to the use of nitrous oxide as an analgesia is included. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (DENT 174 and DENT 176).
- Placement Score: None.
- Corequisite Course: DENT 242 and DENT 244 and DENT 247 and DENT 248.

DENT 242 Dental Hygiene III

Credit Hours: 2 / Billing Hours: 2

This course is a continuing development of a theoretical framework of dental hygiene treatment with advancement of dental hygiene proficiency in all areas of dental hygiene treatment. Case histories from patients are presented and discussed along with preventive measures employed against disease concurrent with clinical practice, with emphasis on special needs patients. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (DENT 174 and DENT 176).
- Placement Score: None.
- Corequisite Course: DENT 240 and DENT 244 and DENT 247 and DENT 248.

2024-2025 Course Descriptions

DENT 244 Clinical Dental Hygiene III

Credit Hours: 3 / Billing Hours: 12

The clinical sessions combine dental hygiene skills with time management techniques essential for private practice. Comprehensive patient care includes assessment, dental hygiene diagnosis, treatment planning, implementation and evaluation of dental hygiene care, nonsurgical periodontal therapy, ultrasonic instrumentation, patient management, sealants, and comprehensive programs for control of dental diseases. The course consists of faculty supervised patient treatment in the clinic. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (DENT 174 and DENT 176).
- Placement Score: None.
- Corequisite Course: DENT 240 and DENT 242 and DENT 247 and DENT 248.
- Course Note: \$275 of the course fee is for a dental supply kit and is non-refundable.

DENT 247 Oral Pathology

Credit Hours: 3 / Billing Hours: 3

This course is a study of the diseases affecting oral tissues, including the principles of inflammation and repair, developmental and genetic disturbances, oral infections, injuries and neoplasms. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (DENT 174 and DENT 176).
- Placement Score: None.
- Corequisite Course: DENT 240 and DENT 242 and DENT 244 and DENT 248.

DENT 248 Dental Public Health & Educ

Credit Hours: 3 / Billing Hours: 3

This course provides a study of the principles and concepts of community public health and dental health education. Emphasis is placed on dental epidemiology and statistical methods, community assessment, educational planning, implementation, and evaluation, scientific review of literature, and classroom presentation. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (DENT 174 and DENT 176).
- Placement Score: None.
- Corequisite Course: DENT 240 and DENT 242 and DENT 244 and DENT 247.

2024-2025 Course Descriptions

DENT 252 Dental Hygiene IV

Credit Hours: 2 / Billing Hours: 2

This course is a continuation of information to prepare the student for advanced clinical practice. An in-depth study of dental hygiene care for patients with special needs is provided along with an examination of the dental hygienist's role in practice settings and employment considerations. Resume preparation, job interviewing, employment preparation, and an understanding of the law and professional ethics of dental hygiene are covered. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (DENT 240 and DENT 242 and DENT 244 and DENT 247 and DENT 248).
- Placement Score: None.
- Corequisite Course: DENT 254 and DENT 256.

DENT 254 Clinical Dental Hygiene IV

Credit Hours: 3 / Billing Hours: 12

The clinical session combines dental hygiene skills with time management techniques essential for private practice. Comprehensive patient care includes assessment, dental hygiene diagnosis, treatment planning, implementation and evaluation of dental hygiene care, nonsurgical periodontal therapy, ultrasonic instrumentation, patient management, sealants, and comprehensive programs for control of dental diseases. The course consists of faculty supervised patient treatment in the clinic. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (DENT 240 and DENT 242 and DENT 244 and DENT 247 and DENT 248).
- Placement Score: None.
- Corequisite Course: DENT 252 and DENT 256.

DENT 256 Community Oral Health

Credit Hours: 1.5 / Billing Hours: 1.5

Students assess, plan, implement, and evaluate a community dental health project. Dental specialties and the dental hygienist's role in recognizing specialty care needed by patients is presented. Each student participates in a variety of community health projects and observing in dental specialty practices. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (DENT 240 and DENT 242 and DENT 244 and DENT 247 and DENT 248).
- Placement Score: None.
- Corequisite Course: DENT 252 and DENT 254.

2024-2025 Course Descriptions

DENT 270 Dental Hygiene Board Review

Credit Hours: 2 / Billing Hours: 2

This course will provide students with a review of previous DENT course material in order to prepare the student for the National Dental Hygiene Board licensing exam. Students inventory their current knowledge of previously learned program material through a variety of class exercises including: self-assessments & personal study plans, case-based question group reviews, along with on-line available review materials. The course will also emphasize testing techniques and question construction. It will conclude with a mock board examination. (Offered Spring)

- Prerequisite Course: None. Program approval is required.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

DENT 290 Directed Study

Credit Hours: 0.25 to 3 / Billing Hours: 0.25 to 6

This course provides selection of content from the Dental Hygiene curriculum to update or enhance current knowledge and skill for returning students and health care professionals. Through evaluation of previous learning, examinations, self study, and scheduling into needed lectures and labs, students are advanced-placed or readmitted into the Dental Hygiene Program. (Offered As Needed)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: None.

DMAC 120 Intro to Audio Production

Credit Hours: 4 / Billing Hours: 4

Students will learn fundamental concepts of contemporary audio production. Using Digital Audio Workstations and modern analog components, students will experience recording, editing, mixing, session and data management, and create content that meets modern broadcast and web delivery standards. Students will explore recording audio during a video recording, audio for video post-production, and will experience a client-based production model, culminating in the creation of deliverable media. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

DMAC 130 Intro to Video Production

Credit Hours: 4 / Billing Hours: 4

A hands-on, practical application course; students will learn the fundamental concepts of digital video production. Hands-on classroom exercises will include basic non-linear editing, lighting, videography/cinematography, and the distribution of digital media. Digital Video Production is the video foundation course required of all DMAC students. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

DMAC 131 Digital Cinematography I

Credit Hours: 4 / Billing Hours: 4

In this intermediate digital cinematography course, students will learn to use LED, tungsten, HMI, and fluorescent lighting systems, along with grip equipment, to design, shape, bounce, and diffuse light. Students will work hands-on and utilize the tools typically used on productions, including an array of light fixtures, stands, clamps, power distribution, and hardware. (Offered Fall, Spring)

- Prerequisite Course: Minimum 3.0 in DMAC 130.
- Placement Score: Reading Level 5 and Writing Level 6.

DMAC 132 Video Post-Production I

Credit Hours: 4 / Billing Hours: 4

A hands-on course, Video Post-Production I will present the student with an extensive experience in non-linear post-production using a computer-based editing platform. Learning activities within and outside the classroom are designed to provide a technical and creative foundation in the procedures used by video and digital cinema editors. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in DMAC 130.
- Placement Score: Reading Level 5 and Writing Level 6.

DMAC 140 Pre-Production Design

Credit Hours: 3 / Billing Hours: 3

This introductory course focuses on the fundamental concepts of pre-production design. Hands-on classroom exercises will find students creating a variety of pre-production materials including storyboards, scripts, treatments, project request forms, project budget forms, site survey form, pre-production checklist, production schedules, etc. Pre-Production Design is required of all DMAC students. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

DMAC 141 Ethics and Impact of the Media

Credit Hours: 3 / Billing Hours: 3

This course explores the effects of Cinema, Television, and Mass Media on American culture. Topics such as privacy, censorship, violence, and portrayals of minorities and women are discussed and analyzed. Course discussions occur within an ethical reasoning framework. Ethics and Impact of the Media is required for all DMAC students. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

DMAC 231 Digital Cinematography II

Credit Hours: 4 / Billing Hours: 4

Through hands-on exercises in the studio and on location, students will combine the technical aspects of cinematography including ISO, WB, FPS, shutter angle, resolution, and recording format with the aesthetic considerations of lens choice, framing, composition, camera perspective, and movement to create compelling visual images and engaging visual stories. Students in this class will be utilizing the RED Camera. (Offered Summer)

- Prerequisite Course: Minimum 3.0 in DMAC 131.
- Placement Score: Reading Level 5 and Writing Level 6.

DMAC 232 Video Post-Production II

Credit Hours: 4 / Billing Hours: 4

Video Post-Production II focuses on the advanced technical, creative, and design issues of non-linear editing. Hands-on classroom exercises will include video compositing, color correction, advanced effects, media management, and networking. Based upon these exercises, students will manage and edit several short form projects deliverable in a variety of digital formats. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in DMAC 132.
- Placement Score: Reading Level 5 and Writing Level 6.

DMAC 234 Studio Production Techniques

Credit Hours: 4 / Billing Hours: 4

This practical application course focuses on the fundamental concepts of television studio production. Hands-on classroom exercises will find students operating in a variety of production roles including but not limited to director, technical director, camera operator, graphics operator, audio engineering, floor director, etc. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in DMAC 130.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

DMAC 240 Employment Issues in Media

Credit Hours: 2 / Billing Hours: 2

This course will develop an individual's understanding of media industry issues related to organizational and self-employment. Class sessions and assignments contain practical exercises aimed at developing the individual's employability. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (DMAC 120, DMAC 130 and DMAC 140).
- Placement Score: Reading Level 5 and Writing Level 6.

DMAC 246 Workshop: Video

Credit Hours: 2 / Billing Hours: 2

A practical application course in which students will, under the direct supervision of a faculty member, work as a member of a production team to stream live sporting events. Students may serve in a variety of production roles, including director, technical director, floor director, camera operator, and graphics and replay. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in DMAC 130.
- Placement Score: None.

DMAC 255 Digital Presentation & Signage

Credit Hours: 4 / Billing Hours: 4

This course focuses on environmental digital media. Using production and design tools, students will create presentations for open spaces and non-standard resolution venues, as well as retail outlets, restaurants, airports, and other public hubs. This includes simple photo/video and graphics to complicated touch-screen interactions. Students may earn over 30 industry acknowledged certifications. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in DMAC 232 or department approval.
- Placement Score: Reading Level 5 and Writing Level 6.

DMAC 260 World Cinema

Credit Hours: 4 / Billing Hours: 4

This survey course introduces students to pre-eminent international filmmakers and film movements. World Cinema explores social, political, economic and historical contexts pertaining to film production to create an understanding of the relationship between cinema, story telling and national culture. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

DMAC 295 Media/Cinema Portfolio

Credit Hours: 2 / Billing Hours: 2

The student will assemble a portfolio under faculty supervision that represents the student's attainment of DMAC program outcomes. The Portfolio created in this course can be used for securing employment or acceptance into a four-year school. This course is intended to be a capstone course in the DMAC curriculum. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in DMAC 240 and 48 or more credits toward the DMAC degree and Department Approval Required.
- Placement Score: Reading Level 5 and Writing Level 6.

DMAC 296 Media/Cinema Internship

Credit Hours: 3 / Billing Hours: 3

This course provides an opportunity for students to work in external media or cinema settings under professional supervision. Students work closely with faculty in arranging and evaluating the workplace experience. Placement is contingent upon interview results between the student and interview site. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Restriction: Digital Media and Cinema Majors Only.

DTSC 200 Principles of Data Science

Credit Hours: 4 / Billing Hours: 4

This course develops fundamental skills to prepare students for further learning in advanced topics of Data Science, the study of extraction of knowledge from data. Students will learn the methodology involved and the fundamentals of the tools required to perform data analytics for the role of a data scientist. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (CPSC 101 and STAT 215).
- Placement Score: Reading Level 5 and Writing Level 6.

DTSC 201 Data Science with Python

Credit Hours: 4 / Billing Hours: 4

This course develops fundamental and advanced skills to prepare students for a career in the field of data science. Students will continue to develop their skillset with the Python coding language and learn how to prepare and communicate data analysis results to stakeholders. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in DTSC 200.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

ECON 120 Power, Authority and Exchange Credit Hours: 4 / Billing Hours: 4

A comparative study of ancient and modern economic and political systems and theories in different parts of the world. An emphasis will be placed on the evolution of economic and political organizations and the impact these have on societies and individuals. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

ECON 201 Principles of Economics-Micro Credit Hours: 4 / Billing Hours: 4

This course is designed to develop objective consideration of economic issues and provides information and understanding of how resources are allocated by prices. Topics for study include price theory, consumer demand, cost and market structure, the role of government in the market, resource pricing, and international trade. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Math Level 4.

ECON 202 Principles of Economics-Macro Credit Hours: 4 / Billing Hours: 4

This course addresses the theory of national income, employment and the price level, and government fiscal and monetary policies designed to influence aggregate economic activity. It also addresses exchange rates, international financial relationships, and economic growth. (Offered Fall, Spring, Summer)

- Prerequisite Course: ECON 201 or concurrently.
- Placement Score: Reading Level 5 and Math Level 4.

ECON 213 U.S. Economic/Business History Credit Hours: 3 / Billing Hours: 3

This course provides a survey of American economic and business history, change, and growth since the pre-colonial period to the present. Topics include an overview of business organization, the role of technological change, money and banking, industrialization, demography, public economic policy, living standards, and patterns of labor and capital. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

2024-2025 Course Descriptions

ECON 260 Comparative Economic Systems Credit Hours: 3 / Billing Hours: 3

A comparison of different global economic systems and their impact on economic growth, distribution of income and opportunity, and economic treatment of women and minorities. Theories, philosophies, historical development and current practices will be examined. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

EDUC 204 Educational Psychology Credit Hours: 3 / Billing Hours: 3

Educational psychology examines the contribution of psychology to education, emphasizing childhood development, learning, motivation, measurement, and both individual and group dynamics that affect pupils' achievements. Research on specific programs and strategies designed to improve instruction and learning will be explored. This class is designed for potential certified teachers or paraprofessionals. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

EDUC 220 Introduction to Education Credit Hours: 3 / Billing Hours: 3

An overview of the foundations, philosophy, history, and organization of education as a human endeavor. Topics include legal concerns, issues and trends in American education, school governance, and school finance. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

EDUC 226 Reading in Elementary School Credit Hours: 3 / Billing Hours: 3

This course provides an introduction to concepts and issues in the reading development of elementary school children. Included are methods of reading instruction and assessment, and review of current school practices. Intended for teacher paraprofessionals, but may also be used for transfer to a teacher certification program. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: EDUC 220 and EDUC 204.

2024-2025 Course Descriptions

EDUC 228 Technology in Education

Credit Hours: 3 / Billing Hours: 3

In this survey course, students will learn sound principles for integrating technology and media into K-12 classrooms, legal and societal issues surrounding their use, and how to assess and select appropriate technology and media. Students will explore uses of productivity/presentation software and the internet/WWW to enhance their teaching. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: EDUC 220.

EDUC 230 Intro to Special Education

Credit Hours: 3 / Billing Hours: 3

An introduction to Special Education for potential elementary or secondary teachers and teacher paraprofessionals. The physical, social, emotional and cognitive characteristics of special needs students are defined. Emphasis is placed on the disability categories addressed in state and federal special education mandates. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

EDUC 280 Teacher Education Practicum

Credit Hours: 3 / Billing Hours: 3

This course requires students to work with a teacher in an educational setting, thus receiving practical experience working with children in K-12 classrooms at two different grade levels. Combined with readings, reflections, and on-campus classroom discussion, students should gain an appreciation for the role of professional teachers. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note:
 - 1) This course requires 70 additional hours of practical experience in K-12 classrooms at two different grade levels approved by the instructor. Information on field placement and assignment will be given during the first day of class. You cannot pass this course unless all 70 hours in two different K-12 classrooms have been completed.
 - 2) All public schools are required to ask for a background check for anyone who regularly visits a K-12 school building. Students in EDUC 280, Teacher Education Practicum, should be prepared to present a completed [ICHAT](#) (online State background check) to their practicum site at the beginning of the assignment.

ELTA 105 Elect. Industry Orientation

Credit Hours: 0.5 / Billing Hours: 0.5

An overview of laws and standards that apply to the electrical construction industry in the State of Michigan. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 3.

ELTA 106 Basic Electrical Calculations

Credit Hours: 2 / Billing Hours: 2

Reviews mathematical concepts required of the electrical technician in their study of electrical theory: fractions, ratios, proportions, powers and roots as used in Ohm's and Watt's Laws. Basic right triangle trigonometry, graphing and the reading of a tape measure are also discussed. A basic scientific calculator will be required and used in class. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

ELTA 120 AC Fundamentals - Electrician

Credit Hours: 2 / Billing Hours: 3

A practical approach to calculations of alternating current circuit quantities that an electrician may be required to use in the electrical trade. Impedance and power relationships will be explored for both single and three-phase circuits. (offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 110 or ELTE 108) and [Minimum 2.5 in (ELTA 106 or MATH 114) or Math Level noted below].
- Placement Score: Reading Level 4 and Writing Level 2 and Math Level 5.
- Course Note: \$8 of the Course Fee is non-refundable.

ELTA 155 Transformer Fundamentals

Credit Hours: 2 / Billing Hours: 3

This course covers alternating current transformers. Topics include operating principles, transformer calculations, single phase transformers, three phase transformers, autotransformers, and transformer connections. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in [ELTE 121 or (ELTA 120 or concurrently)].
- Placement Score: Reading Level 4 and Writing Level 2.
- Course Note: \$8 of the Course Fee is non-refundable.

ELTA 160 PLC Overview for Electricians

Credit Hours: 1 / Billing Hours: 2

This course provides a practical overview of programmable logic controllers with focus on operating principles and installation. Topics include the capabilities, installation, programming, (examine on/off, timers and counters) and connecting of external devices. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (ELTE 130 or ELTE 131).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note:
 - ELTA 160 sections require 2 additional lab hours that need to be arranged with the instructor and ELTE lab staff.
 - It is recommended that students attend the additional instructor led lab period assigned to your specific section.
 - Students who choose to utilize the ELTE open lab times to satisfy the arranged lab time, should be aware that the instructor may not be present during this time to answer questions.
 - \$7 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

ELTA 180 Introduction to Fire Alarms

Credit Hours: 1 / Billing Hours: 1

This course provides an introduction to the installation and operation of fire alarm systems. Topics covered include: wiring methods, components, circuit types, system types and code rules. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (ELTE 109 or concurrently).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.

ELTE 104 Employee Worksite Basics

Credit Hours: 1 / Billing Hours: 1

This course is designed to prepare students for entering the technical workplace. Students will learn employability skills for entry-level employment in the manufacturing, construction, and utility industries. Upon successful completion of this class, students will be prepared to take the SkillsUSA Energy Industry Employability Skills Assessment. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

ELTE 108 Practical Electricity I

Credit Hours: 2 / Billing Hours: 3

ELTE is a foundational course in Direct Current electrical theory. Series, parallel and combination circuits are studied in class. Meters are used in lab to measure and confirm the relationships between voltage, current, resistance, and power in studied circuits. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (ELTE 102 or DCTM 102 or HVAC 102 or METS 102 or TECH 102 or WELD 102) or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note:
 - This course is restricted to ERESA Early college students only. ELTE 109 must be completed within two years of completion of ELTE 108.
 - ELTE 110 (Practical Electricity) has been divided into two courses to allow more flexibility in scheduling.
 - Each course covers half of the ELTE 110 content:
 - ELTE 108 (Practical Electricity I) runs for the first half of the semester and covers the first half of the ELTE 110 content.
 - ELTE 109 (Practical Electricity II) runs for the last half of the semester and covers the remaining ELTE 110 content.
 - Students who take both ELTE 108 and ELTE 109 will fulfill curriculum guide requirements that list ELTE 110 as a requirement.
 - If you have questions, contact the Electrical Program at 517-483-1360. \$6 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

ELTE 109 Practical Electricity II

Credit Hours: 2 / Billing Hours: 3

This course applies the concepts covered in ELTE 108 (formerly ELTE 118), to conductance in gases and liquids; batteries; magnetism and motor operation. Conductor sizing, basic household wiring, electrical service components and the State of Michigan licensing law are addressed. Combined with ELTE 108, curricular requirements for ELTE 110 are fulfilled. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (ELTE 102 or DCTM 102 or HVAC 102 or METS 102 or TECH 102 or WELD 102) or concurrently and Minimum 2.0 in ELTE 108 or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note:
 - This course is restricted to ERESA Early College students only. ELTE 109 must be completed within two years of completion of ELTE 108.
 - ELTE 110 (Practical Electricity) has been divided into two courses to allow more flexibility in scheduling.
 - Each course covers half of the ELTE 110 content:
 - ELTE 108 (Practical Electricity I) runs for the first half of the semester and covers the first half of the ELTE 110 content.
 - ELTE 109 (Practical Electricity II) runs the last half of the semester and covers the remaining ELTE 110 content.
 - Students who take both ELTE 108 and ELTE 109 will fulfill curriculum guide requirements that list ELTE 110 as a requirement.
 - If you have questions, contact the Electrical Program at 517-483-1360. \$6 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

ELTE 110 Practical Electricity

Credit Hours: 4 / Billing Hours: 6

This course introduces the student to electricity on a practical level. The student will learn to use meters to measure electrical quantities, do basic circuit calculations, install basic household electrical wiring and investigate the behavior of motors. Reviews electrical codes and standards. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (ELTA 101 or ELTE 100 or ELTE 102 or DCTM 102 or HVAC 102 or METS 102 or TECH 102 or WELD 102 or concurrently).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Recommended: Math Level 4.
- Course Note: \$12 of the Course Fee is non-refundable.

ELTE 111 Intro to Industrial Automation

Credit Hours: 4 / Billing Hours: 6

Provides a hands-on introduction to computer-based manufacturing through experiments and demonstrations. Topics include computer architecture, operating systems, the internet, text and spreadsheet processing, PLC's, machine vision, programming languages, discrete electronics, computer aided design and network communications. Emphasis placed on the integration of these systems and impact on human lifestyle. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 102 or DCTM 102 or HVAC 102 or METS 102 or TECH 102 or WELD 102) or concurrently and ELTE 108 or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Student will be required to provide a 2 gigabyte memory stick (jump drive) with a USB port interface. \$15 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

ELTE 112 Basic Wiring Installation

Credit Hours: 2 / Billing Hours: 3

This course covers installation of a variety of wiring systems in wood frame construction. Students will practice installing nonmetallic sheathed cable, electrical metallic tubing and residential services. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 109 or ELTE 110 or HVAC 110).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: Students will be required to provide hand tools not included in the course fee. A list of these tools will be provided at the first class meeting. \$5 of the Course Fee is non-refundable.

ELTE 121 Electrical Mathematics

Credit Hours: 5 / Billing Hours: 6

This course utilizes concepts in algebra, vector algebra and trigonometry to solve DC and AC electric circuit problems. Topics will include units, Ohm's Law, network analysis, series parallel and combination DC and AC circuits, inductance, capacitance, AC power relationships and power factor correction. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 102 or DCTM 102 or HVAC 102 or METS 102 or TECH 102 or WELD 102) and (ELTE 110 or ELTE 108) and (minimum 2.0 in MATH 114 or Math Level 5).
- Placement Score: Reading Level 5.

ELTE 122 Industrial Control Electronics

Credit Hours: 5 / Billing Hours: 7

This course introduces the student to solid-state circuitry used in industry. Students will study diodes, transistors, SCRs, triacs, optical isolators, transducers, power circuits, etc. Laboratory will include oscilloscope usage. The course also includes an introduction to Boolean algebra and digital circuits. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in [(ELTE 108 or ELTE 110) and ELTE 111].
- Placement Score: Reading Level 5 and Writing Level 2 and Math Level 5.
- Recommended: Minimum 2.0 in (ELTE 121 or ELTA 120).
- Course Note: \$8 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

ELTE 123 Motors and Transformers

Credit Hours: 5 / Billing Hours: 7

This course begins with three-phase circuits, including three-phase power measurement. Contains practical introduction to single- and three-phase transformers, motors and alternators. Brief coverage of DC machines. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in ELTE 121.
- Placement Score: Reading Level 5 and Writing Level 2 and Math Level 5.
- Course Note: \$10 of the Course Fee is non-refundable.

ELTE 129 Machine Controls I - A

Credit Hours: 2 / Billing Hours: 2.5

This course covers the first half of ELTE 131 and ELTE 130 will cover the second half. Together they emphasize relay logic and controls using industrial standards. Use of correct symbols and standard construction of wiring and ladder diagrams is emphasized. Laboratory exercises include an exploration of three phase power systems; wiring three-phase motor control circuits utilizing two- and three- wire control; interfacing with fluid power control circuits; non-contact sensors; and timers. Troubleshooting skills are emphasized throughout the course. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (ELTE 108 or ELTE 110 or concurrently).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: \$8 of the Course Fee is non-refundable.

ELTE 130 Machine Controls I - B

Credit Hours: 2 / Billing Hours: 2.5

This course covers the second half of ELTE 131 and ELTE 129 covers the first half. Together they emphasize relay logic and controls using industrial standards. Use of correct symbols and standard construction of wiring and ladder diagrams is emphasized. Laboratory exercises include an exploration of three phase power systems; wiring three-phase motor control circuits utilizing two- and three- wire control; interfacing with fluid power control circuits; non-contact sensors; and timers. Troubleshooting skills are emphasized throughout the course. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 129 or concurrently).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$8 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

ELTE 131 Machine Controls I

Credit Hours: 4 / Billing Hours: 5

Covers relay logic and controls using industrial standards. Use of correct symbols and standard construction of wiring and ladder diagrams is emphasized. Laboratory exercises include wiring three-phase motor control circuits utilizing two- and three-wire control and machine control circuits utilizing limit and proximity switches, timers, relays, etc. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (ELTE 108 or ELTE 110).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$10 of the Course Fee is non-refundable.

ELTE 132 Control Panel Assembly

Credit Hours: 2 / Billing Hours: 3

This course provides practical experience in the construction of an industrial control panel. The student will layout, assemble, wire, connect, troubleshoot and operate an industrial control panel for an oscillating table drive. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 130 or ELTE 131) or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.

ELTE 136 Digital Basics

Credit Hours: 2 / Billing Hours: 3

Introduces digital electronics basics: Binary number system, basic gates, and combination and sequential logic circuits. Laboratory work includes the analysis of digital circuits built on PC boards. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (ELTE 130 or ELTE 131).
- Placement Score: Reading Level 5 and Writing Level 2 and Math Level 4.

2024-2025 Course Descriptions

ELTE 141 National Electrical Code I

Credit Hours: 4 / Billing Hours: 4

An introductory course designed for individuals with little or no knowledge of the Electrical Code. Students will study the structure and scope of the National Electrical Code, focusing on Chapters 1 through 4. These chapters constitute the general rules and most often used portion of the NEC. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 109 or ELTE 110 or HVAC 110).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: Students with a minimum of one year of experience may request a waiver for the prerequisites of this class. Call 517-483-1360 to request a waiver.

ELTE 142 National Electrical Code II

Credit Hours: 4 / Billing Hours: 4

This course builds on ELTE141 by applying the National Electrical Code to situations common to the practicing journey electrician. Extensive practice locating and interpreting sections of the NEC helps prepare students for the State Journey Examination. In addition to the NEC, State of Michigan electrical rules will be reviewed. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in ELTE 141.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: Students with a minimum of two years experience and a previous course in the National Electrical Code may request a waiver for the prerequisites of this class. Call 517-483-1360 to request a waiver.

2024-2025 Course Descriptions

ELTE 145 Electrical Prints for Building

Credit Hours: 4 / Billing Hours: 5

Covers construction prints emphasizing standard and nonstandard symbols and interpretation of prints. Uses the National Electrical Code to calculate branch circuit, motor circuit, and feeder sizes. Other topics include industrial loads, uninterruptible power supplies, and signaling systems. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in ELTE 141.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.
- Recommended: Minimum 2.0 in ELTE 121 or ELTA 120 or equivalent.
- Course Note:
 - This course requires 2 additional lab hours that need to be arranged with the instructor and ELTE lab staff.
 - It is recommended that students attend the additional instructor led lab period assigned to your specific section.
 - Students who choose to utilize the ELTE open lab times to satisfy the arranged lab time, should be aware that the instructor may not be present during this time to answer questions.
 - \$10 of the Course Fee is non-refundable.

ELTE 147 National Electric Code Update

Credit Hours: 1 / Billing Hours: 1

For individuals with National Electrical Code® experience and practical electrical knowledge and hold a journeyman electrician's license, a master electrician's license or a fire alarm specialty technician's license. Students will cover changes to the National Electrical Code® and discuss interpretation of the Code changes. (Offered as needed)

- Prerequisite Course: None.
- Recommended: Experience using the National Electrical Code.

ELTE 150 Electric Motor Maintenance

Credit Hours: 2 / Billing Hours: 3

Students learn to diagnose and test electric motors. Students will learn to identify and repair common problems in motors using meters, test equipment and appropriate tools. An introduction to rewinding and metal working procedures is also included. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 109 or ELTE 110 or HVAC 110).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.

2024-2025 Course Descriptions

ELTE 154 Utility Prints and Diagrams

Credit Hours: 3 / Billing Hours: 3

This course will develop a student's ability to accurately read various types of blueprints used to document cabling, components and operation of electrical systems. Single-line, riser, schematic, ladder, relay, cabling, and layout diagrams will be addressed. The need for accurate recordkeeping will be reinforced throughout the class. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (ELTA 120 or ELTE 121) or concurrently.
- Placement Score: Reading Level 4 and Writing Level 4 and (Math Level 5 or minimum 2.0 in ELTA 106).

ELTE 156 Lineworker/Utility Rigging

Credit Hours: 3 / Billing Hours: 4

This course covers uses and strengths of ropes, chains, block and tackles, truck-mounted augers, hoists, lifts and capstans. Knots used by lineworkers will receive extensive coverage and practice. Safe working strength of slings, hooks, sheaves, ropes and chains, the use of personal safety equipment, and proper hand signals used in the industry will be covered. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 102 or DCTM 102 or HVAC 102 or METS 102 or TECH 102 or WELD 102 or concurrently).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4 or [minimum 2.0 in 9MATH 105 or MATH 106]] or P in (NCMA 106 or NCMA 110).
- Course Note: \$10 of the Course Fee is non-refundable.

ELTE 173 Energy Industry Fundamentals I

Credit Hours: 2 / Billing Hours: 2

This course provides students with knowledge of basic and emerging principles and concepts that impact the energy industry including how the industry is organized and operates as a whole. Students will gain a basic understanding of electric power generation, including traditional and alternative sources. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Recommended: Minimum 2.0 in ELTE 108.

2024-2025 Course Descriptions

ELTE 174 Energy Industry Fundamental II

Credit Hours: 2 / Billing Hours: 2

This course provides students with knowledge of electric power and natural gas transmission and distribution. Students will also learn about career opportunities in the energy industry, including job entry requirements and educational pathways. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 173 or concurrently).
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: \$10 of the Course Fee is non-refundable.

ELTE 181 Pole Climbing I

Credit Hours: 0.5 / Billing Hours: 1

An introduction to the climbing of wooden utility poles, this hands-on class gives students climbing instruction, time for developing basic skills and the ability to determine if the student is comfortable at heights. Exposure to the proper use of basic hand tools used in industry is included. (Offered Fall, Summer)

- Prerequisite Course: Program Approval for Acceptance into the Electrical Utility/Lineworker Curriculum.
- Recommended: PFFT 180 Lineworker Fitness A within 1 semester or a passing score on the Lineworker Physical Ability Test (LPAT) within 1 semester.

ELTE 182 Pole Climbing II

Credit Hours: 0.5 / Billing Hours: 1

This hands-on class provides students with the opportunity to build climbing technique, comfort working at various heights on the pole, and competency working with tools that are needed for success in advanced climbing classes in the Lineworker program. (Offered Fall)

- Prerequisite Course: Minimum 3.5 in ELTE 181.
- Placement Score: None.

ELTE 185 Pole Climbing Practice I

Credit Hours: 0.25 / Billing Hours: 0.5

This hands-on class assumes students have had a minimum of 12 hours of active climbing skill development and provides the opportunity to practice, build and refine climbing technique. (Offered Fall, Spring)

- Prerequisite Course: Minimum 3.5 in ELTE 181.
- Placement Score: None.

2024-2025 Course Descriptions

ELTE 186 Pole Climbing Practice II Credit Hours: 0.25 / Billing Hours: 0.5

This hands-on class builds climbing skill and confidence based on competency developed in prerequisite courses. Students will have opportunity to evaluate and then focus on skills needing development. (Offered Spring, Summer)

- Prerequisite Course: Minimum 2.5 in ELTE 182 or passing grade in ELTE 185.
- Placement Score: None.

ELTE 187 Pole Climbing Practice III Credit Hours: 0.25 / Billing Hours: 0.5

This hands-on class assumes students have had a minimum of 32 hours of active climbing skill development and provides the opportunity to refine technique and develop the stamina required for advanced climbing classes in the Lineworker program. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in ELTE 182 or passing grade in ELTE 185.
- Placement Score: None.

ELTE 188 Pole Climbing Practice IV Credit Hours: 0.25 / Billing Hours: 0.5

This hands-on class assumes students have had a minimum of 40 hours of active climbing skill development and provides the opportunity to refine technique and build the stamina required for advanced climbing classes in the Lineworker program. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in ELTE 182 or passing grade in ELTE 185.
- Placement Score: None.

ELTE 232 Machine Controls II Credit Hours: 4 / Billing Hours: 6

This course is a continuation of ELTE131. Students will work with more components, larger and more complex machine control diagrams, automation interlocking, automatic continuous cycling of machinery, variable speed motor drives, design of control circuits for more complex machines, and the use of AutoCAD for drawing electrical schematics. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in [ELTE 131 or (ELTE 129 and (ELTE 130 or concurrently))].
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.
- Course Note: \$10 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

ELTE 251 Energy Generation & Control I

Credit Hours: 4 / Billing Hours: 5

Provides students with a foundational understanding of electrical power generated by steam turbines, gas turbines, and reciprocating SI and CI engines. Prime movers, generators, governors, regulators and fault protection equipment are covered. Addresses both theory and practice of maintenance, operation, repair and installation of electrical generating systems and related components. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (ELTE 121 and (ELTE 130 or ELTE 131) and (ELTE 123 or concurrently)).
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 5.
- Recommended: Minimum 2.0 in ELTE 150.
- Course Note: The textbook for ELTE 251 is purchased thru [Electrical Generating Association](http://egsa.org) (egsa.org). Students can pick up an order form at West Campus in M127 or U206. Please allow enough time to receive the textbook before class begins.

ELTE 252 Energy Generation & Control II

Credit Hours: 4 / Billing Hours: 5

Second in a two-course sequence addressing electrical power generation. Covers advanced concepts of the prime mover and the generator as well as associated governors, regulators and fault protection equipment. Students will learn both theory and practice of maintenance, operation, repair and installation of electrical generating systems and related components. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 123 and ELTE 251) and Reading Level 5 and Writing Level 4 and Math Level 5.

ELTE 255 Power Instrumentation

Credit Hours: 4 / Billing Hours: 5

An introduction to the instrumentation and control of power generation and distribution. The application, calibration and use of smart meters, electronic power meters, potential and current transformers, switchboard instruments & controls, power equipment measurement/protection, temperature measurement, 4-20ma current loop systems and programmable energy meters are explored and applied. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 251 and ELTE 260) and Reading Level 5 and Writing Level 4 and Math Level 5.

2024-2025 Course Descriptions

ELTE 260 Programmable Controllers I

Credit Hours: 4 / Billing Hours: 6

This course introduces students to the concepts and principles of programmable logic controllers (PLCs). Topics include the basics of ladder logic and function block programming, discrete input and output field device connections, as well as troubleshooting software, hardware, communications and other PLC related equipment. Allen Bradley and Siemens control technology will be utilized. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in [ELTE 131 or (ELTE 129 and (ELTE 130 or concurrently))].
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.
- Course Note: \$5 of the Course Fee is non-refundable.

ELTE 261 Programmable Controllers II

Credit Hours: 6 / Billing Hours: 8

This course provides an in-depth understanding of Allen-Bradley ControlLogix programmable logic controllers. Students will learn about CLX flexible memory structure as it relates to data file types, data manipulation, and scheduling. Bit, word, and file operations will be extensively covered. Topics include Ethernet communications, analog field device connections, safety relays, variable frequency drives, remote I/O, and AB equipment configuration/installation. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (ELTE 260 or ELTA 160).
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.
- Course Note:
 - 1) Students are required to provide a 2 gigabyte memory stick (jump drive) with USB port interface.
 - 2) \$5 of the Course Fee is non-refundable.

ELTE 262 Programmable Controllers III

Credit Hours: 5 / Billing Hours: 8

This course provides an in depth understanding of industrial automation as it relates to integrated robot systems, distributive process control and safety related systems. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in ELTE 261.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.
- Recommended: Minimum 2.5 in METS 160.
- Course Note: \$15 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

ELTE 270 Lineworker Fundamentals

Credit Hours: 1 / Billing Hours: 1.5

The purpose of this course is to give prospective lineman apprenticeship candidates a good demonstration of the work they will be required to do as an apprentice and journeyman lineworker. Students will be given an introduction to the physical aspects and mental discipline required to perform the duties of a lineworker with demonstrations and physical tests. (Offered Fall, Spring)

- Prerequisite Course: None. Program Approval for Acceptance into the Electrical Utility/Lineworker Curriculum is required.
- Placement Score: None.

ELTE 272 Electric Basic Line Climbing

Credit Hours: 4 / Billing Hours: 6

This course is designed to provide students with the basic knowledge and pole climbing skills necessary to progress through the Electric Line Apprentice Program. (Offered Fall, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: \$60 of the Course Fee is non-refundable.

ELTE 274 Ground/Utility Worker

Credit Hours: 6 / Billing Hours: 9

This course is designed to provide students with the basic Ground Worker/Utility Worker knowledge and skills necessary to progress through the Electric Line Apprentice Program. (Offered Fall, Summer)

- Prerequisite Course: Minimum 3.5 in ELTE 272.
- Placement Score: None.

ELTE 276 Energized Secondary Worker

Credit Hours: 5 / Billing Hours: 8

This course addresses the knowledge and skills necessary to progress through the Electric Line Apprentice Program with a focus on the installation and maintenance of secondary lines of 120/240 Volts. Safe work practices on energized conductors and aerial lifts, digger derricks and associated equipment are developed and required. (Offered Fall, Summer)

- Prerequisite Course: Minimum 3.5 in ELTE 274.
- Placement Score: None.

2024-2025 Course Descriptions

ELTE 290 Electrical Internship

Credit Hours: 2 to 4 / Billing Hours: 2 to 4

This course provides Electrical Technology students with practical work experience in industry. Students work for an employer in a supervised environment which provides an opportunity to apply knowledge and skills learned in the classroom and lab to an actual job situation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

ELTE 291 Electrical Project Lab

Credit Hours: 1 to 4 / Billing Hours: 1 to 4

A guided study of topics of interest in electrical technology. The student will prepare a summary report of activities and demonstrate results of laboratory experiences. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

EMTA 100 Emergency Medical Responder

Credit Hours: 4 / Billing Hours: 6

This course will provide the student with the knowledge and skills necessary to manage ill or injured victims at the scene of an emergency until the arrival of ambulance personnel. Successful completion qualifies the student to take the National Registry of Emergency Medical Technicians (NREMT) certification exam, then apply for state licensure as a Medical First Responder (MFR) upon passing exam. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.
- Course Note: In addition to regular class time, students are required to complete Bloodborne Pathogens training online. Information will be distributed via the D2L Course Management site and/or in class. \$35 of the course fee is for medical supplies and is non-refundable.

2024-2025 Course Descriptions

EMTA 121 EMT Medical Trauma

Credit Hours: 5 / Billing Hours: 5

This course is the first of three courses to prepare the student as a Basic Emergency Medical Technician (EMT). Emphasis is placed on didactic material including airway management, patient assessment, CPR, soft tissue injuries, head, chest, and abdominal injuries, and proper use of equipment in the delivery of basic emergency care. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.
- Corequisite Course: EMTA 122 and EMTA 125.
- Course Note:
 - Students are required to pass an ICHAT Criminal Background investigation completed through the State of Michigan [ICHAT](#) webpage prior to starting the program. There is a fee for this service. Students must submit ICHAT documentation to the EMS Program office to receive Program Approval to enroll in the Academy. Documentation can be submitted electronically to LCC-HHS@star.lcc.edu.
 - ALL EMT ACADEMY STUDENTS must attend a mandatory orientation session held at the LCC main campus. Contact the EMS Program at 517-483-1410 for dates and times.
 - There will be an additional cost to students for uniforms and textbooks. Medical supplies are included in the course fees.
 - In addition to regular class time, students are required to complete Bloodborne Pathogens Training online. Information will be distributed via the D2L Course Management site and/or in class.

EMTA 122 EMT Skills

Credit Hours: 2.75 / Billing Hours: 5.5

This course is the second of three courses to prepare the student as a Basic Emergency Medical Technician (EMT). Emphasis is placed on practical material including airway management, patient assessment, CPR, soft tissue injuries, head, chest, and abdominal injuries and proper use of equipment in the delivery of basic emergency care. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.
- Corequisite Course: EMTA 121 and EMTA 125.

2024-2025 Course Descriptions

EMTA 125 EMT Clinical

Credit Hours: 2.25 / Billing Hours: 2.25

The third of three courses to prepare the student as a basic EMT, this course includes hospital and ambulance clinicals. Successful completion of all three basic EMT courses qualifies the student to take the National Registry of Emergency Medical Technicians (NREMT) certification exam and then apply for state licensure as an EMT upon passing exam. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.
- Corequisite Course: EMTA 121 and EMTA 122.

2024-2025 Course Descriptions

EMTA 222 EMS Instructor-Coordinator

Credit Hours: 9 / Billing Hours: 9

The first of two courses for EMS personnel interested in becoming an EMS instructor coordinator. Includes teaching and testing methods, lesson plan development, writing performance objectives, course administration, State of Michigan application process for course approval, and meeting other State-mandated requirements. Student teaching is required. Must be able to provide proof of three (3) years of field experience with a responding Life Support agency within the State of Michigan to qualify for Instructor Coordinator licensure. (Offered Fall)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: In order to qualify for State of Michigan EMS IC licensure, an individual must be able to provide proof of three (3) years of field experience with a responding Life Support agency within the State of Michigan. Please contact the EMS Program Director at 517-483-1530 to obtain approval to enroll in this course.

EMTA 224 EMS Instr-Coord Student Teach

Credit Hours: 2 / Billing Hours: 2

The second of two courses for EMS personnel interested in becoming an EMS Instructor Coordinator (EMS IC), this course provides the opportunity to complete the required student teaching segment of the training in both didactic and laboratory settings. Successful completion of both courses qualifies the student to take the State of Michigan EMS IC licensure exam. (Offered Spring)

- Prerequisite Course: Minimum 3.0 in EMTA 222. Department Approval is required.
- Placement Score: None.
- Course Note: Please contact the EMS Program Director at 517-483-1530 to obtain approval to enroll in this course.

2024-2025 Course Descriptions

ENGL 098 Integrated Reading Writing I

Credit Hours: 4 / Billing Hours: 4

This integrated reading and writing cornerstone course develops contextualized applications of skills and strategies necessary for academic and career success. Areas of focus include critical thinking and research processes, with emphasis on relevancy and transfer to academic courses and career goals. Concurrent enrollment in SOCL120 or PSYC200 or BUSN118 and its corresponding lab is required. After registering for ENGL098, students must register for one of the following pairs of Academic Support labs and classes: NCAS103/SOCL120; NCAS104/PSYC200; or NCAS105/BUSN118. (Add the NCAS lab first to see information on the paired course.) Students are encouraged to meet with an Academic Advisor for further information. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 2 and Writing Level 2.
- Recommended: Concurrent enrollment in ACAD 100.

ENGL 099 Integrated Reading Writing II

Credit Hours: 4 / Billing Hours: 4

This integrated reading and writing cornerstone course develops contextualized applications of skills and strategies necessary for academic and career success. Areas of focus include critical thinking and research processes, with emphasis on relevancy and transfer to academic courses and career goals. Concurrent enrollment in college-level classes is recommended. Students should meet with an academic advisor to determine which concurrent enrollment options to select. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4. Co-requisite Courses: ENGL 121 (ENGL 124 or ENGL 127 may be substituted with approval from the Integrated English Department).
- Course Note: Students enrolled in ENGL 099 may take a second college-level course in addition to ENGL 121 or 124 or 127. See an academic advisor for college-level courses that allow concurrent enrollment with ENGL 099.

2024-2025 Course Descriptions

ENGL 118 Personal Writing

Credit Hours: 3 / Billing Hours: 3

Explores the various forms of personal writing (diaries, journals, letters, personal narratives, and autobiography) through written exercises and selected readings. The student's observations and life experiences are the focus of written assignments. Emphasizes language, style, and tone appropriate to the different forms of personal writing. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: (Reading Level 5 and Writing Level 4) or ENGL 099 concurrently.

ENGL 121 Composition I

Credit Hours: 4 / Billing Hours: 4

Composition I is the study and practice of expository discourse to help students write more effectively. It emphasizes critical thinking, academic source materials, writing processes, content development, structure, style, database research, and documentation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

ENGL 122 Composition II

Credit Hours: 4 / Billing Hours: 4

Composition II builds upon the writing skills developed in Composition I and emphasizes writing argumentatively, reasoning, and using appropriate documentation. The course develops analytical skills in reading, writing, and research techniques. Students learn about the development, structure, and style of academic research. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (ENGL 121 or ENGL 131) or Placement Scores listed below.
- Placement Score: Reading Level 5 and Writing Level 8.

2024-2025 Course Descriptions

ENGL 124 Technical Writing

Credit Hours: 3 / Billing Hours: 3

A college-level course in the study and practice of technical writing in a variety of formats for select audiences. Covers writing instructions, mechanism descriptions, technical definitions, as well as business letters, persuasive memos, job application materials, and basic research techniques. Students learn basic research techniques. Students will work individually and collaboratively. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently).
- Recommended: Computer and/or keyboarding experience.

ENGL 127 Business Writing

Credit Hours: 3 / Billing Hours: 3

Theory and practice of business communication in a variety of forms, from short communications in print and in non-print channels to longer business proposals and research reports. Emphasizes effective use of graphics such as tables, charts, and illustrations, following accepted design principles. Covers business use of electronic media including websites, social media, and messaging applications. Considers appropriate uses of AI tools. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently).
- Recommended: Computer and/or keyboarding experience.

ENGL 131 Honors Composition I

Credit Hours: 4 / Billing Hours: 4

Honors Composition I is the study and practice of expository discourse to expand students' ability to write effectively. It emphasizes critical thinking, reading academic sources, writing processes, content development, structure, style, database research, and documentation. Students may expect a more rigorous approach to the course. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 7.

2024-2025 Course Descriptions

ENGL 132 Honors Composition II

Credit Hours: 4 / Billing Hours: 4

This course builds upon the writing skills developed in ENGL 121 to help students write argumentative essays which use logical support and appropriate documentation. The course develops analytical skills in reading, writing, and research techniques. Students learn about the development, structure, and style of academic research. Students may expect a more rigorous approach to the course. (Offered Fall, Spring)

- Prerequisite Course: Minimum 3.5 in (ENGL 121 or ENGL 131).
- Placement Score: Reading Level 5 and Writing Level 8.

ENGL 200 Introduction to Literature

Credit Hours: 3 / Billing Hours: 3

Students will analyze and interpret poetry, drama, and narrative works from a globally and culturally diverse range of historical and literary periods. Close readings of both written texts and visual texts will be encouraged. Through written assignments and discussion, students will offer analytical, argumentative, or researched responses to the readings. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently).

ENGL 201 Introduction to Poetry

Credit Hours: 4 / Billing Hours: 4

An introduction to the content, form, style, and technique of poetry; its structural types: metrical, blank, and free verse; its thematic types: lyric, narrative, and dramatic; and its effects or purposes. The course emphasizes poetry written in English but includes English translations of representative poetry from other languages and cultures. (Offered Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: (ENGL 121 or ENGL 131) and ENGL 122.

2024-2025 Course Descriptions

ENGL 202 World Drama

Credit Hours: 4 / Billing Hours: 4

Introduces drama as a unique genre with its own literary techniques and conventions within a global context. Students will read and interpret representative plays from the ancients to the 21st century, including works from Western and non-Western cultures. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: (ENGL 121 or ENGL 131) and ENGL 122.

ENGL 208 Children's Literature

Credit Hours: 4 / Billing Hours: 4

This course offers a survey of children's literature, from fairy tales to young adult novels. Students will be introduced to a variety of literary genres in classic and contemporary works. Students will experience the literature through writing, discussion, oral or dramatic presentations, and other means suitable to classroom practice. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: (ENGL 121 or ENGL 131) and ENGL 122.

ENGL 211 World Literature I

Credit Hours: 4 / Billing Hours: 4

A selective survey of the literatures of major world cultures reflecting the diversity of the continents of Africa, the Americas, Asia, and Europe to approximately the 17th century. Explores the historical, ethnic, aesthetic, political, economic, and thematic elements of their respective cultures through narrative prose fiction, poetry, and drama. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: (ENGL 121 or ENGL 131) and ENGL 122.

2024-2025 Course Descriptions

ENGL 212 World Literature II

Credit Hours: 4 / Billing Hours: 4

A survey of the literatures of major cultures reflecting the diversity of the continents of Africa, the Americas, Asia, and Europe from approximately the 17th century through the present. Explores the historical, ethnic, aesthetic, political, economic, and thematic elements of their cultures through narrative prose fiction, poetry, and drama. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: (ENGL 121 or ENGL 131) and ENGL 122.

ENGL 220 Science Fiction

Credit Hours: 4 / Billing Hours: 4

ENGL220 is an introductory course which explores significant issues in science fiction. Novels and/or stories will be the main focus, although works from other media also may be studied. The course's emphasis transcends entertainment to include understanding, interpretation, and analysis as well. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ENGL 121 (formerly WRIT 121) or ENGL 131 (formerly WRIT 131) and ENGL 122.

ENGL 240 The Film as Art

Credit Hours: 4 / Billing Hours: 4

This course will introduce film as an art form capable of making perceptive comments on our civilization. Thematic analysis of 12 to 15 films of recognized merit will emphasize the film maker's visual and aural techniques as well as conventions more commonly associated with literature. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: (ENGL 121 or ENGL 131) and ENGL 122.

2024-2025 Course Descriptions

ENGL 245 Popular Culture and Mass Media

Credit Hours: 4 / Billing Hours: 4

A study of the popular culture distributed by mass media (newspapers, radio, film, television, magazines, and music videos) and how the media and popular culture reflect and shape our cultural beliefs. Extensive use of multimedia. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: (ENGL 121 or ENGL 131) and ENGL 122.

ENGL 255 American Lit to 1865

Credit Hours: 4 / Billing Hours: 4

Provides a perspective on the evolution of traditional American literature beginning with the writings of the first European explorers and Native American oral tradition. Features selected essays, autobiographical writings, poems, fiction, and drama from the mid-15th century to 1865, including the work of women and ethnic minorities, which have contributed to American thought. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ENGL 121 (formerly WRIT 121) or ENGL 131 (formerly WRIT 131) and ENGL 122.

ENGL 256 American Lit 1865 to Present

Credit Hours: 4 / Billing Hours: 4

Provides a perspective on the further development of traditional American literature from 1865 (the Realism period) to contemporary literature. Features selected essays, autobiographical writings, poems, fiction, and drama from the end of the Civil War to the literature of the late 12th century, including the work of women and ethnic minorities, which have profoundly shaped American literature. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ENGL 121 or ENGL 131 and ENGL 122.

2024-2025 Course Descriptions

ENGL 260 African-American Literature

Credit Hours: 4 / Billing Hours: 4

This course introduces the African-American literary tradition as seen in the literature of the Americas, including the Caribbean. Selections explore the black experience in autobiography, essay, fiction, poetry, and drama. Themes of slavery, colonialism, and the Black Diaspora are discussed. Reading selections include the Harlem Renaissance and contemporary texts. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: (ENGL 121 or ENGL 131) and ENGL 122.

ENGL 261 Creative Writing I

Credit Hours: 3 / Billing Hours: 3

This course helps students develop expressive abilities in writing poetry and short stories. Emphasizes narrative modes of the short story, and free verse forms and traditional forms of poetry. Students read and analyze models from masters in fiction and poetry. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (ENGL 121 or ENGL 131) or placement levels noted below.
- Placement Score: Reading Level 5 and Writing Level 8.

ENGL 266 British Lit to 1800

Credit Hours: 4 / Billing Hours: 4

British Literature I surveys the poetry, prose, and drama of the major British writers from Chaucer (14th Century) to the Satirists (18th Century). The works are selected to reflect the attitudes and values of British culture and the perception of the world from a British point of view. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: (ENGL 121 or ENGL 131) and ENGL 122.

2024-2025 Course Descriptions

ENGL 267 British Lit 1800 to Present

Credit Hours: 4 / Billing Hours: 4

British Literature II surveys the poetry, prose, and drama of the major British writers from the Romantics (19th Century) to the early 21st century. The works are selected to reflect the attitudes and values of British culture and the perception of the world from a British point of view. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: (ENGL 121 or ENGL 131) and ENGL 122.

ENGL 270 Gender and Literature

Credit Hours: 4 / Billing Hours: 4

A study of selected works representing women and LGBTQ writers. Readings are chosen to engage students in thoughtful discussion and to increase understanding of themes, literary theory, issues, and modes of expression of women writers and the LGBTQ communities. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: (ENGL 121 or ENGL 131) and ENGL 122.

ENGL 271 Creative Writing II

Credit Hours: 3 / Billing Hours: 3

Emphasizes improving the ability to write effective poems, short stories, and novellas. Students select their own subjects and receive feedback in a workshop environment. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in ENGL 261.
- Placement Score: Reading Level 5.

ENGL 278 Writing the Novel

Credit Hours: 3 / Billing Hours: 3

This course addresses all aspects of writing a novel. Classroom sessions will emphasize finding a narrative voice, establishing sturdy characters, and developing a workable plot. Students will receive feedback on their fiction in a workshop setting. Publishing information will be provided, but will not be a focus of the course. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in ENGL 261 or ENGL 264 or ENGL 260 or ENGL 264.
- Placement Score: Reading Level 5.

2024-2025 Course Descriptions

ENGL 279 Prose Style

Credit Hours: 3 / Billing Hours: 3

An advanced study of non-fictional prose writing. Extensive directed practice helps experienced writers make their own writing clear, precise, direct, and graceful. Workshop sessions include a study of the expectations and choices in various types of writing, and of the relationships among purpose, structure, words, sentences, grammar, punctuation, and style. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (ENGL 121 or ENGL 131).
- Placement Score: Reading Level 5 and Writing Level 8.

ENGL 290 Shakespeare

Credit Hours: 4 / Billing Hours: 4

Students will read, discuss and write about selected comedies, histories, tragedies and romances written by Shakespeare. To better understand how Shakespeare's work continues to influence literature and the arts, the class may also screen film versions of modern re-tellings of Shakespearean plots. (Offered Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ENGL 121 or ENGL 131 and ENGL 122.

ENGL 295 Independent Study in English

Credit Hours: 1 to 4 / Billing Hours: 1 to 4

An opportunity for self-directed learners to explore topics related to, but not taught in the curriculum. Students spend at least two hours per week for each credit. A detailed proposal must be submitted by the student for approval by the Department and supervising instructor prior to registration. (Offered Fall, Spring, Summer)

- Prerequisite Course: Department Approval.

ENVR 121 Environmental Rules and Regs

Credit Hours: 3 / Billing Hours: 3

Overview of federal and state environmental regulations and agency rules that regulate discharges to air, water, and land. Laws are examined with respect to the reason the regulation is needed, what the law does, and how it does it. The course is designed for students pursuing careers as environmental technicians. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

2024-2025 Course Descriptions

ENVR 122 Enviro Sampl & Instrumentation

Credit Hours: 4 / Billing Hours: 6

An introduction to sampling and monitoring procedures and instrumentation to accomplish a task. Students will learn to take samples from ground water, surface water, air, and soil. This course is designed for students pursuing careers in biological science, but emphasizes the skills used by environmental technicians. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

ENVR 131 Industrial Process Safety

Credit Hours: 3 / Billing Hours: 3

Introduction to general manufacturing processes with emphasis on waste reduction and pollution prevention strategies. Case studies of basic processes, materials flow, worker health and safety, waste reduction, and pollution prevention will be examined. Fundamentals of toxicology, epidemiology, and environmental health will be used in understanding workplace safety and health issues. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

ESOL 098 ESL Combined Skills Level 4

Credit Hours: 6 / Billing Hours: 6

Prepares non-native speakers of English for success in college courses. Students will develop reading, writing, academic vocabulary, grammar, and critical thinking skills through a theme-based approach. Emphasis on technology skills for academic work including word processing, MLA/APA format, and course management system. Students are expected to co-enroll in one of the co-requisite courses. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in (ESOL 090 and ESOL 095) or placement scores noted below.
- Placement Score: ESOL 4 or (Reading Level 2 and Writing Level 2).
- Corequisite Course: PSYC 200 or SOCL 120 (excluding online and online hybrid sections).
- Recommended: ACAD 101.
- Course Note: An exit competency of 2.5 awards Reading Level 4 and Writing Level 4 and allows enrollment in ESOL 099, ESL Combined Skills Level 5, and the concurrent enrollment options associated with that course.

2024-2025 Course Descriptions

ESOL 099 ESL Combined Skills Level 5

Credit Hours: 4 / Billing Hours: 4

Advanced level non-native speakers of English will develop reading, vocabulary, and grammar skills for academic success. Students will use college-level texts to develop reading, writing, and critical skills. Emphasis on technology skills for academic work. Students should meet with an academic advisor to determine which concurrent enrollment options to select. Reading Level 5 and Writing Level 6 granted upon successful completion (exit competency 2.5). (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in ESOL 098 or Placement Scores noted below.
- Placement Score: (Reading Level 4 and Writing Level 4) or (ESOL Level 5).
- Corequisite Course: ENGL 121 (ENGL 124 or ENGL 127 may be substituted with approval from the English Department).

FIRE 100 Principles Emergency Services

Credit Hours: 4 / Billing Hours: 4

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; and fire service nomenclature. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

FIRE 101 MI F.F.T.C. Basic Fire Level I

Credit Hours: 10 / Billing Hours: 14

Level I is basic training required for all firefighters in the State of Michigan. Training is certified by the Michigan Fire Fighters Training Council and includes the basics of fire suppression, apparatus operation, life safety, and physical fitness. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Corequisite Course: FIRE 102 and PFFT 119.
- Course Note: \$800 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

FIRE 102 **MI F.F.T.C. Basic Fire Lev II**

Credit Hours: 6 / Billing Hours: 8

Level II is basic training required for all career firefighters in the State of Michigan. Training is certified by the Michigan Fire Fighter's Training Council and includes advanced fire suppression, aerial operation, life safety, and physical fitness. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Corequisite Course: FIRE 101 and PFFT 119.

FIRE 104 **Fire Behavior & Combustion**

Credit Hours: 3 / Billing Hours: 3

This course explores the theories and fundamentals of how and why fires start and spread.(Offered Spring).

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

FIRE 105 **Fire/Hydraulics/Water Supply**

Credit Hours: 4 / Billing Hours: 4

This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

FIRE 110 **Fire Prevention**

Credit Hours: 3 / Billing Hours: 3

This course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation, and fire and life-safety education. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (FIRE 100 or concurrently) or (FIRE 101 and FIRE 102).
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

FIRE 112 Occup Health & Safety/Fire Svc

Credit Hours: 4 / Billing Hours: 4

This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk evaluation and control procedures for fire stations, training sites, emergency vehicles, and emergency situations involving fire, EMS, hazardous materials, and technical rescue. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

FIRE 115 Bldg Construction/Fire Protect

Credit Hours: 4 / Billing Hours: 4

This course provides the components of building construction that relate to fire and life safety. The focus of this course is on firefighter safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, pre-planning fire operations, and operating at emergencies. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in [(FIRE 100 or concurrently) or (FIRE 101 and FIRE 102)].
- Placement Score: Reading Level 5 and Writing Level 4.

FIRE 122 Hazardous Materials Chemistry

Credit Hours: 4 / Billing Hours: 4

This course covers basic fire chemistry relating to the categories of hazardous materials including problems with recognition, reactivity, and health encountered by firefighters. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in [(FIRE 104 or concurrently) or (FIRE 101 and FIRE 102)].
- Placement Score: Reading Level 5 and Writing Level 4.

FIRE 125 Fire Protection Systems

Credit Hours: 4 / Billing Hours: 4

This course provides information relating to the features of design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection and portable fire extinguishers. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (FIRE 105 or FIRE 110).
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

FIRE 150 Strategy and Tactics

Credit Hours: 4 / Billing Hours: 4

This course provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground. This course meets the Michigan Office of Fire Fighter Training prerequisites for Fire Officer I and II. (Offered Spring)

- Prerequisite Course: (Minimum 2.0 in FIRE 101 or FIRE 102) or (MI F.F.T.C. Fire Fighter I & II Certification) and Department Approval.
- Placement Score: None.
- Course Note: Department Approval required. Contact the Fire Technology Program at 517-483-1394.

FIRE 210 Fire Investigation I

Credit Hours: 4 / Billing Hours: 4

This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (FIRE 104 or concurrently) or (FIRE 101 and FIRE 102) and Department Approval.
- Placement Score: None.
- Course Note: Contact the Fire Technology Program advisor at 517-483-1394 for department approval.

FIRE 215 Fire Investigation II

Credit Hours: 3 / Billing Hours: 3

This course is intended to provide the student with advanced technical knowledge of rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and testifying. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in FIRE 210 and Department Approval.
- Placement Score: None.
- Course Note: Contact the Fire Technology Program advisor at 517-483-1394 for department approval.

2024-2025 Course Descriptions

FIRE 220 Hazardous Materials/Fire Svc

Credit Hours: 4 / Billing Hours: 5

This course explores the concepts and methods of detection, control, and mitigation of hazardous materials incidents. Contains specific elements of NFPA 471, 472 and OSHA CFR 1910.120. This course is designed to train Haz-mat technicians. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in FIRE 104 or (FIRE 101 and FIRE 102) and Haz-Mat Operational Level Training and Department Approval.
- Placement Score: None.
- Course Note: Contact the Fire Technology Program at 517-483-9608 for department approval.

FIRE 245 Fire Officer I & II

Credit Hours: 4 / Billing Hours: 4

This course introduces the firefighter to the duties assigned to company level officers. Topics addressed include budgeting, planning, public relations, personnel management, communications, legal responsibilities, and safety at the company level. This course complies with the Michigan Office of Fire Fighter Training requirements for Fire Officer I and II. (Offered Fall)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: Department approval required. Contact the Fire Technology Program at 517-483-1394.

FIRE 250 Fire Administration I

Credit Hours: 4 / Billing Hours: 4

This course introduces the student to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis is placed on fire service leadership from the perspective of the company officer. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (FIRE 150 or Michigan Office of Firefighter Training Fire Officer III).
- Placement Score: Reading Level 5 and Writing Level 4.
- Course Note: Students with Michigan Office of Firefighter Training Fire Officer III certification should contact the FIRE program office at 517-483-1394 for enrollment approval.

2024-2025 Course Descriptions

FIRE 255 Fire Officer III & IV

Credit Hours: 4 / Billing Hours: 4

This course provides the basic tools for analyzing and evaluating budgets, programs, policies, personnel and management systems within the fire service organization. Data interpretation and planning are major elements addressed in this course. Enhancement of fire service leadership decision-making capabilities is the primary focus of this course. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (FIRE 245 and FIRE 250) or concurrently and Department Approval.
- Placement Score: None.
- Course Note: Contact the Fire Technology Program advisor at 517-483-1394 for department approval.

FIRE 260 Legal Aspects/Fire Service

Credit Hours: 4 / Billing Hours: 4

This course introduces the federal, state, and local laws that regulate emergency services, national standards which influence emergency services, standard of care, tort and liability. Relevant court cases are also reviewed. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in FIRE 104 or (FIRE 101 and FIRE 102) and Department Approval.
- Placement Score: None.
- Course Note: Contact the Fire Technology Program advisor at 517-483-1394 for department approval.

FIRE 265 Fire Service Blue Card

Credit Hours: 4 / Billing Hours: 4.5

This Incident Command Certification Program is designed to first instruct, train, and then evaluate and certify Fire Department Officers who serve in the role of Incident Commander that supervise and manage emergency and hazard zone operations for every day, local NIMS Type 4, and Type 5 events. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: Department approval is required. Contact the Fire Technology Program advisor at 517-483-1394. In order to get credit for this class, the student must show proof of Blue Card Certificate.

2024-2025 Course Descriptions

FIRE 270 Fire Service Career Developmnt Credit Hours: 3 / Billing Hours: 3

This course prepares the student for entry into the fire service workplace. Student will learn new processes of organizational operations and professional development skills. Students will complete 108 hrs of internship with a previously screened agency. The required Associate Degree assessment will be administered in this course. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Recommended: Completion of all other required courses in curriculum.
- Course Note: Department approval required. Contact the Fire Technology Program advisor at 517-483-1394.

FIRE 280 Fire Directed Indep Study Credit Hours: 0.5 to 3 / Billing Hours: 0.5 to 6

This course includes special research, projects, or directed study in fire science technology. Firefighting students may enroll to update or enhance knowledge, skills, and competencies. Advanced students may explore topics related to, but not included in the curriculum. A learning contract specifying objectives, activities, and outcomes is required. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: Department approval required. Contact the Fire Technology Program advisor at 517-483-1394.

FREN 121 Elementary French I Credit Hours: 4 / Billing Hours: 4

First course of a two-semester sequence in elementary French. Students are introduced to basic structures of French, enabling them to develop listening, speaking, reading, and writing skills. Emphasis is on contemporary vocabulary, essentials of grammar, and pronunciation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

2024-2025 Course Descriptions

FREN 122 Elementary French II

Credit Hours: 4 / Billing Hours: 4

Second course of a two-semester sequence in elementary French. Introduction to more complex structures and patterns, and more active use of spoken and written French. (Offered Spring, Summer)

- Prerequisite Course: Minimum 2.0 in FREN 121 or equivalent.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

FREN 201 Intermediate French I

Credit Hours: 4 / Billing Hours: 4

First course of a two-semester sequence in intermediate French. Course provides grammar review, vocabulary building, listening comprehension, composition writing, group discussions, and readings of literary and cultural texts, short stories, and news articles for a better understanding of the Francophone world. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in FREN 122 or equivalent.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

FREN 202 Intermediate French II

Credit Hours: 4 / Billing Hours: 4

Second course of a two-semester sequence in intermediate French. Course includes a review of more complex grammar topics, readings of cultural and literary texts, short stories, and newspaper articles for a better understanding of the Francophone world. Students will improve fluency through listening-comprehension, writing, and discussions in the target language. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in FREN 201 or equivalent.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

2024-2025 Course Descriptions

GEOG 120 Introduction to Geography

Credit Hours: 3 / Billing Hours: 3

An introductory course designed to provide contemporary geographic ideas and mapping techniques to study the interaction between people and their physical environment. Selected topics include soils, land forms, water, climate, natural vegetation, agriculture, urbanization, demographic patterns and resource utilization. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently) and [Math Level 4 or Minimum 2.0 in (Math 105 or Math 106) or P in (NCMA 106 or NCMA
- Recommended: ENGL 121.

GEOG 200 World Regional Geography

Credit Hours: 4 / Billing Hours: 4

This course describes and analyzes human relationships with the natural and cultural environment and examines the physical and cultural aspects of the major regions of the world. International interdependency is examined to promote global awareness. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

GEOG 202 Geography of North America

Credit Hours: 3 / Billing Hours: 3

A study of the cultural and physical aspects of North America. This course will identify some of the factors that influence the quality of life and give character to each of the various subregions. (Offered Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

2024-2025 Course Descriptions

GEOG 220 Weather, Forecasting & Climate

Credit Hours: 4 / Billing Hours: 4

Introduces the meteorological and climatological sciences. The basics and the limitations of weather forecasting, as well as climatic data, will be examined. Concepts presented include cloud and precipitation types, cyclonic characteristics, computer guidance analysis, and the importance of physical geography in weather and climate. No science background is presumed. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and (Math Level 4 or minimum 2.0 in [MATH 105 or MATH 106] or P in [NCMA 106 or NCMA 110]).

GEOG 221 Physical Geography

Credit Hours: 4 / Billing Hours: 4

Emphasizes landforms, flora and fauna, weather and climatic elements, land forms, mass wasting, hydrology, and soils. Offers an extensive study of these forces and phenomena through lecture and laboratory exercises. This study notes the environmental and ecological interrelationships between flora and fauna, and between the physical world and human society. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

GEOL 221 Physical Geology

Credit Hours: 4 / Billing Hours: 6

This course investigates the dynamic physical earth using a cause-effect theme, and emphasizes relationships of geologic cycles (tectonic/hydrologic) to modifications of earth's crust (e.g., volcanism, mountain building, rivers, glaciers) with introduction to environmental topics and earth resources. Laboratory includes mineral and rock identification, topographic and geologic map interpretation, and plate tectonics exercises. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or (MATH 105 concurrently or MATH 106 concurrently) or (NCMA 106 concurrently or NCMA 110 concurrently)].

2024-2025 Course Descriptions

GEOL 222 Historical Geology

Credit Hours: 4 / Billing Hours: 6

Plate tectonics is used to integrate crustal and organic evolution in the dynamic global system. Includes methods of geologic inquiry and critical evaluation of evidence. Laboratory stresses interpretation of the rock and fossil records, reconstruction of past ecosystems, geologic maps, and plate tectonics' influence on the environment. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in [GEOL 221 or GEOL 230 or (ISCI 121 and ISCI 122)].
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

GEOL 230 Environmental Geology

Credit Hours: 4 / Billing Hours: 6

Concepts of physical geology are applied to human interaction with the environment. Geologic resources (e.g., minerals, energy, and water) and hazards (e.g., earthquakes, landslides, and flooding) are explored. Laboratory includes rock and mineral identification, map reading and interpretation, evaluation of land use alternatives, and problem-solving activities related to environmental issues. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or (MATH 105 concurrently or MATH 106 concurrently) or (NCMA 106 concurrently or NCMA 110 concurrently)].

GERO 100 Introduction to Human Aging

Credit Hours: 4 / Billing Hours: 4

This course provides students with a basic orientation to the study of aging. Emphasis is placed on the psychosocial, cultural, and individual issues which impact aging persons, their families, community, and society. Students will learn to identify and utilize resources across the human services network. This course complies with the Gerontology Competencies, Academy for Gerontology in Higher Education (AGHE). (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

GERO 164 Med & Alcohol Use/Older Adults Credit Hours: 0.5 / Billing Hours: 0

Medication and alcohol use among older adults is explored in this seminar, including prescription and non-prescription medicines, side effects, drug interactions, and strategies for using medicines wisely. Participants will learn to identify a substance-abuse situation and how to make appropriate referrals. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.

GERO 169 Legal Rights of Older Adults Credit Hours: 0.5 / Billing Hours: 0

This course focuses on issues such as guardianship, conservatorship, power of attorney, advance care directives, and nursing home residency, including actual and perceived choices the individual has as aging and illness occur. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.

GERO 191 Special Topics in Gerontology Credit Hours: 0.25 to 4 / Billing Hours: 0

This course consists of a series of seminars which address current issues in the field of gerontology. The seminars are designed to provide up-to-date information on selected, high-interest subjects concerning human aging. (Offered As Needed)

- Prerequisite Course: Determined by Section.
- Placement Score: None.

GRMN 121 Elementary German I Credit Hours: 4 / Billing Hours: 4

This is the first course of a two-semester sequence in elementary German for students who have no or little knowledge of German. Students are introduced to the basic structures of German, enabling them to develop listening, speaking, reading, and writing skills. Emphasis is on practical vocabulary, essentials of grammar, basic pronunciation, and contemporary culture. This course helps beginner German students develop effective language learning strategies. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

2024-2025 Course Descriptions

GRMN 122 Elementary German II

Credit Hours: 4 / Billing Hours: 4

This is the second course of a two-semester sequence in elementary German. Students are introduced to more advanced structures of German, enabling them to further practice listening, speaking, reading, and writing skills. Emphasis is on practical vocabulary, contemporary culture, and essentials of grammar and pronunciation. This course helps novice German students develop effective language learning strategies. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in GRMN 121 or equivalent.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

GRMN 201 Intermediate German I

Credit Hours: 4 / Billing Hours: 4

This is the first course of a two-semester sequence in intermediate German. This course reviews and introduces more advanced grammar structures, composition, vocabulary building, group discussions, and more information on German culture and everyday life. Class is taught mainly in German. This course helps intermediate German students develop effective language learning strategies. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in GRMN 122 or equivalent.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

GRMN 202 Intermediate German II

Credit Hours: 4 / Billing Hours: 4

This is the second course of a two-semester sequence in intermediate German. This course reviews and introduces more advanced grammar structures, composition, vocabulary building, group discussions, and more information on German culture and everyday life. Class is taught mainly in German. This course helps intermediate German students to continue to develop effective language learning strategies. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in GRMN 201 or equivalent.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

2024-2025 Course Descriptions

GSCI 100 Intro to Geospatial Tech

Credit Hours: 3 / Billing Hours: 3

This entry level course explores the fundamental concepts underlying all geographic information systems. These concepts will be demonstrated by examining how GIS is used in planning, law enforcement, medicine, asset management, transportation and other fields. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.

GSCI 110 Beginning ArcGIS

Credit Hours: 3 / Billing Hours: 5

This course is an introduction in the use of ArcGIS software. ArcGIS is a leading product used in the design of Geographic Information Systems (GIS). Students will learn the basic functionality of this software and its application in real-world scenarios. GIS principles will also be covered. Students will conceptualize, design and present a final project. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

GSCI 120 Advanced ArcGIS

Credit Hours: 3 / Billing Hours: 5

This course will build on the fundamentals learned in GSCI 110. Students will use ArcGIS tools and processing to complete a series of assigned projects. Students will learn modeling and analysis techniques using a variety of vector and raster datasets. Students will conceptualize, design, implement and present a final project. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in GSCI 110 (formerly GRET 110).
- Placement Score: Reading Level 3 and Math Level 4.

2024-2025 Course Descriptions

GSCI 150 Drone Flight for Industry

Credit Hours: 3 / Billing Hours: 4

This course covers the foundations of unmanned aircraft systems, including history, UAS systems, payloads, classes of UAS systems, applications, mission planning and control and recovery systems. A wide variety of industry-specific uses will be presented. Students will demonstrate knowledge through hands-on drone use. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 4.
- Corequisite Course: AVAU 100.

GSCI 210 Global Positioning Systems

Credit Hours: 3 / Billing Hours: 4

This course covers the basic principles necessary to set up, operate, and run a Global Positioning System (GPS) receiving station, as well as collect information with a receiver. Data collection will be incorporated into a computer database program. The information link with Geographic Information Systems (GIS) and the use of GPS in GIS will be demonstrated. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.

GSCI 240 Cartography in GIS

Credit Hours: 3 / Billing Hours: 4

The basic principles, functions, and origins of maps will be discussed. The student will construct various types of maps. Computer-offered map planning and design along with how to read, print, and design maps will also be covered. (Offered Spring).

- Prerequisite Course: Minimum 2.0 in (GSCI 110 or concurrently (formerly GRET 110)).
- Placement Score: Reading Level 3 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

GSCI 241 Remote Sens/AirPhoto Interpret Credit Hours: 3 / Billing Hours: 4

This course will include the development of skills necessary for basic interpretation of aerial photography data, how it is collected, and the ability to analyze maps created from the data collected in this method. The current technology and GIS relationship will be highlighted.

(Offered Spring)

- Prerequisite Course: Minimum 2.0 in GSCI 110 (formerly GRET 110).
- Placement Score: Reading Level 3 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

GSCI 250 Drone Map Analysis Credit Hours: 3 / Billing Hours: 4

This class introduces the fundamentals of map data collection with UAS (drones), including concepts, real-world examples, navigation, best practices, data acquisition, mission assessment, data processing, event coverage, and map delivery. Students will demonstrate knowledge through hands-on drone use. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in GSCI 150.
- Placement Score: Reading Level 5 and Math Level 4.

GSCI 260 Automating Workflows in GIS Credit Hours: 3 / Billing Hours: 4

This course will explore a variety of ways to automate workflows in ArcGIS software. In addition to using "batch" functionality in ArcGIS software, the student will be exposed to Model Builder and creating Python scripts. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in GSCI 110 (formerly GRET 110).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

GSCI 264 Web GIS

Credit Hours: 3 / Billing Hours: 4

This course will explore a variety of ways to migrate GIS maps and data to the internet for public viewing and sharing. Technologies include Web maps, HTML, CSS & JavaScript code, Mobile technology, and ArcGIS Online. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in GSCI 110 (formerly GRET 110).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

GSCI 271 Parcel Mapping

Credit Hours: 3 / Billing Hours: 5

This course will teach students how to interpret and produce ownership parcels based on legal descriptions in a GIS environment. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in GSCI 110 (formerly GRET 110).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

GSCI 275 GIS Proj Mgmt & Implementation

Credit Hours: 3 / Billing Hours: 4

This is a capstone course designed for students to develop the skills necessary for the design and implementation of GIS. The student will present their project to a client and train the client in the system that they developed. The student will also develop skills in project management and system documentation. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
-

GSCI 290 GIS Internship

Credit Hours: 2 to 4 / Billing Hours: 2 to 4

This course provides Geospatial Science students with practical work experience in industry. Students work for an employer in a supervised environment which provides an opportunity to apply knowledge and skills learned in the classroom and lab to an actual job situation. (Offered Fall, Spring, Summer)

- Prerequisite Course: Department Approval.

2024-2025 Course Descriptions

HERT 110 Equipment Introduction

Credit Hours: 5 / Billing Hours: 5

This course is intended to give the student an overall review of legal and work responsibilities of an operator of heavy construction equipment. Safety, inspections, and familiarization of equipment and operation standards for all major pieces of equipment will be stressed. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.

HERT 120 Heavy Engine Rebuild

Credit Hours: 6 / Billing Hours: 6

Upon completion of this course, the successful student will be able to disassemble, inspect, and reassemble a heavy-duty diesel engine. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.

HERT 125 Heavy Equipment Electronics

Credit Hours: 5 / Billing Hours: 5

Upon completion of this course the successful student will be able to diagnose and repair electrical problems on heavy duty equipment. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None.

HERT 130 Equipment Hydraulics

Credit Hours: 6 / Billing Hours: 6

Upon completion of this course the successful student will be able to diagnose and repair hydraulic problems found typically on heavy duty construction equipment. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.

HERT 135 Diesel Fuel Systems

Credit Hours: 4 / Billing Hours: 4

Upon completion of this course, the successful student will be able to diagnose and repair common fuel system failures found on heavy-duty diesel engines. (Offered Summer)

- Prerequisite Course: None.
- Placement Score: None.

2024-2025 Course Descriptions

HERT 140 Equipment Powertrain

Credit Hours: 5 / Billing Hours: 5

Upon completion of this course, the successful student will be able to identify and inspect and disassemble and assemble and repair powertrain components in heavy duty equipment.
(Offered Spring)

- Prerequisite Course: None.
- Placement Score: None.

HERT 145 Equipment Service Writing

Credit Hours: 4 / Billing Hours: 4

Upon completion the student will be able to make repair estimates on a disabled piece of construction equipment. (Offered Summer)

- Prerequisite Course: None.
- Placement Score: None.

HERT 160 Equipment HVAC/Cab Controls

Credit Hours: 4 / Billing Hours: 6

This course prepares students for ASE, State of Michigan, and EPA Section 609 certification testing. Topics include theory and operation, maintenance, diagnosis, inspection, and repair of automobile and heavy equipment heating, ventilation, and air conditioning systems. Students will practice the use of special tools and procedures related to refrigerant handling, recovery, recycling, and diagnosis. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (HERT 110, HERT 120, and HERT 125).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.

HERT 210 Heavy Equipment Internship

Credit Hours: 3 / Billing Hours: 3

Students earn credits while employed performing duties associated with the heavy equipment operator or repair technician occupations. The student will work under the general supervision of an experienced equipment operator or repair technician and will learn current industry practices. The program coordinator must approve the training station and working conditions.
(Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

HIST 150 African-American History

Credit Hours: 4 / Billing Hours: 4

This course will provide an overview of the African-American experience in the United States, from the arrival of the first Africans in the New World to the present. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

HIST 210 Historical Methods and Skills

Credit Hours: 4 / Billing Hours: 4

Covers problems of research, writing, philosophy, and interpretation of history, involving a detailed examination of a particular area of American history. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (HIST 211 or HIST 212).
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: This course is intended to be the capstone course for History majors.

HIST 211 U.S. History to 1877

Credit Hours: 4 / Billing Hours: 4

A political, economic, social and cultural history of the United States from colonial beginnings to 1877. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

HIST 212 U.S. History: 1877 to Present

Credit Hours: 4 / Billing Hours: 4

A political, economic, social, and cultural history of the United States from the end of reconstruction to the present. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

HIST 214 African History

Credit Hours: 4 / Billing Hours: 4

Surveys African history with emphasis on pre-colonial and colonial Africa, nationalism and the struggle for independence, colonialism and economic development/underdevelopment, and cultures and traditions as factors in development. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ENGL 121 or ENGL 131.

HIST 215 World History to 1500

Credit Hours: 4 / Billing Hours: 4

This course will trace human civilizations from their origins to 1500 by exploring their cultural, social, religious, economic, and political developments and interactions. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

HIST 216 World History since 1500

Credit Hours: 4 / Billing Hours: 4

This course will trace the development of the modern world from 1500 by exploring cultural, social, religious, economic, and political developments and interactions that shape modern societies. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

HIST 220 Michigan History

Credit Hours: 4 / Billing Hours: 4

A survey of the political, economic, and social development of Michigan from precolonial times to the present. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ENGL 121 or ENGL 131.

2024-2025 Course Descriptions

HIST 235 Modern European History

Credit Hours: 4 / Billing Hours: 4

This course will survey political, social, economic, and cultural developments in Europe from approximately the 17th Century to the present. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

HIST 240 Latin American History

Credit Hours: 4 / Billing Hours: 4

A survey of the history and culture of Latin America from pre-Columbian civilizations to the present. This course will examine political, social, and cultural developments in Latin America and assess the role of colonialism, nationalism, and world economic trends in shaping Latin American countries. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

HIST 250 History of Modern Asia

Credit Hours: 4 / Billing Hours: 4

This course will survey political, social, and economic developments as well as principal cultural trends in the major civilizations of Asia from approximately the 17th Century to the present. The course will also include an examination of the interactions among Asian societies and between Asia and the West. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

HIST 295 Independent Study in History **1 to 4**

Credit Hours: 1 to 4 / Billing Hours:

An opportunity for self-directed learners to explore topics related to, but not taught in the curriculum. Students spend at least two hours per week for each credit. A detailed proposal must be submitted by the student for approval by the Department and supervising instructor prior to registration. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None; Department approval required.

2024-2025 Course Descriptions

HONR 151 Honors Colloquy I

Credit Hours: 1 / Billing Hours: 1

Interdisciplinary forum for Honors Program members and other interested students. Includes presentations by experts in such fields as the arts, business, communication, education, humanities, government, mathematics, science, and the social sciences, followed by discussion. Topics concerning international issues, diversity, and technology are often featured. Students write essays reacting to each presentation. (Offered Fall)

- Prerequisite Course: None; Honors Program approval required.
- Placement Score: None.

HONR 152 Honors Colloquy II

Credit Hours: 1 / Billing Hours: 1

Interdisciplinary forum for Honors Program members and other interested students. Includes presentations by experts in such fields as the arts, business, communication, education, humanities, government, mathematics, science, and the social sciences, followed by discussion. Topics concerning international issues, diversity, and technology are often featured. Students write three substantive research papers. (Offered Fall)

- Prerequisite Course: None; Honors Program approval required.
- Placement Score: None.

HONR 155 Community Service Practicum I

Credit Hours: 1 / Billing Hours: 1

A practicum course for freshman students requiring a minimum of 32 hours of volunteer service with a community agency of the student's choice and attendance at three classroom discussion sessions. Students will develop practical skills and evaluate their service in terms of its relevance to the community and their educational, career, and life goals. (Offered Spring)

- Prerequisite Course: None; Honors Program approval required.
- Placement Score: None.

HONR 156 Community Service Practicum II

Credit Hours: 1 / Billing Hours: 1

A practicum course for sophomore students requiring a minimum of 32 hours of volunteer service with a community agency of the student's choice and attendance at three classroom discussion sessions. Students will develop practical skills and evaluate their service in terms of its relevance to the community and their educational, career, and life goals. (Offered Spring)

- Prerequisite Course: None; Honors Program approval required.
- Placement Score: None.

2024-2025 Course Descriptions

HONR 295 Honors Independent Study Credit Hours: 1 to 4 / Billing Hours: 1 to 4

An opportunity for self-directed learners to explore topics related to, but not taught in the curriculum. Students spend at least two hours per week on course work. A detailed proposal must be submitted by the student for approval by the Honors Program Director and supervising instructor prior to registration. (Offered Fall, Spring, Summer)

- Prerequisite Course: None; Honors Program approval required.
- Placement Score: None.

HSAC 090 ERESA Heating & Air Cond Credit Hours: 8 / Billing Hours: 0

This course for ERESA students is an introduction into basic electricity, heating, air conditioning, and sheet metal as it pertains to residential HVAC equipment installation and service. Students are enrolled both fall and spring semesters. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSAH 080 CCRESA PreAllied Hlth Car Prep Credit Hours: 8 / Billing Hours: 0

This course for CCRESA students is designed to present and explore basic concepts of biologic and physical sciences, medical terminology, introductory pathology, and fundamentals of human interactions necessary to pursue training as health care professionals. Students are enrolled in both fall and spring semesters. (Offered Fall, Spring)

- Prerequisite Course: CCRESA Student.

HSAH 090 ERESA Health Occupations I Credit Hours: 8 / Billing Hours: 0

This course for ERESA students provides an overview of the health care industry, including medical ethics, trends in health care, and exploration of career options. It includes instruction in medical terminology as well as an introduction to anatomy and physiology, vital signs measurement, math used for conversions, and universal precautions/blood borne pathogen training. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

2024-2025 Course Descriptions

HSAH 092 ERESA Health Occupations II

Credit Hours: 8 / Billing Hours: 0

This second year course for ERESA students will teach acute care and rehabilitation knowledge and skills needed to deliver quality basic patient care as a nurse aide/patient care technician. This builds on the long-term care knowledge and skills already learned in the first year course. Students will also be given foundational instruction in medical terminology and will be introduced to the Electronic Health Record and its impact on health-career-related job responsibilities. Hands-on EHR experience is included. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSAM 080 CCRESA Auto Service

Credit Hours: 8 / Billing Hours: 0

This course for CRESSA students covers the four National Institute for Automotive Service Excellence requirements for training in brakes, suspension and steering, electrical, and tune-up/driveability. In addition, students will learn basic shop procedures as outlined in AUTO100 and basic training in engine overhaul. Students are enrolled both fall and spring semesters. (Offered Fall, Spring)

- Prerequisite Course: CRESSA Student.

HSAM 090 ERESA Auto Mechanics

Credit Hours: 8 / Billing Hours: 0

This course for ERESA students covers the four National Institute for Automotive Service Excellence requirements for training in brakes, suspension and steering, electrical, and tune-up/driveability. In addition, students will learn basic shop procedures as outlined in AUTO100 and basic training in engine overhaul. Students are enrolled both fall and spring semesters. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSAM 091 ERESA Automotive Technology II

Credit Hours: 8 / Billing Hours: 0

This course for ERESA students covers the four National Institute for Automotive Service Excellence requirements for training in brakes, suspension and steering, electrical, and tune-up/driveability with an emphasis on steering and suspension systems. In addition, students will learn basic shop procedures as outlined in AUTO100 and basic training in engine overhaul. Students are enrolled both fall and spring semesters. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

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Online courses may require students to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) for proctored exams. For more information, please visit the [Testing Services webpage](#).

2024-2025 Course Descriptions

HSAT 090 ERESA Architectural Drafting

Credit Hours: 8 / Billing Hours: 0

This ERESA course focuses on residential architecture. Students will learn board drafting techniques, wall section components and building materials, and drafting conventions. Residential design and planning as well as model building methods will be studied and computer aided drafting (CAD) software will be used throughout the year. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSBT 090 ERESA Building Trades

Credit Hours: 6 / Billing Hours: 0

This course teaches the basic skills needed to build a house including reading and interpreting architectural drawings, preparing the building site, introduction to and use of power tools, residential framing, interior carpentry, measuring, and applied mathematics. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSCJ 090 ERESA Crim Justc/Public Svc I

Credit Hours: 8 / Billing Hours: 0

This course is designed for ERESA students to explore the basic concepts and potential career opportunities in Criminal Justice. The course provides instruction in the area of law enforcement, the courts, and corrections. Students are enrolled both fall and spring semesters to meet all course objectives. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSCJ 092 ERESA Crim Just/Law Enforce II

Credit Hours: 8 / Billing Hours: 0

This course is for second year ERESA students to expand on the basic concepts and potential career opportunities in Criminal Justice learned in the first year of this program. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

2024-2025 Course Descriptions

HSCS 080 CCRESA Computer Support I

Credit Hours: 8 / Billing Hours: 0

Security I first-year courses provide early middle college bound high school students with the foundational skills needed to enter into Security II second-year courses. These courses follow the Lansing Community College, Computer Networking Technology Associate in Business Degree. (Offered Fall, Spring)

- Prerequisite Course: CCRESA Student.

H SCT 090 ERESA Construction Technology

Credit Hours: 8 / Billing Hours: 0

This program provides an overview of the construction industry by presenting information in several related areas. Students will learn about construction safety, framing and foundation techniques; such as framing wall and floor systems, interior and exterior walls, ceilings, roofs and stairs. This includes material takeoffs and installation practices. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSDM 090 ERESA Design and Machining

Credit Hours: 8 / Billing Hours: 0

This course will provide students with hands-on laboratory projects, career based education, and industrial skill sets needed in design and manufacturing. Career opportunities include Machine Tool Operations, CNC Programming and Operations, and Skilled Maintenance. Students will also have the opportunity to earn First Aid and CPR/AED certifications. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSDM 091 ERESA Advanced Manufacturing

Credit Hours: 8 / Billing Hours: 0

This course is the drafting/CAD portion of the ERESA Design and Machining course. Combined with the machining course, HSDM 092, students will perform hands-on laboratory projects, career based education, and industrial skill sets needed in design and manufacturing. Career opportunities include Machine Tool Operations, CNC Programming and Operations, and Skilled Maintenance. Students will also have the opportunity to earn First Aid and CPR/AED certifications. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

2024-2025 Course Descriptions

HSDM 092 ERESA Machine Tool Operations Credit Hours: 2 / Billing Hours: 0

This course is the machine tool operations portion of the ERESA Design and Machining course. Combined with the drafting/CAD course, HSDM 091, students will perform hands-on laboratory projects, career based education, and industrial skill sets needed in design and manufacturing. Career opportunities include Machine Tool Operations, CNC Programming and Operations, and Skilled Maintenance. Students will also have the opportunity to earn First Aid and CPR/AED certifications. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSDT 090 ERESA Industrial Drafting Credit Hours: 8 / Billing Hours: 0

This course for ERESA students is centered around basic concepts of orthographic projection, sketching, lettering techniques and dimensioning. Emphasis will shift to more detailed work with orthographic projection, sections and auxiliary views, and preparation of welding or fabrication type drawings. Students are enrolled both fall and spring semesters. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSKN 090 ERESA Sports Med Foundations Credit Hours: 8 / Billing Hours: 0

This course introduces ERESA students to various careers in the field of Kinesiology, with emphasis on athletic training. Students will learn techniques for assessment, treatment, and rehabilitation of athletic injuries; lifestyles skills that lead to better health and fitness; and will be certified in CPR. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSLE 090 ERESA Law Enforcement Credit Hours: 8 / Billing Hours: 0

This course is designed for ERESA students to explore the basic concepts and potential career opportunities in Law Enforcement. The course provides instruction in the areas of law enforcement, such as theory of patrol, community policing, and CPR for health care professionals. Students are enrolled both fall and spring semesters to meet all course objectives for a total of 9.5 credits for the school year. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

2024-2025 Course Descriptions

HSMA 090 ERESA Mechatronics/Automation

Credit Hours: 8 / Billing Hours: 0

After an introduction to industrial workplace safety, including the ability to earn First Aid and CPR/AED certifications, students will focus on the installation and repair of electrical, hydraulic, pneumatic and digital controls that operate automated mechanical and robotic systems. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSMT 090 ERESA Manufacturing Tech

Credit Hours: 1.5 / Billing Hours: 0

This course for ERESA students is centered around basic concepts of manufacturing technology which are learned through a series of lectures, demonstrations, and manufacturing projects. Students are enrolled during both fall and spring semesters to meet all course objectives for a total of 12 credits for the school year. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSWD 090 ERESA Comp Graphic/Web Dsgn

Credit Hours: 8 / Billing Hours: 0

An introduction to manipulation of photographic images and generation of images on the computer using design principles for the creation of effective presentations for the web with rich media content. Students will learn the entire process from concept to design and storyboarding, to structure, preparation, production, and programming. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HSWT 090 ERESA Welding/Cutting

Credit Hours: 8 / Billing Hours: 0

This course is for ERESA students interested in the industrial trades. Students will learn the basics of oxy-fuel welding and cutting, advanced arc welding, and gas metal arc welding through lectures and hands-on experience. Students are enrolled both fall and spring semesters to meet all course objectives for a total of 12 credits for the school year. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

2024-2025 Course Descriptions

HSWT 092 ERESA Welding/Cutting II

Credit Hours: 8 / Billing Hours: 0

This course is for ERESA students interested in the industrial trades. Students will learn the basics of shielded metal arc welding and gas tungsten arc welding through lectures and hands-on experience. Students are enrolled both fall and spring semesters to meet all course objectives for a total of 12 credits for the school year. (Offered Fall, Spring)

- Prerequisite Course: ERESA Student.

HUMS 140 Art of Being Human

Credit Hours: 4 / Billing Hours: 4

This course analyzes the human experience through the stages of life within historical and global frameworks. With consideration given to creative traditions, topics are chosen to encourage a student's appreciation of common human themes and values across diverse cultures in order to understand what it means to be human, as well as promote self-discovery and personal creativity. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

HUMS 160 Mythology

Credit Hours: 4 / Billing Hours: 4

Students will analyze a variety of mythological works, in text and other forms, from multiple regions of the world such as Africa, the Americas, Asia, and Europe. The student will apply knowledge of The Hero's Journey and the basic functions of myth to enhance their appreciation of primary sources, individually and culturally. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ENGL 121 or ENGL 131.

HUMS 213 World Civilizations to 1600

Credit Hours: 4 / Billing Hours: 4

Surveys the literature and art, science and technology, and the social and political systems of major civilizations in Africa, Asia, Europe, and the Americas to approximately the 17th century. Emphasizes the contributions of early civilizations to the creativity, richness, and diversity of the human condition. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

HUMS 215 American Cultural Experience

Credit Hours: 4 / Billing Hours: 4

This course will explore the cultural foundations of the United States from the period of exploration to the present. This is an interdisciplinary course which examines central themes of American culture and their representation in history, literature, art, philosophy, and religion. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

HUMS 223 The Western World to 1500

Credit Hours: 4 / Billing Hours: 4

The course introduces students to the artistic, intellectual, and technological developments that shaped the western worldview to 1500. The creativity, richness, and diversity of western culture and connections between people and places will be emphasized. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

HUMS 224 The Western World since 1500

Credit Hours: 4 / Billing Hours: 4

The course introduces students to the artistic, intellectual, and technological developments that shaped the western worldview from 1500 to present. The creativity, richness, and diversity of western culture and connections between people and places will be emphasized. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

HUMS 260 Ancient Egypt

Credit Hours: 4 / Billing Hours: 4

This course explores developments in Egyptian art and architecture, religion and kingship. Pyramids, tombs, hieroglyphs and the land of Egypt are emphasized. Great discoveries and discoverers in archaeology past and present are also featured. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ENGL 121 or ENGL 131.

2024-2025 Course Descriptions

HUSE 100 Introduction to Human Services

Credit Hours: 3 / Billing Hours: 3

This course presents an overview of human services evolution that impact social welfare policies on services provided and the populations served. Emphasis is on community, clients, trends, ethics, and skills used in diverse settings. The approach is generalist in nature. This course complies with the Ethical Standards, National Organization of Human Services. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.

HUSE 105 Personal Dynamics/Interviewing

Credit Hours: 4 / Billing Hours: 4

The nature of personal development, knowledge and values are taught. The course integrates diversity issues with the demonstration of the knowledge, skills, and values of the "helping interview" through structured exercises and role playing. This course complies with the Ethical Standards of the National Organization of Human Services. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.
- Recommended: Minimum 2.5 in (HUSE 100 or SOWK 101).

HUSE 110 Child Abuse and Neglect

Credit Hours: 3 / Billing Hours: 3

This course reviews the history and scope of child abuse and neglect, including socioeconomic and psychological factors. It explores the world of abnormal rearing, roles of community agencies and disciplines, approaches to treatment and prevention, coordination of cases and services, and legal aspects and the law. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.
- Recommended: Minimum 2.5 in HUSE 105.

2024-2025 Course Descriptions

HUSE 242 The Family: Addiction/Violence

Credit Hours: 3 / Billing Hours: 3

This course provides a holistic conceptual framework to understanding the interplay of substance misuse with violence across the family life cycle. Attention is brought to the many factors of substance misuse and violence. Assessment, intervention, the role of treatment, and broad-spectrum human services are discussed. This course complies with the Ethical Standards, National Organization of Human Services. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.
- Recommended: Minimum 2.5 in [(HUSE 100 or SOWK 101) and HUSE 112].

HUSE 282 Human Services Practicum I

Credit Hours: 4 / Billing Hours: 4

This course combines classroom training with beginning field experience in a community agency, with exposure to community structure and the internal working of human services organizations. Emphasis is on the development of professional skills while adhering to professional ethics and standards. This course complies with the Ethical Standards, National Organization of Human Services. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (GERO 100 and HUSE 100 and HUSE 105 and HUSE 242 and Specialization Courses) and Minimum 2.0 in ENGL 121. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

HUSE 284 Human Services Practicum II

Credit Hours: 4 / Billing Hours: 4

This course combines classroom training with advanced field experience in a community agency, emphasizing communications in diverse settings with diverse populations. Analysis of services identifies systems, people, and resources to provide quality services. Potential careers are discussed. This course complies with the Ethical Standards, National Organization of Human Services. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in HUSE 282. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

HVAC 100 Fundamentals of HVAC

Credit Hours: 3 / Billing Hours: 3

This course is an introduction to the mechanical refrigeration cycle and its individual components. Compressors, evaporators, condensers and metering devices as well as their functions are covered in detail. Exercises in psychrometrics and an introduction to system design are also covered. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2.
- Course Note: \$4 of the Course Fee is non-refundable.

HVAC 110 Applied Electricity I

Credit Hours: 3 / Billing Hours: 4

An introduction to basic electricity (AC and DC) using both theory and applied study methods. Topics will include electrical components, symbols, basic schematic diagrams, Ohm's Law applied to series and parallel circuits and motor types and usages. In conjunction with lab exercises, meters and their proper usage will be covered. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (HVAC 102 or DCTM 102 or ELTE 102 or METS 102 or TECH 102 or WELD 102) or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: \$4 of the Course Fee is non-refundable.

HVAC 111 Applied Electricity II

Credit Hours: 3 / Billing Hours: 4

The study of motors with an emphasis on theory, troubleshooting and servicing. Motor controls, control circuits, protection devices and discussion of energy conservation as related to motors will be covered in detail. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (HVAC 100 and HVAC 110).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$4 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

HVAC 113 HVAC/R Piping

Credit Hours: 3 / Billing Hours: 4

This course is designed to teach students about the common types of pipes used in the HVAC/R industry. Topics will include safety, tools and fasteners, common types of pipe, pipe joints, pipe-fittings, and general guidelines for working with pipe and tubing. Hands-on experience with piping is included. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (HVAC 102 or DCTM 102 or ELTE 102 or METS 102 or TECH 102 or WELD 102 or concurrently).
- Placement Score: Reading Level 3 and Writing Level 2.
- Course Note: \$5 of the Course Fee is non-refundable.

HVAC 115 Sheet Metal Fab & Installation

Credit Hours: 2 / Billing Hours: 3

Designed to aid the installer in the skills and techniques for the proper duct sizing, layout, and installation of a residential air distribution system. Topics include sheet metal layout, identification of sheet metal fittings, and their use. Safe and proper use of tools and equipment used in the trade. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (HVAC 102 or DCTM 102 or ELTE 102 or METS 102 or TECH 102 or WELD 102) or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: \$4 of the Course Fee is non-refundable.

HVAC 120 Heating I

Credit Hours: 3 / Billing Hours: 4

This course covers basic construction and function of components in residential gas and oil fired furnaces with detail on theory, application, troubleshooting, and servicing standard heating systems. Installation procedures and codes are also covered. Additional equipment studied will include humidifiers, air cleaners and vent dampers. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (HVAC 100 and HVAC 110).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$4 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

HVAC 130 Air Conditioning I

Credit Hours: 3 / Billing Hours: 4

This course covers the fundamentals and principles of residential air conditioning systems. Students will learn soldering and brazing of tubing, wiring, component testing, evacuation procedures, charging and maintenance of both split systems, as well as small packaged units. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (HVAC 100 and HVAC 110).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$34 of the Course Fee is non-refundable.

HVAC 140 Residential Energy

Credit Hours: 3 / Billing Hours: 4

The focus of this course will be on the history of traditional energy sources and reasons why government, business, and industry are turning to alternative and renewable energy sources. Topics include how to reduce fossil fuel usage and how to convert from traditional energy sources to alternative and renewable energy sources. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

HVAC 201 Mechanical Code

Credit Hours: 4 / Billing Hours: 4

A fundamental course designed to acquaint the student with the methods and techniques used in field inspection of mechanical systems. The Michigan Mechanical Code and excerpts from the International Fuel Gas Code and Michigan Residential Code will be discussed. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (HVAC 120 and HVAC 130).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$6 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

HVAC 210 Solar Energy Technologies

Credit Hours: 3 / Billing Hours: 4

This course will cover the basics of solar energy generation including energy collection and storage. Solar power ranging from the heat of the day to solar electric conversion technologies will be covered including Solar Electric (Photovoltaic); Thermal; and Heating, Cooling and Lighting (Active and Passive). A brief history of solar powered energies will be included.
(Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

HVAC 220 Heating II

Credit Hours: 3 / Billing Hours: 4

This course covers the fundamentals and principles of electronic ignition systems including troubleshooting and servicing. The major emphasis is placed on high efficiency and condensing furnaces to include sequence of operation, troubleshooting, servicing, and proper installation.
(Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (HVAC 111 and HVAC 120).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$4 of the Course Fee is non-refundable.

HVAC 221 Introduction to Hydronics

Credit Hours: 3 / Billing Hours: 4

Covers hot water and steam residential heating systems, piping and all accessories, safety controls, expansion tanks, zone valves, installation procedures and codes. Students perform testing, troubleshooting, adjusting and servicing of components to insure maximum efficiency.
(Offered Fall)

- Prerequisite Course: Minimum 2.0 in HVAC 120.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$4 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

HVAC 230 Air Conditioning II

Credit Hours: 3 / Billing Hours: 4

This course covers advanced air conditioning, light commercial equipment, water cooled units, cooling towers, and the wiring of both control and line voltage circuitry. The latest in test equipment and meters will aid the student in becoming proficient in servicing and maintaining commercial equipment. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (HVAC 111 and HVAC 130).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$4 of the Course Fee is non-refundable.

HVAC 231 Heat Pump

Credit Hours: 3 / Billing Hours: 4

This course deals entirely with heat pumps (air-to-air, water-to-air) and their installation, servicing, proper application or heat pump components, and extensive wiring schematics. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in HVAC 130.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$4 of the Course Fee is non-refundable.

HVAC 240 Refrigeration I

Credit Hours: 3 / Billing Hours: 4

This course includes domestic refrigeration as applied to refrigerators, freezers and de-humidifiers. Course content includes applications, operation and servicing of sealed systems, electrical and cabinet styles. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (HVAC 230 or concurrently).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$4 of the Course Fee is non-refundable.

HVAC 241 Refrigeration II

Credit Hours: 3 / Billing Hours: 4

This course provides instruction in light commercial refrigeration to include low and medium temperature applications as applied to ice machines, walk-ins, reach-ins, and display cases. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in HVAC 240.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$4 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

HVAC 251 Fund of Direct Digital Control

Credit Hours: 3 / Billing Hours: 4

Basic fundamentals and principles of direct digital controls will be covered through demonstrations of computer basics, control strategies for computer based energy management systems, and installation components according to industry standards. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in HVAC 230 or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: \$5 of the Course Fee is non-refundable.

HVAC 260 Building Commissioning

Credit Hours: 3 / Billing Hours: 4

Students learn the step-by-step processes used to perform building commissioning, retro-commissioning, and continuous commissioning. Students will implement software programs, data analysis, and recording techniques to track system energy use. Students compare design documents from building construction or energy system installation with actual performance data. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (DCTM 103 or AEET 251) and Reading Level 5 and Writing Level 6 and Math Level 5.

HVAC 280 EPA 608 Certification Review

Credit Hours: 1 / Billing Hours: 1

This course prepares students for the EPA Section 608 Certification test which is required to work on appliances containing CFC, HCFC or HFC refrigerants. This course will not certify technicians in EPA Section 609 - Automotive Air Conditioning. Students who successfully complete the course will take the proctored EPA Section 608 Certification Test. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Recommended: HVAC 130 or HVAC field experience.
- Course Note: \$30 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

HVAC 290 HVAC Internship

Credit Hours: 2 to 4 / Billing Hours: 2 to 4

This course provides Heating, Ventilating, Air Conditioning and Refrigeration students with practical work experience in industry. Students work for an employer in a supervised environment which provides an opportunity to apply knowledge and skills learned in the classroom and lab to an actual job situation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

IDMS 150 Sonographic Directed Study

Credit Hours: 1 to 5 / Billing Hours: 1 to 8

Provides selection of content from the Diagnostic Medical Sonography curriculum to update or enhance current knowledge and skill for returning students and health care professionals. Through evaluation of previous learning, examinations, self study, and scheduling into needed lectures, labs and clinical experience, students are advanced placed or readmitted into the Diagnostic Medical Sonography program. (Offered As Needed)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: None.

IDMS 170 Intro to Ultrasound Knobology

Credit Hours: 2 / Billing Hours: 3

In this course students will learn how to safely operate ultrasound equipment, perform routine machine maintenance, and operate equipment knobology as it relates to image optimization. Scanning, and sonographic positioning and technique, will be explored. Students will learn to use appropriate ergonomics while performing an exam in order to minimize and/or prevent work-related musculoskeletal disorders. (Offered Summer)

- Prerequisite Course: None. Admission to Diagnostic Medical Sonography Program is required.
- Placement Score: Reading Level 5 and Writing Level 6.
- Corequisite Course: IDMS 200 and IDMS 270.
- Course Note: \$127 of the course fee is for medical supplies and is non-refundable.

2024-2025 Course Descriptions

IDMS 200 Sonographic Introduction

Credit Hours: 2 / Billing Hours: 2

This course is an introduction to sonography including equipment history, criteria, limitations of ultrasound, and sonographer ethics. General information is provided regarding patient preparation, history/clinical correlation, and basic nursing care specific to ultrasound. Strong emphasis is placed on terminology and abbreviations most commonly used with ultrasound. (Offered Summer)

- Prerequisite Course: None. Admission to Diagnostic Medical Sonography Program is required.
- Placement Score: Reading Level 5 and Writing Level 6.
- Corequisite Course: IDMS 170 and IDMS 270.

IDMS 201 General Sonography I: Abdomen

Credit Hours: 4 / Billing Hours: 4

This course provides the student with cross-sectional anatomy and pathology as it relates to sonographic scanning of the abdomen, abdominal vessels, thyroid, prostate, scrotum, breast, and neurosonology of the neonate. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (IDMS 170 and IDMS 200 and IDMS 270).
- Placement Score: None.
- Corequisite Course: IDMS 202 and IDMS 234 and IDMS 271 and IDMS 280.
- Course Note: \$127 of the course fee is for medical supplies and is non-refundable.

IDMS 202 OB/GYN Sonography I

Credit Hours: 4 / Billing Hours: 4

This course provides the student with cross-sectional anatomy and pathology as it relates to gynecological and obstetrical sonography. Fetal anatomy and appearance will be presented. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (IDMS 170 and IDMS 200 and IDMS 270).
- Placement Score: None.
- Corequisite Course: IDMS 201 and IDMS 234 and IDMS 271 and IDMS 280.
- Course Note: \$127 of the course fee is for medical supplies and is non-refundable.

2024-2025 Course Descriptions

IDMS 234 Sonographic Physics

Credit Hours: 2 / Billing Hours: 2

The student will study the fundamental principles of acoustical physics, how sound is produced and manipulated, and how it reacts in various mediums. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (IDMS 170 and IDMS 200 and IDMS 270).
- Placement Score: None.
- Corequisite Course: IDMS 201 and IDMS 202 and IDMS 271 and IDMS 280.

IDMS 245 Sonographic Instrumentation

Credit Hours: 2 / Billing Hours: 2

The student will be introduced to the mechanics of A-Mode, M-Mode, Doppler, and Real-time ultrasound equipment. Accessory equipment such as the camera, transducer, and cathode ray tube will be presented. Methods of quality assurance will also be presented. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (IDMS 201 and IDMS 202 and IDMS 234 and IDMS 271 and IDMS 280).
- Placement Score: None.
- Corequisite Course: IDMS 265 and IDMS 266 and IDMS 281.

IDMS 250 Vascular Technology I

Credit Hours: 6 / Billing Hours: 6

The student will study the physical principles of venous fluid dynamics and Doppler measurement analysis with its relationship to physiology and pathology, including risk factors, disease processes, correlative tests, and treatments. The student will review the circulatory system and vascular anatomy including, carotid arteries, intracranial blood vessels, upper and lower extremity veins, and penis. RDMS or RT(S) credential or graduated from an accredited ultrasound program and current sonography employment is required. (Offered Fall)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: None.
- Corequisite Course: IDMS 255.
- Course Note: \$318 of the course fee is for medical supplies and is non-refundable.

2024-2025 Course Descriptions

IDMS 251 Vascular Technology II

Credit Hours: 6 / Billing Hours: 6

The student will study arterial fluid dynamics and Doppler measurement analysis with its relationship to physiology and pathology, including risk factors, disease processes, correlative tests, and treatments. The student will review vascular anatomy including, upper and lower extremity arteries and abdominal vasculature. Bypass grafts, stents and hemodialysis access will be studied. Quality measurements and safety are reviewed. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in IDMS 250. Program Approval is required.
- Placement Score: None.
- Corequisite Course: IDMS 256.

IDMS 255 Vascular Scan Lab I

Credit Hours: 2.5 / Billing Hours: 4

Students will learn scanning and sonographic positioning as well as imaging techniques in color and spectral Doppler as related to the vascular system. Students will identify normal vascular anatomy including carotid, circle of Willis, upper and lower extremity veins and impotence testing. ARDMS or RT(S) credential or graduated from an accredited ultrasound program and current sonography employment is required. (Offered Fall)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: None.
- Corequisite Course: IDMS 250.
- Course Note: \$318 of the course fee is for medical supplies and is non-refundable.

IDMS 256 Vascular Scan Lab II

Credit Hours: 2.5 / Billing Hours: 4

Students will learn scanning and sonographic positioning as well as imaging techniques in color and spectral Doppler, plethysmography and segmental pressures as related to the vascular system. Students will identify normal vascular anatomy including, aorta, IVC, renal vasculature, portal system, upper and lower extremity arteries, and Hemodialysis grafts. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in IDMS 255. Program Approval is required.
- Placement Score: None.
- Corequisite Course: IDMS 251.

2024-2025 Course Descriptions

IDMS 265 General Sonography II

Credit Hours: 4 / Billing Hours: 4

The student will be presented with the identification of and interpretation of anatomy and pathology on sonographic exams as it relates to the abdomen, venous system, and small parts. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (IDMS 201 and IDMS 202 and IDMS 234 and IDMS 271 and IDMS 280).
- Placement Score: None.
- Corequisite Course: IDMS 245 and IDMS 266 and IDMS 281.

IDMS 266 OB/GYN Sonography II

Credit Hours: 4 / Billing Hours: 4

The student will be presented with the identification of and interpretation of anatomy and pathology on sonographic exams as it relates to the obstetric and gynecologic patient. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (IDMS 201 and IDMS 202 and IDMS 234 and IDMS 271 and IDMS 280).
- Placement Score: None.
- Corequisite Course: IDMS 245 and IDMS 265 and IDMS 281.

IDMS 270 Sonographic Positioning I

Credit Hours: 2.5 / Billing Hours: 4

Sonography students continue to learn scanning and sonographic positioning as well as imaging techniques. Normal anatomy of the abdomen including liver, biliary tree, kidneys, spleen, and pancreas will be explored. The great vessels will be introduced including the aorta, celiac axis, superior mesenteric artery, inferior vena cava and related arteries. (Offered Summer)

- Prerequisite Course: None. Admission to Diagnostic Medical Sonography Program is required.
- Placement Score: Reading Level 5 and Writing Level 6.
- Corequisite Course: IDMS 170 and IDMS 200.
- Course Note: \$127 of the course fee is for medical supplies and is non-refundable.

2024-2025 Course Descriptions

IDMS 271 Sonographic Positioning II

Credit Hours: 1.5 / Billing Hours: 2

Sonography students continue to practice sonographic positioning and scanning techniques. Normal anatomy of the abdomen including abdominal vasculature, liver and portal vein, urinary tract, biliary system, pancreas, spleen, and adrenal glands will be explored. Transabdominal and transvaginal pelvis, thyroid, scrotum, gastrointestinal tract, soft tissue, musculoskeletal, breast, non-cardiac chest, and gravida uterus will also be explored. Students will learn indications and sonographic technique for ultrasound guided interventional procedures. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (IDMS 170 and IDMS 200 and IDMS 270).
- Placement Score: None.
- Corequisite Course: IDMS 201 and IDMS 202 and IDMS 234 and IDMS 280.
- Course Note: \$127 of the course fee is for medical supplies and is non-refundable.

IDMS 280 Clinical Experience I

Credit Hours: 6 / Billing Hours: 6

First course in a three-semester sequence of clinical application in diagnostic medical sonography. Clinical experience is provided under the direct supervision of an ARDMS Registered Sonographer. Clinical competencies will be given corresponding to completed didactic work. Performance standards are used to evaluate the student's progress. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (IDMS 170 and IDMS 200 and IDMS 270).
- Placement Score: None.
- Corequisite Course: IDMS 201 and IDMS 202 and IDMS 234 and IDMS 271.
- Course Note: \$100 of the course fee is for supplies and is non-refundable.

IDMS 281 Clinical Experience II

Credit Hours: 8 / Billing Hours: 8

Building on material presented in IDMS280, this is the second course in a three-semester sequence in diagnostic medical sonography. Clinical experience is provided under the direct supervision of an ARDMS Registered Sonographer. Clinical competencies will be given corresponding to completed didactic work. Performance standards are used to evaluate the student's progress. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (IDMS 201 and IDMS 202 and IDMS 234 and IDMS 271 and IDMS 280).
- Placement Score: None.
- Corequisite Course: IDMS 245 and IDMS 265 and IDMS 266.

2024-2025 Course Descriptions

IDMS 282 Clinical Experience III

Credit Hours: 7.5 / Billing Hours: 7.5

Based on material presented in IDMS281, this is the last course in a three-semester sequence of clinical application in diagnostic medical sonography. Clinical experience is provided under the direct supervision of an ARDMS Registered Sonographer. Clinical competencies will be given corresponding to completed didactic work. Performance standards are used to evaluate the student's progress. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in (IDMS 245 and IDMS 265 and IDMS 266 and IDMS 281).
- Placement Score: None.

IDMS 295 DMS Special Topics

Credit Hours: 0.25 to 8 / Billing Hours: 0.25 to 11

This course offers students the opportunity to learn new diagnostic medical sonography career skills and knowledge. Specific up-to-date content will vary with each topic presented and will be related to diagnostic medical sonography careers. (Offered As Needed)

- Prerequisite Course: Determined by Section.
- Placement Score: Determined by Section.

INSU 105 Prin of Managing Evolving Risk

Credit Hours: 3 / Billing Hours: 3

Students will gain a broader understanding of risk, focusing on managing risk data, modeling outcomes, and applying new risk technologies. Students will develop the communication skills to collaborate when making risk-related decisions. This course will be a useful tool as students prepare for the AINS 101 and CPCU 500 national exams administered by The Institutes. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently).
- Course Note:
 - 1) Prepares students for the AINS 101 and CPCU 500 national exam administered by The Institutes.
 - 2) Students who achieve a minimum grade of 3.0 may waive the CPCU 500 national exam.

2024-2025 Course Descriptions

INSU 110 Personal Insurance

Credit Hours: 3 / Billing Hours: 3

This course will help students strengthen critical written and oral communication and analytical skills, and identify sources for gaining personal insurance information, including home, auto, life, health and retirement options. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note:
 - 1) Students who achieve a grade of 3.0 or above may waive the CPCU 553 national exam.
 - 2) Prepares students for the AINS 22 national exam.

INSU 125 Commercial Insurance

Credit Hours: 3 / Billing Hours: 3

This course will help the student strengthen critical communication and analytical skills, and identify sources for gaining commercial insurance information, including coverage for buildings, property, workers compensation, auto, etc. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note:
 - 1) Students who achieve a grade of 3.0 or above may wave the CPCU 557 national exam.
 - 2) Prepares students for the AINS 23 national exam.

INSU 175 Intro to Financial Advising

Credit Hours: 3 / Billing Hours: 3

This course will help students develop analytical skills in financial advising for a career the insurance industry. This course will cover all areas including estate planning, life insurance, annuities, retirement planning, and health insurance options. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Course Note: Students who achieve a grade of 3.0 or above may wave the CPCU 556 national exam.

2024-2025 Course Descriptions

INSU 250 Claims and Underwriting

Credit Hours: 3 / Billing Hours: 3

This course is an overview of the principles and practices of claims and commercial underwriting. (Offered Spring)

- Prerequisite Course: Minimum 3.0 in (INSU 105 or INSU 125).
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note:
 - 1) Students who achieve a grade of 3.0 or above may wave the AU 60 national exam.
 - 2) Prepares students for the AIC 30 CPCU exam.

INSU 260 Life/Health Insur Licensing

Credit Hours: 2 / Billing Hours: 2

This course will prepare individuals for the State of Michigan life/health licensing exam and provide them with the paperwork required to take the State licensing test. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

INSU 270 Property/Casualty Insur Licens

Credit Hours: 2 / Billing Hours: 2

This course will prepare individuals for the State of Michigan property/casualty licensing exam and provide them with the paperwork required to take the State licensing exam. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

INSU 285 Insurance Agency Operations

Credit Hours: 3 / Billing Hours: 3

This course is an overview of agency operations including financial, marketing, management, IT, regulations, leadership, time management, understanding risk control, and strategic operations. This course will be a useful tool as students prepare for the CPCU 520 national exam, administered by The Institutes. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

INSU 295 Insurance Internship

Credit Hours: 3 / Billing Hours: 3

This course is an opportunity for students to work with Lansing area insurance companies as a team member to explore various careers within the industry. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (INSU 105 or INSU 110 or INSU 125).
- Placement Score: Reading Level 5 and Writing Level 6.

IRXT 105 Introduction to Imaging

Credit Hours: 2 / Billing Hours: 2

History of the radiologic technologist profession. Fundamentals of the role of the radiographer in the health care industry including professional conduct and responsibilities of the radiographer. Ethical and legal issues in specific to radiography. Exploration of principles, practices and policies of radiology departments, modalities, and health care organizations. Basic medical terminology specific to the field of radiography. Introduction to technical factors that affect radiographic exposure. This course includes an on-site orientation to the assigned clinical setting. (Offered Fall)

- Prerequisite Course: None. Admission to the Radiologic Technology Program is required.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 5 or minimum 2.5 in (MATH 119 or STAT 170 or STAT 215)].
- Course Note: \$85 of the course fee is for medical supplies and is non-refundable.

IRXT 111 Radiographic Positioning I

Credit Hours: 6 / Billing Hours: 6

Student radiographers are introduced to radiographic positioning of the upper and lower extremity, chest, abdomen, bony thorax, pelvis, and spine. Associated topographic, skeletal, chest, and abdominal anatomy is studied. A laboratory experience is provided to evaluate the student skills in performing each position/projection. (Offered Fall)

- Prerequisite Course: None. Admission to Radiologic Technology Program is required.
- Placement Score: None.
- Course Note: \$5 of the course fee is for medical supplies and is non-refundable.

2024-2025 Course Descriptions

IRXT 112 Radiographic Positioning II

Credit Hours: 6 / Billing Hours: 6

A continued study of routine radiographic positioning with the addition of fluoroscopic procedures. Included are studies of the skull, G.I. tract, G.U. tract, myelography, and bronchography. In addition, various contrast media are studied. Laboratory experiences are provided to evaluate student skills in performing selected position/projections. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in all previous required IRXT courses.
- Placement Score: None.
- Course Note: \$5 of the course fee is for medical supplies and is non-refundable.

IRXT 116 Patient Care in Radiography

Credit Hours: 2 / Billing Hours: 2.5

Concepts of optimal care for the physical and psychological needs of the patient and family. Fundamental procedures for routine patient identification, patient education, communication, standard precautions, aseptic techniques, infection control, venipuncture, and vital signs. Emergency patient care procedures are studied. Examination of the impact of a patient's beliefs and culture on health care. CPR/BLS certification included. (Offered Fall)

- Prerequisite Course: None. Admission to the Radiologic Technology Program is required.
- Placement Score: None.
- Course Note: \$40 of the course fee is for medical supplies and is non-refundable.

IRXT 123 Radiographic Independent Study

Credit Hours: 1 to 4 / Billing Hours: 1 to 7

Provides selection of content from the Radiologic Technology curriculum to update or enhance current knowledge and skill for returning students and health care professionals. Through evaluation of previous learning, examinations, self study, and scheduling into needed lectures and labs students are advanced placed or readmitted into the Radiologic Technology Program. (Offered As Needed)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

IRXT 140 Image Analysis

Credit Hours: 2 / Billing Hours: 2

Analysis of radiographic images. Included are the importance of optimal imaging standards, discussions of problem-solving techniques for image evaluation and the factors that can affect image quality. Discussion of implications of patient care and patient dose. Knowledge of procedures and characteristics of image characteristics. Emphasis on appropriate corrective action. Actual images will be included for analysis. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in all previous required IRXT courses.
- Placement Score: None.

IRXT 144 Digital Imaging and Exposure

Credit Hours: 2 / Billing Hours: 2

Understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving and retrieval are discussed. Principles of digital system quality assurance and maintenance are presented. Examination of technical factors that govern radiographic exposure and affect the image production process. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in all previous required IRXT courses.
- Placement Score: None.
- Course Note: This course includes on-site proctored exam(s). Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

IRXT 170 Clinical Practice I

Credit Hours: 4 / Billing Hours: 4

This course is the first in a two-semester sequence of clinical application in radiography designed with required and specific patient care and clinical radiographic examination competencies under direct supervision of an ARRT Registered Technologist. Students must obtain a minimum number of competencies to progress to the next semester. Performance standards are used to evaluate student achievement. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in all previous required IRXT courses.
- Placement Score: None.

2024-2025 Course Descriptions

IRXT172 Clinical Practice II

Credit Hours: 6 / Billing Hours: 6

Second in a two-semester sequence of clinical application in radiography. Clinical experience is provided under the direct supervision of an ARRT Registered Technologist. A minimum number of clinical competencies must be obtained corresponding to completed didactic work to be eligible to continue in the program. Performance standards are used to evaluate the student's achievement. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in all previous required IRXT courses.
- Placement Score: None.

IRXT 200 Intro to Radiologic Pathology

Credit Hours: 2 / Billing Hours: 2

Emphasizes how disease processes are diagnosed radiographically and the relationship of the radiographic appearance of the disease to its anatomic, physiologic, and pathologic characteristics. The etiology, treatment, and resolution of each disease is discussed with an attempt to relate more recent advances in these areas. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in all previous required IRXT courses.
- Placement Score: None.

IRXT 214 Comprehensive Experience I

Credit Hours: 6 / Billing Hours: 6

First in a two-semester sequence of advanced clinical application in radiography. Clinical experience is provided under the direct/indirect supervision of an ARRT Registered Technologist. A minimum number of clinical competencies must be obtained corresponding to appropriate levels of supervision to be eligible to progress to the next semester. Students must demonstrate maintenance of previously obtained competencies. Performance standards are used to evaluate the student's achievement. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in all previous required IRXT courses.
- Placement Score: None.

2024-2025 Course Descriptions

IRXT 215 Comprehensive Experience II

Credit Hours: 6 / Billing Hours: 6

Final semester in advanced clinical application in radiography. Clinical experience is provided under the direct/indirect supervision of an ARRT Registered Technologist. Students are expected to demonstrate maintenance of previously obtained competencies. Students meeting established criteria may be eligible to participate in observing additional modalities. All mandatory/elective competencies must be completed this semester to be ARRT Registry eligible. Performance standards are used to evaluate the student's achievement. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in all previous required IRXT courses.
- Placement Score: None.

IRXT222 Radiobiology and Protection

Credit Hours: 2 / Billing Hours: 2

This course focuses on the rationale for good radiation hygiene and methods used to protect the patient and technologist from radiation exposure. Current theories and events regarding the physiological effects of ionizing radiation are also explored. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in all previous required IRXT courses.
- Placement Score: None.
- Course Note: This course includes on-site proctored exam(s). Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

IRXT 224 Radiologic Physics

Credit Hours: 4 / Billing Hours: 4

Basic physical principles, measurement, structure of matter, electrostatics and magnetism, are related to the radiologic process. A study of elementary electricity and the operation of the x-ray circuit are presented. Examination of design and function of radiographic, fluoroscopic and mobile equipment. Finally, advanced topics regarding the formation of radiation and care of the X-ray tube are studied. Discussion of quality assurance and quality control. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in all previous required IRXT courses.
- Placement Score: None.
- Course Note: This course includes on-site proctored exam(s). Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

2024-2025 Course Descriptions

IRXT 240 Sectional Anatomy

Credit Hours: 2 / Billing Hours: 2

This course provides an overview of transverse, coronal, and sagittal sectional anatomy of the human body. Special emphasis is placed on a study of the head and brain, thorax, abdomen, and pelvis. The shoulder, elbow, hip, and knee are also examined. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in BIOL 145 or (BIOL 201 and BIOL 202).
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 5 or (minimum 2.5 in MATH 119 or STAT 170 or STAT 215)].

IRXT 280 Radiologic Tech Board Review

Credit Hours: 2 / Billing Hours: 2

This course is designed to help prepare students for the American Registry of Radiologic Technologist (ARRT) national board exam. The course is divided into weekly assignments covering material that was presented throughout the previous year's radiography courses. Students are required to successfully pass a mock registry exam to complete this course. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in all previous required IRXT courses.
- Placement Score: None.
- Course Note: \$200 of the course fee is non-refundable.

IRXT 295 Radiologic Tech Special Topics

Credit Hours: 0.25 to 8 / Billing Hours: 0.25 to 11

This course offers students the opportunity to learn new radiologic technology career skills and knowledge. Specific up-to-date content will vary with each topic presented and will be related to radiologic technology careers. (Offered As Needed)

- Prerequisite Course: Determined by Section.
- Placement Score: Determined by Section.

2024-2025 Course Descriptions

ISCI 121 Physical Science Concepts

Credit Hours: 4 / Billing Hours: 6

A science course focusing on matter and energy, including topics from physics, chemistry, and earth science. Science processes, methods, and reasoning skills are emphasized throughout. Experiments and lab activities are integrated with lecture topics. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

ISCI122 Integrate Sci for Education II

Credit Hours: 4 / Billing Hours: 6

The second of two general science courses focusing on the biological and ecological nature of our universe, using a historical and integrative approach. Science processes, methods, and reasoning skills are emphasized throughout. Recommended for education majors. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Recommended: ISCI 121.

ISCI 131 Integrated Physical Science

Credit Hours: 4 / Billing Hours: 6

A general education course designed to provide students with a basic understanding of the methods and applications of physical science. Topics include discussion about what science is, basic chemistry, energy and motion, the hydrologic cycle, earth science, and weather. Critical thinking and problem-solving skills are applied to environmental issues. Laboratory activities illustrate and amplify lecture topics. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and [Math Level 4 or Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

2024-2025 Course Descriptions

ISCI 245

S.T.E.M. Workplace Practices

Credit Hours: 4 / Billing Hours: 6

This course will introduce students to vital concepts encountered by employees working in advanced technology regulated environments within the emerging global economy. This covers four main areas of working in an advanced technology environment: process control, safety and security, legal and ethical issues, and essential math and science skills. The lab work emphasizes systems thinking and continuous improvement concepts discussed during lecture. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (MATH 119 or STAT 170) or MATH 109 concurrently or Math Level indicated below.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 5.
- Recommended: A science laboratory course.

JAPN 121

Elementary Japanese I

Credit Hours: 4 / Billing Hours: 4

This is the first course of a two-semester sequence in elementary Japanese. Students gain basic knowledge of communication skills through speaking, reading, writing, and listening comprehension. Practical communication is emphasized. Aspects of Japanese culture are introduced through multi-media presentations. Hiragana and Katakana syllabaries and basic Kanji are introduced. (Offered Fall, Spring and Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

JAPN 122

Elementary Japanese II

Credit Hours: 4 / Billing Hours: 4

Second course of a two-semester sequence in elementary Japanese. Students receive more practice in Japanese for practical communication. Develops speaking, reading, writing, and listening skills. Previously acquired knowledge and skills are refined and ability to communicate in Japanese is increased. Emphasis is on practical communication. Additional Kanji are introduced. Aspects of Japanese culture are introduced through multi-media presentations. (Offered Spring, Summer)

- Prerequisite Course: Minimum 2.0 in JAPN 121 or equivalent.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

2024-2025 Course Descriptions

JAPN 201 **Intermediate Japanese I**

Credit Hours: 4 / Billing Hours: 4

First course of a two-semester sequence in intermediate Japanese. Includes introduction of more advanced grammar, vocabulary building, composition, group discussions, and more information on Japanese culture and everyday life. Emphasis is on practical communication in Japanese in Japanese. Additional Kanji are introduced. Various aspects of Japanese culture are introduced through multi-media presentations. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in JAPN 122 or equivalent.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

JAPN202 **Intermediate Japanese II**

Credit Hours: 4 / Billing Hours: 4

Continuation of JAPN 201. Includes more advanced grammar, intensive vocabulary building, writing composition, reading contemporary materials, discussions, and student presentations on Japanese language or culture. Additional Kanji are introduced. Natural and practical communication is emphasized. Various aspects of Japanese culture are introduced through multi-media presentations. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in JAPN 201 or equivalent.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

JRNL 151 **Newswriting and Reporting**

Credit Hours: 3 / Billing Hours: 3

Introduction to and practice in writing news stories. Students learn news terminology, style, objectivity, attribution, accuracy, and copy-editing skills. Basic news gathering and reporting tactics are presented and practiced. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in ENGL 121 or ENGL 131.
- Placement Score: Reading Level 5 and Writing Level 8.
- Recommended: Computer and/or keyboarding experience.

2024-2025 Course Descriptions

JRNL 254 Opinion Writing

Credit Hours: 3 / Billing Hours: 3

A course in how to write effective editorials. Students analyze content, structure and style of editorial models, learn methods of finding subjects, learn methods of research, and write editorials and articles on important issues. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (JRNL 151 or ENGL 121 or ENGL 131).
- Placement Score: Reading Level 5 and Writing Level 8.
- Recommended: Computer and/or keyboarding experience.

LABR 200 Intro to Labor Relations

Credit Hours: 3 / Billing Hours: 3

This course surveys both historical and legal frameworks of the labor movement. Major labor laws, causes and goals of the labor movement, and union structure and behavior will be discussed. Students will explore both labor and management approaches to solving employment disputes. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

LABR 204 Employment Law for Managers

Credit Hours: 3 / Billing Hours: 3

This course provides an introduction and overview to the principles and application of laws affecting the workplace, not including traditional labor relations law. Areas of law covered include discrimination, wage-hour, unemployment benefits, personnel records, and common law issues relating to discharge and other matters. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

2024-2025 Course Descriptions

LEAD 110 Leadership Development I

Credit Hours: 2 / Billing Hours: 2

LEAD 110 will help students develop leadership skills through study, observation, and application. Assists students in increasing their understanding of themselves, and the theories and techniques of leadership. Course topics include developing a personal leadership philosophy, leading by serving, understanding ethical leadership, articulating a vision, team building and leading with goals. (Offered Fall)

- Prerequisite Course: None. Department Approval Required.
- Placement Score: None.

LEAD 111 Leadership Development II

Credit Hours: 2 / Billing Hours: 2

LEAD 111 will help students develop leadership skills through study, observation, and application. Assists students in increasing their understanding of themselves, and the theories and techniques of leadership. Course topics include making decisions as a leader, guiding others through conflict, realizing change, and empowering others as a servant leader. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in LEAD 110.
- Placement Score: None.

LEGL 110 Editing Legal Documents

Credit Hours: 2 / Billing Hours: 2

This course is an in-depth exposure to common legal documents and vocabulary students will encounter in any law office. Students will learn to read, analyze, proofread and edit legal documents applying sound legal and English fundamentals. Standard reference materials and their importance with respect to legal documents will be emphasized. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

LEGL 115 Introduction to Legal Studies

Credit Hours: 3 / Billing Hours: 3

Introduction to the paralegal's role in the legal system, including essential skills used in the litigation process and law practice. Introduces student to legal terminology, legal analysis, procedural, and substantive law. Students will produce a resume and cover letter and prepare for and practice mock employment interviewing skills and practice mock client interviews modeling legal professional ethical standards. Surveys paralegal employment and regulation. 2.0 minimum required to continue program. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

LEGL 125 Legal Research and Writing I

Credit Hours: 3 / Billing Hours: 3

Students learn research procedures and resources to find federal and Michigan law. Assignments utilize appropriate legal citation form, off-campus law libraries and online legal research tools. Students analyze court opinions and apply them to fact situations to write summaries of court opinions and draft legal documents. Learning methods include reading, discussion, lecture, and writing. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in ENGL 121.
- Placement Score: (Reading Level 5 and Writing Level 6) or Post-Bachelor student enrolled in 0744 program.

LEGL 160 Critical Thinking in Law

Credit Hours: 3 / Billing Hours: 3

This course strongly emphasizes the "learn by doing" approach, specifically by utilizing group dynamics. The panorama of thinking skills, particularly those relevant in law and criminal justice, will be examined and practiced. Innovative evaluation skills, both personal and group, are a regular part of each session. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.

2024-2025 Course Descriptions

LEGL 207 eDiscovery

Credit Hours: 3 / Billing Hours: 3

This course will explore the rapidly developing role of software in the area of legal data, eDiscovery, and information governance. An in-depth look at the role of software in the litigation lifecycle from data collection and document review to production and presentation at a trial will be taken. The course will explore the technology used in a litigation support department and by litigation teams in the acquisition of data and eDiscovery processing. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in CITF 110 or Post Bachelor Student enrolled in 0744 Program.
- Placement Score: Reading Level 5 and Writing Level 6.

LEGL 211 Tort Law

Credit Hours: 3 / Billing Hours: 3

Covers principles of negligence, intentional torts, and strict liability. Emphasizes the role of the paralegal in dealing with these areas of law in actual practice situations. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in LEGL 115 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.

LEGL 212 Litigation Procedures

Credit Hours: 3 / Billing Hours: 3

Provides in-depth study of pre-trial, trial, and post-trial practice and procedure. Emphasizes Michigan and federal rules of court. Detailed study of drafting pleadings, discovery procedures, and case preparation for trial and appeal. Also covers evidentiary rules as they relate to trial practice and preparation. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (LEGL 115 and LEGL 211).
- Placement Score: Reading Level 5 and Writing Level 6.

LEGL 215 Business Law-Basic Principles

Credit Hours: 3 / Billing Hours: 3

Introduction to the legal system, its purpose, and the fundamental principles of various areas of the law. Course content includes sources of law, court procedures, contracts, torts, crimes, and constitutional rights. Taught in traditional classroom style or online. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

LEGL 216 Commercial Transactions

Credit Hours: 3 / Billing Hours: 3

An in-depth analysis of the Uniform Commercial Code allows students to explore the law of sales, commercial paper, secured transactions, banking, insurance, and debtor-creditor rights. Taught in traditional classroom style or online. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (LEGL 115 or LEGL 215).
- Placement Score: None.

LEGL 217 Business Organizations

Credit Hours: 3 / Billing Hours: 3

Introduces basic business organizations, including agency law, partnerships, sole proprietorships, and corporations. Additionally, the course will delve into government regulation of business, real estate, wills, trusts, and estates. Taught in traditional classroom style or online. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (LEGL 115 or LEGL 215) or concurrently.
- Placement Score: None.

LEGL 218 Litigation Specialties

Credit Hours: 3 / Billing Hours: 3

Covers several specialty areas of law, for example personal injury, professional malpractice, products liability, workers' compensation, and no-fault auto insurance. Emphasizes role of paralegal in these practice areas, including drafting of legal instruments. (Offered as needed)

- Prerequisite Course: Minimum 2.0 in LEGL 115 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.

LEGL 219 Adv Busn Law for Acct Majors

Credit Hours: 4 / Billing Hours: 4

This course is intended for students majoring in accounting who have a goal of becoming a Certified Public Accountant (CPA). This course covers the law of sales; commercial paper; security devices; debtor-creditor relations; bankruptcy; insurance; agency; partnership; corporations; wills, trusts and estates; employment regulation; real property; and accountant's liability. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in LEGL 215.
- Placement Score: None.
- Recommended: Accounting background.

2024-2025 Course Descriptions

LEGL 221 Real Estate Transactions

Credit Hours: 3 / Billing Hours: 3

Covers fundamental principles of real estate property law and introduces the student to common types of real estate transactions encountered by a paralegal in a typical real estate practice. Subject matter includes deeds, land contracts, mortgages, title insurance, environmental issues, forfeitures and foreclosures, and landlord-tenant relationships. (Offered as needed)

- Prerequisite Course: Minimum 2.0 in (LEGL 115 or concurrently).
- Placement Score: Reading Level 5 and Writing Level 6.

LEGL 222 Probate Law and Procedure

Credit Hours: 3 / Billing Hours: 3

Probate process will be addressed in detail, from commencement of proceedings through closing the estate of a decedent. Other topics will include wills, trusts, and related topics. Emphasis is on the part played by the paralegal in preparation of documents and other probate practice tasks. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (LEGL 115 or concurrently).
- Placement Score: Reading Level 5 and Writing Level 6.

LEGL 223 Domestic Relations

Credit Hours: 3 / Billing Hours: 3

Covers marriage, divorce, separation, annulment, paternity proceedings, custody, support, property division, and other areas of domestic relations law. Emphasis will be on the paralegal's role in dealing with clients and applying appropriate statutes, case law, and court rules as part of a domestic law practice. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (LEGL 115 or concurrently).
- Placement Score: Reading Level 5 and Writing Level 6.

LEGL 224 Administrative Law

Credit Hours: 3 / Billing Hours: 3

The relationship of governmental administrative agencies to private citizens is explored by studying how law is created and enforced by such agencies at the state and federal levels. Paralegal students will focus on topics including rule making procedures, regulations, adjudication, licensing, and informal action. (Offered as needed)

- Prerequisite Course: Minimum 2.0 in (LEGL 115 or concurrently).
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

LEGL 225 Legal Research and Writing II

Credit Hours: 3 / Billing Hours: 3

Reviews principles of legal research, analysis, and writing. Introduces student to computer-assisted legal research (e.g. Lexis or Westlaw). Student will draft legal memoranda and a trial court brief based on extensive research assignments in Michigan publications. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in LEGL 125.
- Placement Score: Reading Level 5 and Writing Level 6.

LEGL 227 Bankruptcy and Collections

Credit Hours: 3 / Billing Hours: 3

Explores federal bankruptcy law and procedure with emphasis on the paralegal's role in collecting information, interviewing clients, and preparing documents. Topics include a comparison of selected chapters within the bankruptcy code, exemptions, preferences, petitions, schedules, and the part played by the bankruptcy trustee. (Offered as needed)

- Prerequisite Course: Minimum 2.0 in (LEGL 115 or concurrently).
- Placement Score: Reading Level 5 and Writing Level 6.

LEGL 228 Computer Appl for the Law Ofc

Credit Hours: 3 / Billing Hours: 3

This course focuses on computer technology as it is applied within the law office, including the use of computers to perform paralegal functions in litigation support, legal research using tools including Lexis or Westlaw, communication and case management applications, such as calendar and docket control. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (CITF 110 or CITA 119) or Post Bachelor Student enrolled in 0744 program.
- Placement Score: Reading Level 5 and Writing Level 6.

LEGL 229 Immigration Law

Credit Hours: 3 / Billing Hours: 3

This course covers fundamental principles and practical application of Immigration Law with emphasis on the paralegal's role. Topics will include sources, history, and future of immigration law, visas, citizenship, refugee/asylum, removal and defenses, impact on other areas of law, and working with clients from cultures around the world. (Offered as needed)

- Prerequisite Course: Minimum 2.0 in LEGL 115 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

LEGL 251 LegalStudies Independent Study Credit Hours: 1 to 3 / Billing Hours: 1 to 3

This course provides a study of specific current or classic legal topics and issues that affect legal assistants/paralegals. Students, with the assistance of the instructor, select a topic, then develop and execute a plan to independently examine the topic by reviewing written materials and/or interviewing people in the field. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: Department approval to enroll in these CRNs can be requested by calling the Paralegal/Legal Assistant Program office at 517-483-5228.

LEGL 270 Paralegal Certification Prep Credit Hours: 3 / Billing Hours: 3

This course provides a review and preparation for testing for the Certified Paralegal exam administered by the National Association of Legal Assistants. Students will be evaluated on interviewing skills, modeling ethical behavior, legal terminology, substantive and procedural law, research, judgement, and analysis. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (LEGL 210) and [(LEGL 216 and LEGL 217 and LEGL 223 and LEGL 225 and LEGL 228) or concurrently].
- Placement Score: Reading Level 5 and Writing Level 6 and Department Approval.
- Course Note: Department approval to enroll in this class can be requested by calling the Paralegal/Legal Assistant Program office at 517-483-5228.

LEGL 280 Legal Studies Internship Credit Hours: 3 / Billing Hours: 3

Students will experience the paralegal career by working in a supervised capacity. Placements include private law firms, governmental law offices, courts, corporations, and other law-related settings. Requirements include at least 160 hours in the workplace, weekly reports, periodic meetings, and performance evaluations by on-site supervisor. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: Department Approval requires a completed application submitted to the Public Service Careers Office. Students must bring their driver's license with the application. Worksite placements must be discussed and assigned by instructor. Students will be notified by phone upon acceptance into the course of the class meeting time arranged by the instructor.

2024-2025 Course Descriptions

LEGL 295 Special Topics in Paralegal Credit Hours: 0.25 to 8 / Billing Hours: 0.25 to 11

This course offers students the opportunity to learn advanced skills in paralegal practice by focusing on specific areas of legal practice. Specific content may vary with each offering. (Offered as needed)

- Prerequisite Course: Determined by Section.

LING 230 Introduction to Linguistics Credit Hours: 3 / Billing Hours: 3

Examines human language from the perspective of contemporary American linguistics: generative morphology, syntax, phonetics and phonology, and semantics. Special attention will be given to the structure of English, first and second language acquisition, regional and social variations, and the brain and language perception and production. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

MATH 095 Support for MATH115 Credit Hours: 2 / Billing Hours: 2

This course provides support for students enrolled in MATH 115. Topics include: algebraic expressions, powers, roots, ratio and proportion, linear and quadratic equations, evaluating and solving formulas, graphing, perimeter, area, and volume calculations. Emphasis on problem-solving for technical applications. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (MATH 105 or MATH 106) or a Math Placement Score indicated below.
- Placement Score: Reading Level 5 and (BSM1/CPT Arithmetic 85-120 or BSM2/CPT Algebra 40-76 or ACM1/Accuplacer Arithmetic 250-300 or ACM2/QRAS 225-259).
- Corequisite Course: MATH 115.
- Course Notes:
 - 1) This co-support course, MATH 095, must be taken during the same semester as the college level course (MATH 115). Contact your instructor to discuss options if either course is dropped during the semester or if a passing grade is not achieved at the end of the semester.
 - 2) A graphing calculator from the TI-83/84 series is required for coursework.
 - 3) Class participation is strongly recommended; participation is a significant and important part of the course to enable success in MATH 115.

2024-2025 Course Descriptions

MATH 097 Support for MATH119 or STAT170

Credit Hours: 2 / Billing Hours: 2

This course provides support for students enrolled in Math 119 or Stat 170. Topics include numeracy, mathematical thinking and investigations, proportional reasoning, algebraic modeling, basic geometry and statistical concepts. Graphing calculator and real-life applications are integrated throughout the course. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: [Reading Level 5 and Writing Level 4 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently)] and (BSM2/CPT Algebra 50-76 or ACM2/QRAS 225-259 or A02/ACT Math 15-19 or S12/SAT Math 400-510 or PS12/PSAT Math 400-510~~or~~).
- Corequisite Course: Math 119 or Stat 170.
- Course Notes:
 - 1) This co-support course, MATH 097, must be taken during the same semester as the college level course (MATH 119 or STAT 170). Contact your instructor to discuss options if either course is dropped during the semester or if a passing grade is not achieved at the end of the semester.
 - 2) A graphing calculator is required; a TI-83/84 series calculator is highly recommended.
 - 3) Class participation is strongly recommended; participation is a significant and important part of the course to enable success in the college-level course.

2024-2025 Course Descriptions

MATH 098 Support for MATH120

Credit Hours: 2 / Billing Hours: 2

This course provides embedded academic support for students enrolled in MATH 120. Topics include a study of relations and functions, inequalities, algebraic expressions and equations, with a special emphasis on linear and quadratic expressions and equations, and any additional topics, as needed, to support the content of MATH120. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (MATH 105 or MATH 106) or a Math Placement Score indicated below or Department Approval.
- Placement Score: (Reading Level 5 and Writing Level 4) or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) and (BSM2/CPT Algebra 77-120 or BSM7/Accuplacer CLM 45-54 or S12/SAT Math 400-540 or PS12/PSAT Math 400-540 or A02/ACT Math 15-21 or ACM2/QRAS 241-300 or ACM3/AAF 235-244 or [HS GPA 2.5-2.99 within 10 years]).
- Corequisite Course: MATH 120.
- Course Notes:
 - 1) This co-support course, MATH 098, must be taken during the same semester as MATH 120. Contact your instructor to discuss options if either course is dropped during the semester or if a passing grade is not achieved at the end of the semester.
 - 2) A graphing calculator from the TI-83/84 series is required for course work. TI-84 Plus CE is recommended.
 - 3) Class participation is strongly recommended; participation is a significant and important part of the course to enable success in MATH 120.

2024-2025 Course Descriptions

MATH 115 Technical Mathematics

Credit Hours: 4 / Billing Hours: 4

Applied geometry and trigonometry for students in technical programs. Congruence, similarity, polygons, circle geometry, trigonometry with right and oblique triangles (including laws of sines, cosines and cotangents), surface area, volume, coordinate systems, and introduction to vectors. Emphasizes problem-solving for technical applications. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in MATH 114 or (MATH 095 concurrently) or a Math Placement Score indicated below.
- Placement Score: Reading Level 5 and (BSM2/CPT Algebra 77-120 or ACM2/QRAS 260-300 or ACM3/AAF 220-244 or A02/ACT Math 20-21 or S12/SAT Math 520-540 or PS12/PSAT Math 520-540 or HSGPA 2.5 w/in 10 years or GEDM/GED Math 165} w/in 10 years).
- Course Note: Graphing calculator required; TI-83/84 series calculator highly recommended.

2024-2025 Course Descriptions

MATH 119 Math - Applications for Living

Credit Hours: 4 / Billing Hours: 4

This is a quantitative reasoning course that covers concepts in measurement, geometry, finance, algebra, statistics, and probability, with a focus on applications for real life. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (MATH 105 or MATH 106 or MATH 107) or P in (NCMA 106 or NCMA 110) or (MATH 097 concurrently) or a Math Placement Score indicated below.
- Placement Score: (Reading Level 5 and Writing Level 4) or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) and (BSM2/CPT Algebra 77-120 or ACM2/QRAS 260-300 or ACM3/AAF 220-244 or A02/ACT Math 20-21 or S12/SAT Math 520-540 or PS12/PSAT Math 520-540 or HS GPA 2.5 w/in 10 years or GEDM/GED Math 165 w/in 10 years).
- Course Notes:
 - 1). Graphing calculator required; TI-83/84 series calculator highly recommended.
 - 2). This course includes on-site proctored exam(s) for all online and/or hybrid sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

2024-2025 Course Descriptions

MATH 120 College Algebra

Credit Hours: 4 / Billing Hours: 4

A course in algebra that studies families of functions and their graphs, with an emphasis on applications in finance, business, and life, social, and physical sciences. Topics include relations and functions; properties and graphs of linear, quadratic, polynomial, rational, exponential, and logarithmic functions; algebra of functions; solving equations and inequalities; systems of linear equations; and sequences and series. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (MATH 109) within 10 years or P in NCMA 110 within 10 years or MATH 098 concurrently or a Math Placement Score indicated below.
- Placement Score: Reading Level 5 and Writing Level 4 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) and (ACM3/AAF 245-259 or A02/ACT Math 22-25 or S12/SAT Math 550-610 or PS12/PSAT Math 550-610 or HS GPA 3.0 or GEDM/GED Math 165) within 10 years}.
- Course Notes:
 - 1). A graphing calculator from the TI-83/84 family is required for course work. TI-84 Plus CE is recommended.
 - 2). This course includes on-site proctored exam(s) for all online and/or hybrid sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

2024-2025 Course Descriptions

MATH 126 Precalculus

Credit Hours: 5 / Billing Hours: 5

This is a five-credit course on college algebra and trigonometry. Topics include the definition and concept of functions; equations and inequalities; properties and graphs of polynomial, rational, absolute value, exponential, logarithmic, trigonometric, and inverse trigonometric functions; conic sections; and systems of non-linear equations. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in MATH 120 within 2 years or a Math Placement Score indicated below.
- Placement Score: Reading Level 5 and Writing Level 6 and (ACM3/AAF 260-300 or A02/ACT Math 26-28 or S12/SAT Math 620-680 or PS12/PSAT 620-680) within 2 years or Department Approval.
- Course Notes:
 - 1). A graphing calculator from the TI-83/84 series is required for course work.
 - 2). WebAssign access is required for homework.
 - 3) This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

MATH 141 Calculus with Applications

Credit Hours: 4 / Billing Hours: 4

This course provides an introduction to calculus with an emphasis on applications in business, economic, social/life sciences and other fields not requiring an extensive study of calculus. Topics include functions, derivatives, related rates, growth and decay, differential equations, elasticity of demand, the definite integral and applications. (Mathematics, Physical Science, Computer Science, and Engineering majors should take MATH151.) (Offered Fall)

- Prerequisite Courses: Minimum 2.5 in MATH 120 within 2 years or a Math Placement Score indicated below.
- Placement Scores: Reading Level 5 and Writing Level 6 and (ACM3/AAF 260-300 or A02/ACT Math 26-28 or S12/SAT Math 620-680 or PS12/PSAT Math 620-680) within 2 years.
- Course Notes:
 - 1). A graphing calculator from the TI-83/84 Series is required for course work.
 - 2). This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

2024-2025 Course Descriptions

MATH 151 Calculus I

Credit Hours: 4 / Billing Hours: 4

This is the first course in a three-semester calculus sequence. Topics include limits, continuity, parametric curves, derivatives of algebraic, trigonometric, exponential, and logarithmic functions, implicit differentiation, linear approximation and differentials, L'Hospital's rule, Riemann sums, integration using the Fundamental Theorem of Calculus and the substitution rule. Applications of differential and integral calculus to problems in math, natural, and social sciences are presented. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in MATH 126 within 2 years or a Math Placement Score indicated below.
- Placement Score: Reading Level 5 and Writing Level 6 and (A02/ACT Math 29-36 or S12/SAT Math 690-800 or PS12/PSAT Math 690-800 or [ACM3/AAF 270-300 and TRIG/LCC Trigonometry Test 3]) within 2 years.
- Course Notes:
 - 1). A graphing calculator from the TI-83/84 series is required for course work; TI-89 may be used.
 - 2). This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

MATH 152 Calculus II

Credit Hours: 4 / Billing Hours: 4

This is the second course in a three-semester calculus sequence. Topics include integral calculus and its applications to real world problems, infinite sequences and series, tests for convergence of series, Taylor and Maclaurin series, power series, representations of functions, 3D-rectangular coordinate system, polar coordinates, vectors and vector operations, and equations of lines and planes in 3D space. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in MATH 151 within 2 years.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Notes:
 - 1). A graphing calculator from the TI-83/84 series is required for course work; TI-89 or TI-Nspire (CAS) may be used.
 - 2). This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

2024-2025 Course Descriptions

MATH 201 Math for Elementary Teachers I

Credit Hours: 4 / Billing Hours: 4

The first course in a two-course sequence for prospective elementary teachers. Topics include real number systems and their properties, sets, logic, and number theory. Emphasis is on active engagement in mathematical investigation to develop problem-solving skills and conceptual knowledge essential for teaching elementary school mathematics. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (MATH 109 within 2 years) or a Math Placement Score indicated below.
- Placement Score: Reading Level 5 and Writing Level 6 and (ACM3/AAF 245-259 or A02/ACT Math 22-25 or S12/SAT Math 550-610 or PS12/PSAT Math 550-610) within 2 years.
- Course Note: A graphing calculator from the TI-83/84 series is required for course work.

MATH 202 Math for Elementary Teacher II

Credit Hours: 4 / Billing Hours: 4

The second course in a two-course sequence for prospective elementary teachers. Topics include data exploration, probability, descriptive statistics and geometry concepts and measurement. Emphasis is on active engagement in mathematical investigations to develop problem-solving skills and conceptual knowledge essential for teaching elementary school mathematics. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in MATH 201 within 2 years.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: A graphing calculator from the TI-83/84 series is required for course work.

2024-2025 Course Descriptions

MATH 253 Calculus III

Credit Hours: 4 / Billing Hours: 4

This is the last course in a three-semester calculus sequence that covers multivariable calculus and vector analysis. Topics include vector algebra, curves and surfaces in 3D-space, cylindrical and spherical coordinate systems, vector-valued functions, partial derivatives and gradients, multiple integrals, vector fields, line integrals, and surface integrals, including the theorems of Green and Stokes, and Divergence Theorem. Applications for all these topics are presented. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in MATH 152 within 2 years.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Notes:
 - 1). A graphing calculator from the TI-83/84 series is required for course work; TI-89 or TI-Nspire (CAS) may be used.
 - 2). This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

MATH 254 Intro to Differential Equation

Credit Hours: 4 / Billing Hours: 4

An introduction to ordinary differential equations. Topics include separable, exact, linear, and Bernoulli equations, direction fields, higher order linear equations, undetermined coefficients, variation of parameters, series solutions, Laplace transforms, systems of differential equations, systems of first order linear equations, nonlinear equations and stability, numerical methods, Fourier series, and separable PDEs. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in MATH 253 within 2 years.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Notes:
 - 1). Graphing calculator required; TI-89 or TI-Nspire is recommended.
 - 2). This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

2024-2025 Course Descriptions

MATH 260 Linear Algebra

Credit Hours: 4 / Billing Hours: 4

This introduction to linear algebra includes the study of systems of linear equations, vector equations, linear independence, determinants, matrix algebra, vector spaces and subspaces, dimension of a vector space, rank, linear transformations, eigenvalues and eigenvectors, diagonalization, inner products, orthogonal sets, and the Gram-Schmidt process, with applications. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in MATH 152 within 2 years.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

MEDA 110 Intro MA Med Terms & Pathology

Credit Hours: 5 / Billing Hours: 5

Students will be introduced to medical terminology, basic human anatomy, and disease conditions which are essential for a career in medical assisting.

- Prerequisite Course: None. Program approval is required.
- Placement Score: Reading Level 5 and Writing Level 4.
- Corequisite Course: MEDA 135 and MEDA 156.

2024-2025 Course Descriptions

MEDA 110A Intro MA Med Terms & Patho I

Credit Hours: 2.5 / Billing Hours: 2.5

This course, the first of two modules, will introduce students to essential medical terminology, covering the basic human anatomy, and disease conditions encountered in a career in medical assisting. Emphasis in this module is on the musculoskeletal, respiratory, cardiovascular, blood, lymph, and immune systems. (Offered Fall)

- Prerequisite Course: None. Program approval is required.
- Placement Score: Reading Level 5 and Writing Level 4.
- Corequisite Course: MEDA 135 and MEDA 156A.
- Course Note: The Medical Assistant program is a yearlong, cohort program that begins every Fall semester; students will complete the program in three consecutive semesters, Fall 2024 through Summer 2025. Seats in this program are limited. To enroll, students must be 18 years of age or older by the start of classes and must submit a Medical Assistant program application along with required supporting documentation. Online applications are accepted March 1 thru June 25th and are available in the Medical Assistant section on the [HHS Advising Guide](http://www.lcc.edu/hhs/advising-guides.html) site (www.lcc.edu/hhs/advising-guides.html). Applicants are encouraged to apply early as enrollment is on a first-come, first-served basis. Once admitted to the program, students will be required to complete an [ICHAT](#) background check (there is a fee for this service, instructions provided upon acceptance to program) and attend a mandatory program orientation, which typically occurs mid-July. Contact Keiston Wirick or Mary Pacitto at 517-483-1410 for more information.

MEDA 110B Intro MA Med Terms & Patho II

Credit Hours: 2.5 / Billing Hours: 2.5

This course, the second of two modules, will introduce students to essential medical terminology, covering the basic human anatomy, and disease conditions encountered in a career in medical assisting. Emphasis in this module is on the integumentary, digestive, urinary, reproductive, endocrine, nervous, and special senses systems. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in MEDA 110A or concurrently.
- Placement Scores: Reading Level 5 and Writing Level 4.
- Co-requisite Course: MEDA 156B.
- Course Note: Minimum age of 18 required to enroll in this course.

2024-2025 Course Descriptions

MEDA 126 MA Administrative Skills

Credit Hours: 5 / Billing Hours: 6

In this course the student will learn about: the EHR (electronic health record), how to apply effective and professional communication and interpersonal skills, demonstrate cultural awareness, maintain inventory, perform billing and collections, process insurance, schedule patients, adapt care to different life stages, and help the patient navigate the healthcare system.

- Prerequisite Course: Minimum 2.5 in (MEDA 110 and MEDA 135 and MEDA 156).
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 4.
- Corequisite Course: MEDA 145 and MEDA 166 and NCHE 102.
- Course Note: Minimum age of 18 required to enroll in this course.

MEDA 126A MA Administrative Skills I

Credit Hours: 2.5 / Billing Hours: 3

In this course, the first of two modules, the student will learn how to apply effective and professional communication and interpersonal skills, demonstrate cultural awareness, maintain inventory, schedule patients, adapt care to different life stages, and help the patient navigate the healthcare system. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (MEDA 110A and MEDA 110B and MEDA 135 and MEDA 156A and MEDA 156B).
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 4.
- Corequisite Course: MEDA 145 and MEDA 166 and NCHE 102.
- Course Note: Minimum age of 18 required to enroll in this course.

MEDA 126B MA Administrative Skills II

Credit Hours: 2.5 / Billing Hours: 3

This course is the second of two modules providing students with the skills needed to apply effective and professional communication and interpersonal skills, demonstrate cultural awareness, adapt care to different life stages, and help the patient navigate the healthcare system. Students will learn about the EHR (electronic health record), perform billing and collections, and process insurance. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (MEDA 110A and MEDA 110B and MEDA 135 and MEDA 156A and MEDA 156B) and (MEDA 126A or concurrently).
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 4.
- Corequisite Course: MEDA 145 and MEDA 166 and NCHE 102.
- Course Note: Minimum age of 18 required to enroll in this course.

2024-2025 Course Descriptions

MEDA 135 MA Pharmacology & Med Math

Credit Hours: 2 / Billing Hours: 2

In this class the student medical assistant will learn about the different classifications of drugs and the most commonly used medications, how to calculate dosages for proper administration, the parts of a prescription, common abbreviations, and how to use proper drug references. (Offered Fall)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 4.
- Corequisite Course: MEDA 110A and MEDA 156A.
- Course Note: Minimum age of 18 required to enroll in this course.

MEDA 145 Legal & Ethical Concepts

Credit Hours: 2 / Billing Hours: 2

The student medical assistant will learn about documentation guidelines, federal and state guidelines when releasing medical records and information, following established policies when initiating or terminating treatment, scope of practice, Code of Ethics compliance, HIPAA, ADA Amendments Act, and local health laws. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (MEDA 110A and MEDA 110B and MEDA 135 and MEDA 156A and MEDA 156B).
- Placement Score: None.
- Corequisite Course: MEDA 126A and MEDA 126B and MEDA 166 and NCHE 102.
- Course Note: Minimum age of 18 required to enroll in this course.

MEDA 156 MA Clinical Procedures I

Credit Hours: 7 / Billing Hours: 11

Within a clinical classroom, the student medical assistant will obtain vital signs, patient history, assist with general and specialty exams, learn how to administer medications, and learn how to educate patients. Students will also learn to apply medical terminology to the different specialties for each body system.

- Prerequisite Course: None. Program approval is required.
- Placement Score: Reading Level 5 and Writing Level 4.
- Corequisite Course: MEDA 110 and MEDA 135.
- Course Note: Minimum age of 18 required to enroll in this course.

2024-2025 Course Descriptions

MEDA 156A MA Clinical Procedures IA

Credit Hours: 3.5 / Billing Hours: 5.5

Within a clinical classroom, the student medical assistant will obtain vital signs and patient history, assist with general exams, respond to emergencies, and learn how to educate patients. Students will also learn to apply medical terminology and learn about diagnostic and treatment modalities for each body system. Emphasis is on cardiac, respiratory, orthopedic, and radiologic procedures. (Offered Fall)

- Prerequisite Course: None. Program approval is required.
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 4.
- Corequisite Course: MEDA 110A and MEDA 135.
- Course Note: Minimum age of 18 required to enroll in this course.

MEDA 156B MA Clinical Procedures IB

Credit Hours: 3.5 / Billing Hours: 5.5

Within a clinical classroom, the student medical assistant will obtain vital signs and patient history, assist with general exams, learn how to administer medications, and learn how to educate patients. Students will also learn to apply medical terminology and learn about diagnostic and treatment modalities for each body system. Emphasis is on OB-GYN, neurological, gastroenterology, dermatology, pediatric, geriatric, and eye and ear procedures. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (MEDA 135 or concurrently) and (MEDA 156A or concurrently).
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 4.
- Corequisite Course: MEDA 110B.
- Course Note: Minimum age of 18 required to enroll in this course.

MEDA 166 MA Clinical Procedures II

Credit Hours: 5 / Billing Hours: 7

The student medical assistant will learn how to obtain laboratory specimens, perform point-of-care testing, apply outpatient treatments, and assist with clinical procedures typically performed in a clinical office setting. Obtaining and processing blood and body fluid specimens are a large portion of this course. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (MEDA 110A and MEDA 110B and MEDA 135 and MEDA 156A and MEDA 156B).
- Placement Score: None.
- Corequisite Course: MEDA 126A and MEDA 126B and MEDA 145 and NCHE 102.
- Course Note: Minimum age of 18 required to enroll in this course.

2024-2025 Course Descriptions

MEDA 175 MA Certification Review

Credit Hours: 3 / Billing Hours: 3

In this capstone course, the student will review both clinical and administrative skills to prepare to take the Registered Medical Assistant (RMA) examination through the American Medical Technologist (AMT) certification agency. The student will also learn professional employability skills, including resume writing and effective interviewing techniques. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in all previous required MEDA courses.
- Placement Score: None.
- Corequisite Course: MEDA 177A and MEDA 177B.

MEDA 177 MA Practicum Immersion

Credit Hours: 3 / Billing Hours: 3

The practicum requires placement at an ambulatory care facility. Students will be exposed to administrative and clinical skills required of the profession and will perform activities under the direct supervision of a preceptor. A minimum of 160 clock hours is required.

Prerequisite Courses: Minimum 2.5 in (MEDA 126 and MEDA 145 and MEDA 166).

- Prerequisite Course: Minimum 2.5 in (MEDA 126 and MEDA 145 and MEDA 166).
- Placement Score: None. Program approval is required.
- Corequisite Course: MEDA 175.
- Course Note: Minimum age of 18 required to enroll in this course. Students will be charged a \$50 fee for ACEMAPP required documentation.

MEDA 177A MA Practicum Immersion I

Credit Hours: 1 / Billing Hours: 1

The first of two practicum modules that requires placement at an ambulatory care facility. Students will be exposed to administrative and clinical skills required of the profession and will perform activities under the direct supervision of a preceptor. A minimum of 54 clock hours is required for this module. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in (MEDA 126A and MEDA 126B and MEDA 145 and MEDA 166).
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 4.
- Corequisite Course: MEDA 175 and MEDA 177B.
- Course Note: Minimum age of 18 required to enroll in this course. Students will be charged a \$50 fee for ACEMAPP required documentation.

2024-2025 Course Descriptions

MEDA 177B MA Practicum Immersion II

Credit Hours: 2 / Billing Hours: 2

The second of two practicum modules that requires placement at an ambulatory care facility. Students will be exposed to administrative and clinical skills required of the profession and will perform activities under the direct supervision of a preceptor. A minimum of 106 clock hours is required for this module. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in (MEDA 126A and MEDA 126B and MEDA 145 and MEDA 166) and (MEDA 177A or concurrently).
- Placement Score: Reading Level 5 and Writing Level 4 and Math Level 4.
- Corequisite Course: MEDA 175 and MEDA 177A.
- Course Note: Minimum age of 18 required to enroll in this course.

METD 100 Basic Mechanical Drafting

Credit Hours: 3 / Billing Hours: 4

This course teaches the fundamental concepts of drafting and design using sketches and manual drafting skills. The student will learn the basics of orthographic projection, lettering, sketching, dimensioning techniques, and much more. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

METD 105 PC Applications for Technology

Credit Hours: 3 / Billing Hours: 4

This course provides an introduction to PCs as used in a technical-industrial setting. Basic computer hardware knowledge and simple file management practices are taught. Students will use Windows, the Internet, word processing, spreadsheet, presentation, and database software. Students will also be introduced to CAD software. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.

2024-2025 Course Descriptions

METD 110 Mechanical CAD Drafting I

Credit Hours: 4 / Billing Hours: 6

This is an introductory course in mechanical drafting and computer aided drafting using CAD software . Instruction includes orthographic projection, auxiliary views, secondary auxiliary view projections, sections, dimensioning techniques, and printing. Students will complete a series of drawings on the computer to demonstrate understanding of the concepts presented. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in METD 100 or Mechanical Drafting Placement Test 80%.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

METD 111 Mechanical CAD Drafting II

Credit Hours: 4 / Billing Hours: 6

This course covers advanced drafting and design techniques needed to project successive auxiliary views from various orthographic views. Layout and design concepts will also be stressed. Students will use computers with CAD software to complete practical design projects in problem solving and creativity applicable to the automotive, industrial, and/or aerospace industries. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in METD 110.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.

METD 130 Geometric Dimension/Tolerance

Credit Hours: 4 / Billing Hours: 6

This course covers the principles and methods of dimensioning and tolerancing for specific design requirements on engineering drawings. Uniform practices for stating and interpreting these requirements will be stressed. Content includes use and understanding of the symbolic method of specification relating to tolerances being applied using ASME/ANSI M14.5Y 1994 standards. (Offered as needed)

- Prerequisite Course: Minimum 2.0 in METD 100 or Mechanical Drafting Placement Test 80%.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

METD 150 Industrial Blueprint Reading

Credit Hours: 3 / Billing Hours: 3

This course covers basic concepts in orthographic projection, with emphasis on interpretation of engineering drawings. Areas also covered include measurement systems, technical sketching, dimensioning, sectional and auxiliary views, and tolerancing. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Recommended: METD 100.

METD 170 Special Topics/Eng & Design Credit Hours: 0.25 to 8 / Billing Hours: 0.25 to 11

This course offers students the opportunity to learn new or advanced skills in Computer Aided Drafting and Design and other related topics. Specific content may vary with each offering and will be related to the Computer Aided Drafting and Design Program and profession. (Offered Fall, Spring, Summer)

- Prerequisite Course: Determined by Section.

METD 220 Basic Unigraphics/NX

Credit Hours: 4 / Billing Hours: 6

This is the first of a two-semester course sequence that covers the fundamentals of the Unigraphics System of interactive design. This course covers comprehensive CAD concepts of 2-D and 3-D construction and basic solid modeling, as well as some of the concepts of drafting. Prior CAD system experience is required. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in METD 110.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.

METD 221 Advanced Unigraphics/NX

Credit Hours: 4 / Billing Hours: 6

This is the second of a two-semester course sequence that covers the design and construction of sophisticated solid models of complex assemblies and components, and the production of dimensioned and toleranced engineering drawings of those components. Advanced concepts of Unigraphics modeling will be discussed and utilized in class projects. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in METD 220.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 5.

2024-2025 Course Descriptions

METD 240 Basic NX Machining

Credit Hours: 4 / Billing Hours: 5

Basic NX Machining will use or modify existing models or boundaries to stage parts or wave-linked geometry for fixed axis or multi axis mill turning operations. Specific NX machining strategies will be purposed and output for target machine tool types for application of post processing. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (METD 220 and METM 108).
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.
- Course Note: This course was formerly METM 240.

METD 250 Detailing Assembly Drawings

Credit Hours: 4 / Billing Hours: 6

This course builds on previous courses giving students an advanced understanding of assemblies and the details pulled from CAD assemblies. Students will also be able to identify how machine processes and various types of dies and components are used to create parts and assemblies. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in METD 130.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.

METD 265 Basic CAD FEA Simulation

Credit Hours: 4 / Billing Hours: 6

NX finite element analysis method is used in conjunction with the application of mesh to analyze part design performance due to the impact. Performance behavior is executed on the product based overall strength, resistance to buckling, and thermal response to external force. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (METD 221 or METD 250).
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.

METD 295 Engineering/Design Project Lab

Credit Hours: 1 to 4 / Billing Hours: 1 to 4

This course is intended to give advanced drafting and design students an opportunity, through mutual agreement between student and instructor, to complete project(s) on one of several available CAD systems. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

METM 100 Manufacturing Processes

Credit Hours: 3 / Billing Hours: 4.5

This course provides students with a comprehensive study of the materials, concepts, and processes used in modern manufacturing which is augmented by field trips to local manufacturing plants. This course is designed for those who are pursuing careers in manufacturing design, engineering, and supervision. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 4.
- Recommended: MATH 105 or MATH 106 or P in (NCMA 106 or NCMA 110) or Math Level 4.

METM 108 Machine Tool Operations

Credit Hours: 4 / Billing Hours: 6

This course will inform students of the machine tool principles used in industry. Safety, measurement, and procedures will be used to complete projects. A working knowledge of hand and machine tools is achieved through a series of lectures, demonstrations, and hands-on projects. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

METM 112 Introduction to CNC Machining

Credit Hours: 4 / Billing Hours: 6

Introduces computerized numerical control equipment with hands-on programming, set up, and operation of the CNC Lathe and Mill. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in METM 108 within 2 years.
- Placement Score: Reading Level 3 and Writing Level 4 and Math Level 4.

METM 150 Advanced CNC Machining

Credit Hours: 4 / Billing Hours: 6

In this course, students will set up and operate CNC lathes, CNC mills, and grinding equipment, write CNC programs, identify and select tooling, and perform precision measurements. Topics covered include safety and preventive maintenance, the eight basic functions of a CNC machine control, and high speed machining processes. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in [METM 110 or (METM 112 within 2 years)].
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.

2024-2025 Course Descriptions

METM 170 Special Topics/Precision Mach Credit Hours: 0.25 to 8 / Billing Hours: 0.25 to 11

This course offers students the opportunity to learn new or advanced skills in Precision Machining and Maintenance and other related topics. Specific content may vary with each offering but will be related to the Precision Manufacturing Technology Program and profession. (Offered Fall, Spring, Summer)

- Prerequisite Course: Determined by Section.

METM 171 Special Topics/Machining Credit Hours: 0.25 to 8 / Billing Hours: 0.25 to 11

This course offers students the opportunity to learn new or advanced skills in Precision Machining and Maintenance and other related topics. Specific content may vary with each offering but will be related to the Precision Manufacturing Technology Program and profession. This course will be offered on a Pass/Fail basis. (Offered Fall, Spring, Summer)

- Prerequisite Course: Determined by Section.

METM 190 Metallurgy and Heat Treatment Credit Hours: 4 / Billing Hours: 6

This course introduces the science of metallurgy, a domain of materials science that studies the physical and chemical behavior of metallic elements. Students acquire a working knowledge of the properties, uses and heat treat processes of commonly used metals and alloys. Topics are explored through lecture and laboratory analysis. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Recommended: High School Chemistry or CHEM 125.

METM 195 Quality/Metrology/Inspection Credit Hours: 4 / Billing Hours: 6

This pre-engineering course introduces the science of precision measurement, focusing on accuracy and application as well as problem solving as it relates to dimensional metrology. Topics include measurement processes and feasibility, industry standards, and operation of the Coordinate Measuring Machine. Quality systems, calibration systems, and Statistical Process Control are also explored. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (METM 108 or METM 110).
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.

2024-2025 Course Descriptions

METM 220 Basic Mastercam

Credit Hours: 4 / Billing Hours: 6

Mastercam is a powerful graphics based programming software for CNC machine tools. Mastercam software is designed to generate CNC programs from mechanical CAD drawings. Students will use Mastercam to solve CNC programming problems in both 2-D and 3-D environments and run selected programs on CNC equipment. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (METM 108 or METM 110).
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4.

METM 221 Advanced Mastercam

Credit Hours: 4 / Billing Hours: 6

The student will learn the advanced CNC programming functions of the MasterCAM software. The successful student will be able to design, program, and run 3-dimensional CNC programs and check the toolpath using the MasterCAM verify toolpath function. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in METM 220.
- Placement Score: Reading Level 3 and Writing Level 4 and Math Level 4.

METM 295 Precision Machine Project Lab

Credit Hours: 1 to 4 / Billing Hours: 1 to 8

An advanced course for students wishing to do in-depth work in the machine shop area or to develop trade-entry skills. Students select projects compatible with their individual fields of work. (Approval may be given to take this course twice for a maximum of eight credits.) (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

METS 110 Mechanical Power Transmissions

Credit Hours: 4 / Billing Hours: 6

This course will teach theory and industrial application of power transmission gear drive systems, chain drive systems, belt drive systems, couplings, clutch and brake and more. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (METS 102 or DCTM 102 or ELTE 102 or HVAC 102 or TECH 102 or WELD 102 or concurrently).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

METS 115 Intro to Mechanical Systems

Credit Hours: 4 / Billing Hours: 6

This course introduces the student to the theory and selection criteria for mechanical power systems. Topics discussed include pneumatics, hydraulics, and mechanical drives. Lectures include fundamentals and real life applications in designing basic systems. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

METS 120 Industrial Pneumatics

Credit Hours: 4 / Billing Hours: 6

An introduction to the concepts, principles, and components of industrial pneumatic systems, this course covers gas laws, theory of air compression, regulators, filters, valves, actuators, electro-pneumatic and pneumatic circuits with emphasis on pneumatic diagrams and circuit design. Lectures, labs and troubleshooting give students a hands-on approach in the field of pneumatics. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (METS 102 or DCTM 102 or ELTE 102 or HVAC 102 or TECH 102 or WELD 102) or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

METS 125 Intro to Hydraulics/Pneumatics

Credit Hours: 4 / Billing Hours: 6

This course introduces the student to the theory of basic hydraulic and pneumatic principles as they relate to automated systems. Topics include application of components, causes of malfunctions in the system, and system troubleshooting strategies. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (METS 102 or DCTM 102 or ELTE 102 or HVAC 102 or TECH 102 or WELD 102) or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

METS 130 Industrial Hydraulics

Credit Hours: 4 / Billing Hours: 6

Industrial hydraulics introduces the theory of fluid power and circuits covering pumps, pressure valves, flow valves, cylinders, filters and motors, etc., as they are used in industry today. This will be done with lectures and labs related to each of the respective components. (Offered Spring)

- Prerequisite Courses: Minimum 2.0 in (METS 102 or DCTM 102 or ELTE 102 or HVAC 102 or TECH 102 or WELD 102 or concurrently).
- Placement Scores: Reading Level 4 and Writing Level 4 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

METS 140 Rigging

Credit Hours: 3 / Billing Hours: 4.5

This course covers uses and strengths of ropes, chains, block and tackles, and the construction and erection of gin poles, with a study of rope knots used in rigging and cranes. Safe working strength of slings, hooks, sheaves, ropes and chains, and the use of personal safety equipment will be covered. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (METS 102 or DCTM 102 or ELTE 102 or HVAC 102 or TECH 102 or WELD 102) or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: \$20 of the Course Fee is non-refundable.

METS 145 Automated Systems

Credit Hours: 3 / Billing Hours: 4.5

This course introduces students to automated system basics, including electrical components, mechanical components, electrical drives, pneumatic and hydraulic control circuits, and programmable logic controllers (PLCs). The student will be able to troubleshoot a complex mechatronics system and correct malfunctions. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in [ELTE 109 and (ELTE 130 or ELTE 131 or concurrently)] and (METS 125 or concurrently).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.

2024-2025 Course Descriptions

METS 160 Introduction to Robotics

Credit Hours: 3 / Billing Hours: 4.5

The purpose of this course is to introduce students to industrial robot fundamentals with regards to safety, types, applications, programming, operation, and troubleshooting. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (METS 102 or ELTE 102 or DCTM 102 or HVAC 102 or TECH 102 or WELD 102) or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

METS 161 Intro to FANUC Robotics

Credit Hours: 3 / Billing Hours: 4.5

The purpose of this course is to introduce students to industrial robot fundamentals with regards to safety, types, applications, programming, operation, and troubleshooting. This course will focus on FANUC robots but ABB robots will also be introduced. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 In TECH 102 or concurrently.
- Placement Score: Reading Level 3, Writing Level 4, and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

METS 162 Intro to ABB Robotics

Credit Hours: 3 / Billing Hours: 4.5

The purpose of this course is to introduce students to industrial robot fundamentals with regards to safety, types, applications, programming, operation, and troubleshooting. This course will focus on ABB robots but FANUC robots will also be introduced. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in TECH 102 or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and MATH Level 3 or [minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110)].

METS 170 Special Topics/Mechanical Sys Credit Hours: 0.25 to 8 / Billing Hours: 0.25 to 11

This course offers students the opportunity to learn new or advanced skills in Manufacturing and other related topics. Specific content may vary with each offering but will be related to the Manufacturing Program and profession. (Offered Fall, Spring, Summer)

- Prerequisite Course: Determined by Section.

2024-2025 Course Descriptions

METS 210 Lubrication and Bearings

Credit Hours: 4 / Billing Hours: 6

This course covers lubricant applications as applied to industrial equipment including the type, frequency, and amount needed. Participants will troubleshoot centralized lubrication systems, learn to set up an oil management program, remove and install bearings, and identify bearing failures. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (METS 102 or DCTM 102 or ELTE 102 or HVAC 102 or TECH 102 or WELD 102) or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

METS 250 Gen. Prevent/Predictive Maint

Credit Hours: 3 / Billing Hours: 4.5

This course will introduce the learner to the various types and styles of predictive and preventive maintenance components used in industrial applications. It focuses on aspects of machine maintenance. Activities include regular and routine cleaning, lubricating, testing, checking for wear and tear, and eventually replacing components to avoid breakdown. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (METS 102 or ELTE 102 or DCTM 102 or HVAC 102 or TECH 102 or WELD 102) or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: \$100 of the Course Fee is non-refundable.

METS 260 Advanced Robotics Capstone

Credit Hours: 3 / Billing Hours: 4.5

The purpose of this class is to build on the students' basic robotic knowledge, to include robot vision systems, robot safety zones and interlocks, and advanced programming. This will all culminate with a capstone project that will incorporate electrical, mechanical, fluid power, robotic, and PLC systems. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in [(METM 108 and METS 125 and METS 160) and (ELTE 260 and METS 145 or concurrently)].
- Placement Score: Reading Level 3 and Writing Level 4 and Math Level 4.
- Course Note: \$20 of the Course Fee is non-refundable.

2024-2025 Course Descriptions

METS 290 Manufacturing Internship Credit Hours: 2 to 4 / Billing Hours: 2 to 4

This course provides Manufacturing students with practical work experience in industry. Students work for an employer in a supervised environment which provides an opportunity to apply knowledge and skills learned in the classroom and lab to an actual job situation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Recommended: 2.5 GPA or greater.

METS 295 Mechanical Systems Project Lab Credit Hours: 1 to 4 / Billing Hours: 1 to 4

An advanced course for students wishing to do in-depth work in the mechanical systems/machine maintenance area or to develop trade-entry skills. Students select projects compatible with their individual fields of work. (Approval may be given to take this course twice for a maximum of eight credits.) (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

MGMT 150 Managing Customer Relations Credit Hours: 3 / Billing Hours: 3

This course is designed to help customer service workers and managers explore the dynamics of customer service and customer relations. The course includes strategies for providing for customer's needs, behavioral skills and knowledge for effective customer service, verbal and non-verbal skills for effective customer communication, and techniques for measuring success. Focus is on the dynamics of building successful relationships. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

2024-2025 Course Descriptions

MGMT 200 Creative Thinking for Business

Credit Hours: 3 / Billing Hours: 3

This course takes an experiential approach to helping students understand and explore elements of the creative process. It is designed to develop skills, eliminate barriers, and allow students to apply thinking skills to business situations. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).
- Recommended: Have taken two or more BUSN or MGMT courses, or have business experience.

MGMT 201 Time Management for Business

Credit Hours: 1 / Billing Hours: 1

Learners will discover basic principles and techniques of time management that can be applied to both personal and professional situations. Students will learn how to manage time using tools and techniques to maximize productivity. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

MGMT 202 Managing Difficult People

Credit Hours: 1 / Billing Hours: 1

This course provides practical strategies to overcome negativity and difficult behaviors of people in the workplace. This includes defining types of difficult employees, understanding an intervention model, and addressing difficult behaviors. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

2024-2025 Course Descriptions

MGMT 223 Supervisory Skills

Credit Hours: 3 / Billing Hours: 3

This course presents supervisory principles and practices for first-line supervisors. Emphasis is on developing interpersonal and first line supervisory skills. Managerial functions are introduced, along with policies, decision-making, and the responsibilities of supervisors for overall work performance and employee development and evaluation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

MGMT 224 Human Resource Management

Credit Hours: 3 / Billing Hours: 3

This course examines the role of human resources management and its contribution to the total organizational effort. Emphasis will be placed on the evolution of human resource management, recruitment and selection, improving performance, compensation and incentives, safety and health, employee-management relations, and current legislation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

MGMT 225 Principles of Mgmt/Leadership

Credit Hours: 3 / Billing Hours: 3

Designed to reflect the dynamics of our changing world, this course covers such topics as management/leadership functions/processes, quality, ethics, global issues and the challenges and opportunities of diversity. Emphasis is on theories and skills of management and leadership at the mid-organizational level. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

2024-2025 Course Descriptions

MGMT 227 Training/Development for Busn

Credit Hours: 3 / Billing Hours: 3

This course is designed to cover all aspects of training in the business environment.

Participants focus on assessing training needs, identifying training barriers, curriculum design, instructional techniques, evaluation, and adult learning theory. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in MGMT 224 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

MGMT 228 Organization Behavior

Credit Hours: 3 / Billing Hours: 3

Examines the dynamics of relationships at work. Integrates and applies behavioral and social science knowledge using a systems approach, and focuses on the nature of both people and organizations. Students will study individual and group behavior and will have opportunities to work on skills necessary for successful interaction in organizations. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) .
- Recommended: MGMT 223 or MGMT 224 or MGMT 225.

MGMT 229 Compensation Management

Credit Hours: 3 / Billing Hours: 3

Students will gain a practical understanding of the principles and applications of compensation management. Students will study the theories, behaviors, and legal constraints affecting compensation practices, including job analysis, job evaluation methodologies, labor market surveys, variable pay approaches, and the administration of legally mandated and voluntary employee benefit programs. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in MGMT 224.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).
- Recommended: LABR 204.

2024-2025 Course Descriptions

MGMT 231 Developing and Leading Teams

Credit Hours: 3 / Billing Hours: 3

This course defines and examines team building, team leadership, and self-managed teams in the context of today's workplace. Students develop skills in writing team mission and vision statements, team goals, and action assignments. Chartering, problem solving, decision-making, conducting effective meetings, work sessions, negotiating, and presenting are also explored. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

MGMT 234 Diversity in the Workplace

Credit Hours: 3 / Billing Hours: 3

This course explores cultural, gender/sexual, physical, and other minority experiences in the workplace and in the world. The management of human resources will be examined from a domestic and global perspective. Emphasis is on helping the majority group and the minority group become aware of the other's opinions, feelings, and perspectives. Instruction takes an experiential, awareness training approach. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

MGMT 237 Managing/Continual Improvement

Credit Hours: 3 / Billing Hours: 3

This course provides an introduction to concepts of quality, continual improvement, systems thinking, and other new management practices. The history of the quality movement including key thinkers/leaders is covered. Methods for continual improvement teams, learning organizations, and new ways of thinking and leading are explored. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently) and Math Level 4.

2024-2025 Course Descriptions

MGMT 280 Mgmt/Leadership Internship

Credit Hours: 3 / Billing Hours: 3

This course provides an opportunity to apply classroom learning to a career-related position by working a minimum of 160 hours at an approved work site. A student may do an internship at their own job only if the duties are new, management or leadership related, and provide an appropriate learning situation. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval Required.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently) and Writing Level 4.
- Recommended: Have completed a minimum of 30 Credits.

MGMT 300 Leading for Possibility

Credit Hours: 3 / Billing Hours: 3

Provides an overview of the changing roles of leadership within an organization and lays a foundation for exploration of the emerging roles and functions of leadership in today's changing environments. Theories and skills are applied to a variety of organizational settings. (Offered Fall, Spring)

- Prerequisite Courses: None.
- Placement Scores: Reading Level 5 and Writing Level 6.

MGMT 304 Organization Development

Credit Hours: 3 / Billing Hours: 3

Based on the assumption that all managers and leaders must recognize, plan for, and manage organizational change, this course examines the process of improving organization effectiveness by means of a systematic change program. Students practice identifying problems, selecting appropriate interventions, building action plans, and developing facilitator skills. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

MGMT 329 Advanced Mgmt Communication

Credit Hours: 3 / Billing Hours: 3

This course explores the importance of ethical and effective communication at the managerial and organizational level of organizations. The course examines strategies for more effective listening, oral, and written communication in business. It explores the ways managers can influence positive strategies for overcoming communication obstacles and recognize the benefits of conflict. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (COMM 110 or COMM 120 or COMM 130) or Department Approval.
- Placement Score: Reading Level 5 and Writing Level 6.

MGMT 332 Ethics: Assumpt for the Future

Credit Hours: 3 / Billing Hours: 3

This course is designed to sensitize participants to the impact of ethics on decision-making. Participants will examine values and assumptions, both personal and organizational, which influence management and leadership style. Exploration of the importance of intention and right relationships in strategy and the creation of the future workplace is also included. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

MGMT 335 Managerial Statistics

Credit Hours: 3 / Billing Hours: 3

This course covers applications of statistical tools and techniques to improve managerial decision-making processes. It includes basic descriptive statistics and graphing techniques, probability, probability distributions, hypothesis testing, analysis of variance, regression analysis, time series and forecasting models. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (MATH 120 or STAT 170) or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently).

2024-2025 Course Descriptions

MGMT 337 Advanced Human Resource Mgmt

Credit Hours: 3 / Billing Hours: 3

Human resource skills are developed at an advanced level. Workplace relationships between employee, manager, human resource department, and the organization are analyzed in areas of leadership and motivation, legal compliance, performance planning and evaluation, union-management dynamics, and recognition and reward practices. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in MGMT 224 or Department Approval.
- Placement Score: Reading Level 5 and Writing Level 6.

MGMT 345 Context and Transformation

Credit Hours: 3 / Billing Hours: 3

This course is designed to help people of vision and courage examine the beliefs, principles, and behaviors which drive organizations. In seminar format, participants investigate possibilities for new ways of thinking together, focusing on emerging perspectives of ourselves, our organizations, our communities, and our world. Students explore the growing importance of environment in creating a context for transformation. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

MILS 110 Introduction to the Army

Credit Hours: 1 / Billing Hours: 1

This course addresses duties and responsibilities of the Army officer and noncommissioned officer, and organizational structure of the Army, Army Reserve, and National Guard. Students will also explore the Army's role in joint operations, Army values, leadership, customs and traditions. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.
- Course Note: Call MSU Department of Military Science at 517-355-1913, for specific information regarding the Military Science program.

2024-2025 Course Descriptions

MILS 111 Introduction to the Army-Lab

Credit Hours: 1 / Billing Hours: 2

The Leadership Laboratory augments the Army ROTC academic curriculum by providing hands-on practice of subjects taught in the Military Science classes. Students receive feedback from department staff regarding their leadership performance within the unit structure. Students seeking a commission with the United States Army are highly encouraged to take the laboratories. Over the continuum of the Military Science courses, cadets practice individual movement techniques and field craft, small unit tactics, operations planning and execution, culminating with operational-level organizational management. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.
- Course Note: Call MSU Department of Military Science at 517-355-1913, for specific information regarding the Military Science program.

MILS 120 Foundations of Army Leadership

Credit Hours: 1 / Billing Hours: 1

Topics include: fundamentals of basic Army leadership, military problem solving process, military briefing and writing skills, and goal setting and time management. Students are also introduced to the Army's developmental counseling program. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: Call MSU Department of Military Science at 517-355-1913, for specific information regarding the Military Science program.

2024-2025 Course Descriptions

MILS 121 Fndtion of Army Leadership-Lab Credit Hours: 1 / Billing Hours: 2

The Leadership Laboratory augments the Army ROTC academic curriculum by providing hands-on practice of subjects taught in the Military Science classes. Students receive feedback from department staff regarding their leadership performance within the unit structure. Students seeking a commission with the United States Army are highly encouraged to take the laboratories. Over the continuum of the Military Science courses, cadets practice individual movement techniques and field craft, small unit tactics, operations planning and execution, culminating with operational-level organizational management. (Offered Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: Call MSU Department of Military Science at 517-355-1913, for specific information regarding the Military Science program.

MILS 210 Army Doctrine & Team Develpmnt Credit Hours: 2 / Billing Hours: 2

Students will examine military case studies, critical dilemmas in combat situations and the ethical decisions Army leaders make to ensure mission success to develop an understanding of how to improve Army organizations and soldier performance. The Army's leadership development program, battle drills, land navigation, and combat decision making are also addressed. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.
- Course Note: Call MSU Department of Military Science at 517-355-1913, for specific information regarding the Military Science program.

2024-2025 Course Descriptions

MILS 211 Army Doctrine/Team Develop-Lab Credit Hours: 1 / Billing Hours: 2

The Leadership Laboratory augments the Army ROTC academic curriculum by providing hands-on practice of subjects taught in the Military Science classes. Students receive feedback from department staff regarding their leadership performance within the unit structure. Students seeking a commission with the United States Army are highly encouraged to take the laboratories. Over the continuum of the Military Science courses, cadets practice individual movement techniques and field craft, small unit tactics, operations planning and execution, culminating with operational-level organizational management. (Offered Fall)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: Call MSU Department of Military Science at 517-355-1913, for specific information regarding the Military Science program.

MILS 220 Mil Leadership & Decision Making Credit Hours: 2 / Billing Hours: 2

This course uses military case studies to study challenging situations for military leaders and units, and understand how to apply sound ethical leadership practices to implement decisions. Students will also develop an understanding of basic military small unit tactics. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None; Department Approval Required.
- Course Note: Call MSU Department of Military Science at 517-355-1913, for specific information regarding the Military Science program.

2024-2025 Course Descriptions

MILS 221 Mil Ldrshp/Decision Making-Lab Credit Hours: 1 / Billing Hours: 2

The Leadership Laboratory augments the Army ROTC academic curriculum by providing hands-on practice of subjects taught in the Military Science classes. Students receive feedback from department staff regarding their leadership performance within the unit structure. Students seeking a commission with the United States Army are highly encouraged to take the laboratories. Over the continuum of the Military Science courses, cadets practice individual movement techniques and field craft, small unit tactics, operations planning and execution, culminating with operational-level organizational management. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None; Department Approval Required.
- Course Note: Call MSU Department of Military Science at 517-355-1913, for specific information regarding the Military Science program.

MKTG 119 Mktg/Manage Your Profess Image Credit Hours: 3 / Billing Hours: 3

This course is a complete guide to professional etiquette practices to increase career advancement opportunities. Students will learn critical tools for building a professional image as well as solid, productive relationships. Students will develop a personal image development plan designed to meet workplace challenges with confidence and poise. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

MKTG 120 Sales Credit Hours: 3 / Billing Hours: 3

This course presents selling fundamentals for how companies and individuals communicate value and obtain desired results through the process of personal selling, customer relationship management, sales management, and resources utilization, to advance the sales process. This is an application course designed for students to learn selling techniques that they can immediately practice within their careers. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

MKTG 130 Retailing

Credit Hours: 3 / Billing Hours: 3

This course is an introduction to the retail merchandising environment and its relationship to consumer demographics, trends, and traditional/nontraditional retailing markets. Students will explore historical and modern retailing methodologies including challenges of operating in local to global marketplaces. Career opportunities in retailing are examined. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

MKTG 140 Principles of Advertising

Credit Hours: 3 / Billing Hours: 3

Methods and techniques used in modern advertising. Information on the entire advertising function. Preparation of an advertising campaign will be required to facilitate hands-on understanding of the component parts which include marketing review, marketing plan, creative strategy, and media selection. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

MKTG 200 Principles of Marketing

Credit Hours: 3 / Billing Hours: 3

Most define marketing as advertising, yet that is only one element in what is known as the Marketing Mix, comprised of product, price, promotions, and more. However, marketing involves market research and demographic strategy to identify customer needs, target audiences, positioning, distribution channels, and promotion methodologies. Students will learn the fundamentals of marketing through case studies and the practical application of marketing tactics. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: BUSN 118.

2024-2025 Course Descriptions

MKTG 204 Marketing Research

Credit Hours: 3 / Billing Hours: 3

This course examines key concepts and methods of marketing research for students to understand how to apply methodological tools to solve real-life business problems. Students will learn research design techniques including problem identification, qualitative and quantitative data collection and sampling, analysis, interpretation, and the applications of marketing research. Students will design and execute a marketing research project. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in MKTG 200.
- Placement Score: Reading Level 5 and Writing Level 6.

MKTG 210 Intro to Digital Marketing

Credit Hours: 3 / Billing Hours: 3

This course will explore the impact of information technology on the practice of marketing. Course content focuses on the internet and its culture and procedures from a marketing perspective, and will include using the internet for customer contact and customer service. Focus areas include, but are not limited to, understanding digital tools such as Canva, Search Engine Optimization, AI and ChatGPT, Boolean, and Google Analytics. This class uses extensive hands-on activities. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: MKTG 200 and basic understanding of computers and their use on the Internet.

MKTG 229 Public Relations

Credit Hours: 3 / Billing Hours: 3

This course provides the student with a working knowledge of the theories, techniques, and processes of public relations, including means of influencing methods of building good will, analysis of media, obtaining publicity, and implementation of public relations programs. Students will learn the importance of cultivating key relationships with media personnel, writing press releases, and crisis management. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

MKTG 235 Marketing Internship

Credit Hours: 3 / Billing Hours: 3

This course provides an opportunity to apply classroom learning to a career-related position by working a minimum of 160 hours at an approved work site. A student may do an internship at their own job only if the duties are new, marketing related, and provide an appropriate learning situation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Recommended: Have completed a minimum of 30 credits.

MRIT 200 Professional Prospectus

Credit Hours: 1 / Billing Hours: 0

This course serves to orientate the MRI student to the profession of medical imaging. Students will explore the integration of MRI within the encompassing health care system. The evolution of MRI as a profession will be investigated with students classifying various organizations and agencies that drive the development and continuing education of the MRI technologist's role and responsibilities. (Offered Summer)

- Prerequisite Course: None. Admission to the EPiC Magnetic Resonance Imaging Program is required.
- Placement Score: None.
- Corequisite Course: MRIT 229 and MRIT 260.

MRIT 201 Computer Apps/Medical Imaging

Credit Hours: 3 / Billing Hours: 0

This course serves to provide the MRI student with a basic understanding of computer applications. Students will explore the components, principles, and operation of digital imaging systems, image data management, and data manipulation as it relates to the imaging department. Students will also explore the basic concepts of patient information management including medical record concerns, patient privacy, and regulatory issues. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (MRIT 200 and MRIT 229 and MRIT 260).
- Placement Score: None.
- Corequisite Course: MRIT 220 and MRIT 230 and MRIT 261.

2024-2025 Course Descriptions

MRIT 220 MR Physics I

Credit Hours: 3 / Billing Hours: 0

This is the first in a series of two courses that provide the MRI student with a basic foundation of MRI physics. Students will explore the properties of atoms and their interactions within the magnetic field. Emphasis will be placed on the basic principles of MRI, data acquisition, and tissues characteristics in image formation. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (MRIT 200 and MRIT 229 and MRIT 260).
- Placement Score: None.
- Corequisite Course: MRIT 201 and MRIT 230 and MRIT 261.

MRIT 222 MR Physics II

Credit Hours: 3 / Billing Hours: 0

This is the final physics course in a series of two. The course content is a continuation of Physics I concepts including pulse sequencing, applications, coil selection as it relates to scan selection, calculation of scan times, scan parameters and imaging factors. Emphasis will be placed on the topics of gradient echoes, cardiac imaging, magnetic resonance angiography, diffusion, perfusion, and spectroscopy. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (MRIT 201 and MRIT 220 and MRIT 230 and MRIT 261).
- Placement Score: None.
- Corequisite Course: MRIT 232 and MRIT 240 and MRIT 262.

MRIT 229 Applied Sectional Anatomy

Credit Hours: 3 / Billing Hours: 0

This course is a study of human anatomy as seen in multiple planes. Students will review the gross anatomy of the entire body and identify anatomic structures in the axial, sagittal, coronal, and orthogonal planes. Emphasis will be applied to the appearance characteristics of each structure as seen on illustrations and photographic images correlated with magnetic resonance (MR) and computed tomography (CT). (Offered Summer)

- Prerequisite Course: None. Admission to the EPiC Magnetic Resonance Imaging Program is required.
- Placement Score: None.
- Corequisite Course: MRIT 200 and MRIT 260.

2024-2025 Course Descriptions

MRIT 230 MR Procedures and Pathophys I Credit Hours: 3 / Billing Hours: 0

This is the first in a series of two courses that will provide the student with considerations related to routine imaging techniques of the central nervous system (CNS) and musculoskeletal system (MSK). Students will explore the signal characteristics of normal anatomy and compare it to common pathologies. Emphasis will be placed on tissue characteristics, protocol options, and positioning considerations. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (MRIT 200 and MRIT 229 and MRIT 260).
- Placement Score: None.
- Corequisite Course: MRIT 201 and MRIT 220 and MRIT 261.

MRIT 232 MR Procedures and Pathophys II Credit Hours: 3 / Billing Hours: 0

This is the final procedures and pathophysiology course in a series of two that will provide the student with considerations related to routine imaging techniques related to the abdomen and pelvis and special imaging techniques. Students will explore the signal characteristics of normal anatomy and compare it to common pathologies. Emphasis will be placed on tissue characteristics, protocol options, and positioning considerations. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (MRIT 201 and MRIT 220 and MRIT 230 and MRIT 261).
- Placement Score: None.
- Corequisite Course: MRIT 222 and MRIT 240 and MRIT 262.

MRIT 240 MRI Image Analysis Credit Hours: 3 / Billing Hours: 0

This course provides the MRI student with the critical assessment skills necessary to recognize and identify pathology and artifacts. Students will explore the necessary parameter adjustments for differential diagnosis. Emphasis will be placed on quality control procedures, image post-processing, and image archiving. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (MRIT 201 and MRIT 220 and MRIT 230 and MRIT 261).
- Placement Score: None.
- Corequisite Course: MRIT 222 and MRIT 232 and MRIT 262.

2024-2025 Course Descriptions

MRIT 260 MRI Pre-Clinical Preparation

Credit Hours: 3 / Billing Hours: 0

This course prepares the MRI student for safe participation in clinical education within the MRI environment. Students will explore and discuss the importance of MRI safety and patient assessment. While most of the course is delivered online, students will practice and master various safety procedures in a face-to-face workshop setting. (Offered Summer)

- Prerequisite Course: None. Admission to the EPiC Magnetic Resonance Imaging Program is required.
- Placement Score: None.
- Corequisite Course: MRIT 200 and MRIT 229.

MRIT 261 Clinical Practice I

Credit Hours: 3 / Billing Hours: 0

This is the first in a series of three clinical courses that provides the necessary supervised clinical education needed for the MRI student to competently apply basic protocols, recognize when to appropriately alter the standard protocol and recognize equipment and patient considerations that affect image quality. Emphasis will be placed on patient safety and comfort while professional values, attitudes, and behaviors are upheld. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (MRIT 200 and MRIT 229 and MRIT 260).
- Placement Score: None.
- Corequisite Course: MRIT 201 and MRIT 220 and MRIT 230.

MRIT 262 Clinical Practice II

Credit Hours: 3 / Billing Hours: 0

This is the second in a series of three clinical courses that provides the necessary supervised clinical education needed for the MRI student to competently apply basic protocols, recognize when to appropriately alter the standard protocol, and recognize equipment and patient considerations that affect image quality. Emphasis will be placed on patient safety and comfort while professional values, attitudes, and behaviors are upheld. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (MRIT 201 and MRIT 220 and MRIT 230 and MRIT 261).
- Placement Score: None.
- Corequisite Course: MRIT 222 and MRIT 232 and MRIT 240.

2024-2025 Course Descriptions

MRIT 263 Clinical Practice III

Credit Hours: 3 / Billing Hours: 0

This is the final clinical course in a series of three that provides the necessary supervised clinical education needed to complete all remaining competencies required by the American Registry of Radiologic Technologists (ARRT) following the Primary Pathway requirements. Emphasis will be placed on patient safety and comfort while professional values, attitudes, and behaviors are upheld. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in (MRIT 222 and MRIT 232 and MRIT 240 and MRIT 262).
- Placement Score: None.
- Corequisite Course: MRIT 295.

MRIT 295 MRI Certification Exam Prep

Credit Hours: 3 / Billing Hours: 0

This course provides the student with instructional review and a self-examination process as preparation for the certification exam in MRI. Discussions will focus on the four content specifications for examination in magnetic resonance as outlined in the American Registry of Radiologic Technology (ARRT) primary pathway certification handbook. Students will have the opportunity to participate in an 8 hour registry review seminar. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in (MRIT 222 and MRIT 232 and MRIT 240 and MRIT 262).
- Placement Score: None.
- Corequisite Course: MRIT 263.

MSGE 110 Massage for Beginners

Credit Hours: 0.53 / Billing Hours: 1

This course provides instruction in basic relaxation massage therapy skills for non-majors. Along with a brief introduction to the history and principles of massage therapy, the student will learn to perform a professionally draped, full-body relaxation massage on a partner for health enhancement. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Must be 18 years of age.
- Placement Score: None.
- Course Note: Students are required to bring two sheets and unscented massage lotion to the first class session. If you are pregnant in your 2nd or 3rd trimester, or are receiving treatment for a diagnosed medical condition, you are required to bring a written release from your doctor to the first class session to participate in this course.

2024-2025 Course Descriptions

MSGE 131 **Massage I**

Credit Hours: 2.13/ Billing Hours: 4

This course provides foundational information on the theory and practice of massage therapy. Swedish massage techniques, with variations, are developed into a sequence for a full-body therapeutic massage for healthy adults. Topics include basic anatomy and physiology of major muscle groups and bones, massage benefits and contraindications, professional ethics, clinical charting, thermo- and cryotherapy, body mechanics, and self-care. (Offered Fall, Spring)

- Prerequisite Course: None. HS Diploma or Equivalent and Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note:
 - The Massage Program is offered in two distinct sessions that cannot be combined: a Daytime Cohort beginning in the fall and an Evening Cohort beginning in the spring.
 - Students enrolling in the Daytime Cohort will complete the program in three consecutive semesters, Fall 2024 through Summer 2025.
 - Students enrolling in the Evening Cohort will complete the program in three consecutive semesters, Spring 2025 through Fall 2025.
 - To enroll, students must be 18 years of age or older by the start of classes and must declare Massage Therapy as their major.
 - Students wishing to enroll must attend a mandatory one-hour program orientation and submit a program approval application with required supporting documentation at least two weeks prior to the start of the semester.
 - Orientation dates and the program approval application can be found on the ["Steps to Apply"](#) webpage.
 - Seats are limited and are awarded on a first come, first served basis. Contact the Health and Human Services Division Office at 517-483-1410 for more information.

2024-2025 Course Descriptions

MSGE 132 Anatomy/Physiology Massage

Credit Hours: 3.2 / Billing Hours: 6

An introductory course in human anatomy and physiology that combines lecture and laboratory experiences to provide a basic understanding of the structure and function of human body systems. It is designed for students enrolled in the Massage Program to prepare for licensing exams and professional practice.

- Prerequisite Course: None. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 132A Anatomy/Physiology Massage I Credit Hours: 2.13 / Billing Hours: 4

An introductory course in human anatomy and physiology that combines lecture and integrated assignments to provide a basic understanding of the structure and function of the skeletal, muscular, and nervous systems of the human body. It is designed for students enrolled in the Massage Therapy Program to prepare for professional practice and licensing exams. (Offered Fall, Spring)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 132B Anatomy/Physiology Massage II Credit Hours: 1.06 / Billing Hours: 2

An introductory course in human anatomy and physiology that combines lecture and laboratory experiences to provide a basic understanding of the structure and function of the cardiovascular, respiratory, endocrine, digestive, special sensory, lymphatic, immune, urinary, and reproductive systems of the human body. It is designed for students enrolled in the Massage Program to prepare for licensing exams and professional practice. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

MSGE 137 Medical Terminology in Massage

Credit Hours: 1.06 / Billing Hours: 2

This course will introduce the student to basic medical vocabulary related to the body system. Basic pharmacology will be presented with the classifications and names of common medications, as well as massage considerations for common medications. (Offered Fall, Spring)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 139 Pathology for Massage

Credit Hours: 1.06 / Billing Hours: 2

This course will introduce students to the pathology of body systems and will address the positive or negative impact that massage may have on those conditions. Students will learn to apply this knowledge to decision-making skills for client care.

- Prerequisite Course: None. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 139A Pathology for Massage I

Credit Hours: 0.53 / Billing Hours: 1

This course will introduce students to the pathology of the skeletal, muscular, and nervous systems and will address the positive or negative impact that massage may have on those conditions. Students will learn to apply this knowledge to decision-making skills for client care. (Offered Fall, Spring)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 139B Pathology for Massage II

Credit Hours: 0.53 / Billing Hours: 1

This course will introduce students to the pathology of the integumentary, cardiovascular, lymphatic, immune, endocrine, respiratory, digestive, urinary, and reproductive body systems and will address the positive or negative impact that massage may have on those conditions. Students will learn to apply this knowledge to decision-making skills for client care. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

MSGE 141 Massage Clinic I

Credit Hours: 1.33 / Billing Hours: 2.5

Students will progressively utilize the knowledge, skills, and practical experience attained throughout the Massage Program in a clinical setting and in event massage. The student will be engaged in weekly scheduled massage sessions with clients in this first of three clinical courses. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 150 Masg Special Topics

Credit Hours: 0.13 to 4.26/ Billing Hours: 0.25 to 7

This course offers students the opportunity to learn new skills and knowledge related to massage. Specific up-to-date course content will vary with each offering and will be related to massage. (Offered As Needed)

- Prerequisite Course: Determined by Section.
- Placement Score: Determined by Section.

MSGE 151 Applied Massage Techniques

Credit Hours: 2.93 / Billing Hours: 5.5

This course will introduce the student to various massage techniques and how these techniques relate to individuals with specific needs. The focus will be on designing and implementing appropriate massage techniques for chair massage, infants, pregnant women, athletes, chronic and terminally ill individuals, the elderly, and clients with psychological issues.

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 151A Research Literacy

Credit Hours: 0.8 / Billing Hours: 1.5

Students will discover the value of clinical research to the massage therapy profession by learning to identify sources of research literature in the massage therapy field, interpreting those findings, and applying the evidence to treatment planning. They will also learn how to become involved in current research. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

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Online courses may require students to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) for proctored exams. For more information, please visit the [Testing Services webpage](#).

2024-2025 Course Descriptions

MSGE 151B Event Massage

Credit Hours: 0.8 / Billing Hours: 1.5

This course prepares the student to perform corporate-venue office massage and massage prior to and following an athletic event or training session. Techniques cover table, on-site chair, and tabletop chair equipment options. Thermal injuries, the use of ice and heat to supplement the healing effects of massage, cross-fiber friction techniques, and indications, contraindications and procedures of event massage are also covered. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 151D Special Populations

Credit Hours: 0.8 / Billing Hours: 1.5

The focus of this course will be on learning information needed for designing and implementing appropriate massage therapy sessions for the chronic and terminally ill, the elderly, and clients with psychological and emotional issues. Students learn to adapt massage techniques to the needs of target populations. (Offered Fall, Summer)

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 170 Massage Directed/Indep Study **Credit Hours: 0.13 to 4.26/ Billing Hours: 0.25 to 7**

This course includes special research, projects, or directed study in massage. Massage students may enroll to update or enhance knowledge, skills, and competencies. Advanced students may explore topics related to, but not included in the curriculum. A learning contract specifying objectives, activities, outcomes, and grading methods is required. (Offered As Needed)

- Prerequisite Course: None.
- Placement Score: Determined by Section.

2024-2025 Course Descriptions

MSGE 231 Massage II

Credit Hours: 2.13 / Billing Hours: 4

This course will introduce the student to clinical massage techniques. Students will learn anatomy, physiology, and kinesiology of specific muscles of the superficial front line, superficial back line, and lateral line followed by clinical massage techniques and stretches to treat these areas. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program approval required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 232 Massage III

Credit Hours: 2.13 / Billing Hours: 4

This course will continue to introduce the student to clinical massage techniques. Students will learn anatomy, physiology and kinesiology of specific muscles of the spiral line, arm line, and deep front line followed by clinical massage techniques and stretches to treat these areas. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 235 Licensing Exam Prep

Credit Hours: 0.53 / Billing Hours: 1

This course is designed to prepare massage students or practicing massage therapists to study for national massage exams. It will review all areas of the licensing exams content and cover test taking strategies. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program Approval is required. Basic Life Support (BLS) certification from American Heart Association or American Red Cross valid through the end of the class or Passing grade in NCHE 102 or NCHE 103 within 2 years.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

MSGE 241 Massage Clinic II

Credit Hours: 1.33 / Billing Hours: 2.5

Students will progressively utilize the knowledge, skills, and practical experience attained throughout the Massage Program in a clinical setting and in an event massage. The student will be engaged in weekly scheduled massage sessions with clients in this second of three clinical courses. (Offered Spring, Summer)

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 242 Massage Clinic III

Credit Hours: 1.6 / Billing Hours: 3

Students will progressively utilize the knowledge, skills, and practical experience attained throughout the Massage Program in a clinical setting and in event massage. The student will be engaged in weekly scheduled massage sessions with clients in this last of three clinical courses. (Offered Fall, Spring, Summer)

- Prerequisite Courses: Minimum 2.5 in all previous required MSGE courses. Program Approval is required.
- Placement Scores: Reading Level 5 and Writing Level 6.

MSGE 253 Spa and Clinic Modalities

Credit Hours: 1.06 / Billing Hours: 2

This course presents a survey of various spa modalities and modalities used in medical settings. Students will learn theories and techniques of these approaches. Modalities include thermotherapy, cryotherapy, cupping, aromatherapy, hot stones, brushing, Positional Release, and instrument use. Students will also have the opportunity to investigate other modalities. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in all previous MSGE courses. Program approval required.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

MSGE 254 Busn App for Massage

Credit Hours: 1.06 / Billing Hours: 2

This course introduces students to aspects of business and marketing in the field of massage and body work. Emphasis is placed on development of a professional and personal business sense using planning and persistence, client-practitioner relationships, research, marketing strategy, goal-setting, motivation, and professional legalities. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 256 Clinical Assess for Massage

Credit Hours: 1.06 / Billing Hours: 2

This course introduces the student to a systematic method of deciding which specific massage techniques to apply and when to apply them. Students use newly acquired assessment skills to gather data to deal effectively with common musculoskeletal complaints, and then apply critical thinking skills to formulate a treatment plan that best addresses the issues identified. (Offered Fall, Summer)

- Prerequisite Course: Minimum 2.5 in all previous required MSGE courses. Program Approval is required.
- Placement Score: Reading Level 5 and Writing Level 6.

MSGE 258 Career Longevity

Credit Hours: 1.06 / Billing Hours: 2

The concepts taught in this Massage Therapy Program class teach students how to mentally and physically care for themselves in order to sustain a career as a massage therapist. Emphasis is placed on the impact of health, wellness and fitness for career longevity. General wellness principles and specific massage-related applications are also addressed. (Offered Fall, Spring)

- Prerequisite Course: None. Program approval required.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

MUSC 101 Vocal Jazz & Pop Ensemble

Credit Hours: 1 / Billing Hours: 3

A select vocal ensemble specializing in jazz and contemporary music for mixed voices. Artistic and creative vocal skills, improvisation and interpretation are developed through ensemble, small group and solo performance. Participation in two to four concerts per semester is required. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Recommended: Music reading skills.
- Course Note: A non-credit option is available for this class at a reduced rate. See the NCCE 200 listing in the Community and Continuing Education section of the College Catalog for more information.

MUSC 106 Private Music Lesson

Credit Hours: 2 / Billing Hours: 2

Concentrated one-to-one training in vocal/instrumental skills, techniques and repertory. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval Required.
- Placement Score: None.
- Corequisite Course: MUSC 121 or MUSC 122 or MUSC 123 or MUSC 124.

MUSC 108 Concert Choir

Credit Hours: 1 / Billing Hours: 3

A larger student and community member mixed voice choir exploring diverse styles, genres, repertoires and cultural traditions spanning the choral experience. General musicianship and training in choral singing are developed. Participation in two to four concerts per semester is required. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Recommended: Music reading skills.
- Course Note: A non-credit option is available for this class at a reduced rate. See the NCCE 200 listing in the Community and Continuing Education section of the College Catalog for more information.

2024-2025 Course Descriptions

MUSC 109 Studio Class

Credit Hours: 1 / Billing Hours: 1

Studio Class will include discussion of practice routines and habits, technical and stylistic problems, performance anxiety, and repertoire memorization, as well as in class performances by the students. Students enrolled in MUSC 157, 158, 257, or 258 must enroll in MUSC 109. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Corequisite Course: MUSC 157 or MUSC 158 or MUSC 257 or MUSC 258.

MUSC 122 Rock Band

Credit Hours: 1 / Billing Hours: 3

The Rock Band rehearses and performs rock music of diverse styles, including cover songs as well as original compositions and arrangements by students. The instrumentation is open to the characteristic make-up of rock ensembles, including guitar, bass, keyboard, drum-set instruments and singers. Other instrumentalists may join to expand the ensemble. Participation in two to four concerts per semester is required. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Recommended: Music reading skills.
- Course Note: A non-credit option is available for this class at a reduced rate. See the NCCE 200 listing in the Community and Continuing Education section of the College Catalog for more information.

MUSC 123 Jazz Ensemble

Credit Hours: 1 / Billing Hours: 3

The Jazz Ensemble rehearses and performs pieces of diverse styles from various periods in jazz history. Musical, interpretative and improvisational skills are developed through ensemble, small combo and solo performances. Participation in two to four concerts per semester is required. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval by Audition Required.
- Placement Score: None.
- Recommended: Music reading skills.
- Course Note: A non-credit option is available for this class at a reduced rate. See the NCCE 200 listing in the Community and Continuing Education section of the College Catalog for more information.

2024-2025 Course Descriptions

MUSC 124 Multi-Instrumental Music Ensem

Credit Hours: 1 / Billing Hours: 3

This course is dedicated to the exploration of new sound combinations of a variety of instrumentations. This ensemble welcomes players of all instrument types. Compositional, improvisational, and interpretative skills are developed through ensemble, small group, and solo performances. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Recommended: Music reading skills.
- Course Note: A non-credit option is available for this class at a reduced rate. See the NCCE 200 listing in the Community and Continuing Education section of the College Catalog for more information.

MUSC 134 Live Sound/Event Production

Credit Hours: 3 / Billing Hours: 3

Students learn to design, set-up, and operate sound reinforcement systems for live performances and events. Students will gain hands-on experience with industry-standard, professional equipment by working in a laboratory/workshop setting as technicians for musical, theatrical, and corporate/community events. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 4.

MUSC 138 Keyboard Harmony I

Credit Hours: 2 / Billing Hours: 3

Music reading skills are required for this course. Keyboard Harmony I introduces fundamental keyboard skills primarily for music majors. Students develop facility in performing scales, arpeggios, intervals, chords, inversions, and diatonic harmonic progressions in all major and some minor keys. Pieces in two- to four-part textures are performed. Harmonizing melodies, simple transposition and reading lead sheets are introduced. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in MUSC 168 or passing score on the Music Theory Placement Test.
- Placement Score: None.

2024-2025 Course Descriptions

MUSC 143 Beginning Piano I - Summer

Credit Hours: 1 / Billing Hours: 1

Course assumes no prior music experience or knowledge. Students are introduced to the rudiments of playing piano. Staff notation, rhythmic notation, correct fingering/hand positions, major scales, and primary chords are introduced. Simple two hand pieces are performed. (Offered Summer)

- Prerequisite Course: None.
- Placement Score: None.
- Recommended: Music reading skills.

MUSC 144 Beginning Piano I

Credit Hours: 2 / Billing Hours: 2

Course assumes no prior music experience or knowledge. Students are introduced to the rudiments of playing piano. Staff notation, rhythmic notation, correct fingering/hand positions, major scales, and primary chords are introduced. Simple two hand pieces are performed. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Recommended: Music reading skills.

MUSC 145 Beginning Piano II

Credit Hours: 2 / Billing Hours: 2

This course is designed to take the student up to an intermediate level of playing. Rhythmic subdivisions, more complex fingering, and new major and minor keys are introduced. Two-hand pieces are performed. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in MUSC 144.
- Placement Score: None.

2024-2025 Course Descriptions

MUSC 157 Applied Lesson I

Credit Hours: 2 / Billing Hours: 2

Concentrated one-to-one training in vocal/instrumental skills, techniques and repertory for Music majors only. Students must perform in Music Studio convocations and attend public concert events. Progression to the next level of Applied Lessons is by successfully passing a jury performance adjudicated by a Music faculty panel. (Offered Fall, Spring)

- Prerequisite Course: None. Music Major Audition Required.
- Placement Score: None.
- Corequisite Course: MUSC 109.

MUSC 158 Applied Lesson II

Credit Hours: 2 / Billing Hours: 2

Concentrated one-to-one training in vocal/instrumental skills, techniques and repertory for Music majors only. Students must perform in Music Studio convocations and attend public concert events. Progression to the next level of Applied Lessons is by successfully passing a jury performance adjudicated by a Music faculty panel. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in MUSC 157 or Music Major Audition.
- Placement Score: None.
- Corequisite Course: MUSC 109.

MUSC 163 Aural Skills I

Credit Hours: 1 / Billing Hours: 2

Music reading skills are required for this course. Aural Skills I allows students to develop their aural capacity through exercises in beginning melodic and rhythmic dictation. The ability to sing melodies on sight through the use of solfeggio will also be developed. This is the first of two courses in freshman aural skills. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in MUSC 168 or passing score on the Music Theory Placement Test.
- Placement Score: None.

2024-2025 Course Descriptions

MUSC 164 Aural Skills II

Credit Hours: 1 / Billing Hours: 2

This course allows students to develop their aural skills through intermediate exercises in melodic and rhythmic dictation. The ability to sightsing melodies through the use of solfeggio continue to be developed. This course is the second in a sequence of two freshman music major requirements. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in MUSC 163.
- Placement Score: None.

MUSC 168 Rudiments of Music

Credit Hours: 3 / Billing Hours: 3

This course introduces students and beginning musicians to the basics of reading and notating music. Fundamentals of rhythm, meter, pitch, intervals, scales, chords, keys and simple harmonic progressions are reviewed. Elements of music are explored through musical examples drawn from a variety of styles and genres. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.

MUSC 171 Sound Design & Production

Credit Hours: 4 / Billing Hours: 4

This course builds upon the fundamental audio and DAW skills achieved in DMAC 120. Students will develop advanced skills in computer-based editing, arranging, mixing, and publishing of audio programming with the Pro Tools platform. Students will also study advanced sound design principles and methods, modern concepts, and techniques for using signal processing, simple acoustics, and audio for video post-production techniques. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (DMAC 120 and MUSC 197).
- Placement Score: Reading Level 5 and Writing Level 6.

MUSC 172 Studio Recording

Credit Hours: 4 / Billing Hours: 4

This course introduces the concepts of multi-track audio recording for music and entertainment production. Students will gain a comprehensive understanding of the audio recording chain, signal path, console design/operation, microphone design function and placement to optimize audio recording, application of basic signal processing, and basic studio acoustics. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (DMAC 120 and MUSC 197).
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

MUSC 193 Music Theory I

Credit Hours: 4 / Billing Hours: 4

Freshman-level course in tonal harmony covering concepts and applications of scales, intervals, keys, rhythm, diatonic chords, inversions and basic part-writing for four voices. Harmonic progressions, cadence structures and simple forms are studied through both analysis and student composition. Introduces principles of counterpoint and jazz theory. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in MUSC 168 or passing score on the Music Theory Placement Exam.
- Placement Score: Reading Level 5 or ENGL 099 concurrently.
- Corequisite Course: MUSC 163.

MUSC 194 Music Theory II

Credit Hours: 4 / Billing Hours: 4

Third semester course in tonal harmony covering diatonic seventh chords, non-chord tones, secondary functions, modulations and larger musical forms. Focus on advancing students' skills in part-writing, analysis, score-reading and counterpoint. Concepts are applied through student composition in classical, jazz and/or popular styles. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in MUSC 193.
- Placement Score: Reading Level 5 or ENGL 099 concurrently.
- Corequisite Course: MUSC 164.

MUSC 197 Electronic Music Production

Credit Hours: 2 / Billing Hours: 3

This course is designed to introduce students to electronic music production. Students will learn the fundamental concepts of using MIDI, pre-existing loops, virtual instruments, and contemporary sequencing and synthesizer software. They will also use digital audio recording methods to augment their electronic work, creating and producing work suitable for diverse media applications. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Corequisite Course:
- Recommended: Familiarity with computers; music reading skills and familiarity with music keyboard.

2024-2025 Course Descriptions

MUSC 199 Music Appreciation

Credit Hours: 3 / Billing Hours: 3

Designed for non-music majors, this course develops well-informed, focused listening. Students are acquainted with representative composers, compositions, and musical characteristics of a variety of style periods from early music through 20th Century music from selected cultural centers including the United States and Europe. Students are required to attend live performances. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently).

MUSC 237 Musical Theater Performance

Credit Hours: 2 / Billing Hours: 3

An introductory course for vocalists and actors emphasizing applying acting techniques to song performance. Students will explore music from a preselected range of musical theatre styles. Focus is on stage presence, movement, and advancing dramatic action through the song. The class concludes with a public performance. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.
- Recommended: Music Reading Skills.
- Course Note: A non-credit option is available for this class at a reduced rate. See the NCCE 200 listing in the Community and Continuing Education section of the College Catalog for more information.

MUSC 240 Musical Cultures to 1750

Credit Hours: 4 / Billing Hours: 4

An historical and analytical survey of music and its development from Antiquity through 1750. Emphasizes an understanding of both Western and non-western genres, styles, composers and literature in relationship to historical, geographical and cultural contexts. Strengthens aural analytical skills and understanding of fundamental musical concepts. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: (Reading Level 5 and Writing Level 4) or ENGL 099 concurrently.

2024-2025 Course Descriptions

MUSC 241 Musical Cultures 1750-Present

Credit Hours: 4 / Billing Hours: 4

An historical and analytical survey of music and its development from 1750 to the present. Emphasizes an understanding of both Western and non-western genres, styles, composers, literature and emerging world musics in relationship to historical, geographical and cultural contexts. Strengthens aural analytical skills and understanding of fundamental musical concepts. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4 or ENGL 099 concurrently.

MUSC 255 Music Business & Management

Credit Hours: 3 / Billing Hours: 3

An introduction to the business aspects of the music industry. Areas covered include copyrights, contracts, trademarks, publishing, recording and record company operations, personal managers, booking agents, concert promotions, and unions. Aspects of band management are also covered, including intra-band arrangements, promotion and sales, road management, and basic organizational information. (Offered Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.

MUSC 257 Applied Lesson III

Credit Hours: 2 / Billing Hours: 2

Concentrated one-to-one training in vocal/instrumental skills, techniques and repertory for Music majors only. Students must perform in Music Studio convocations and attend public concert events. Progression to the next level of Applied Lessons is by successfully passing a jury performance adjudicated by a Music faculty panel. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in MUSC 158 or Music Major Audition.
- Placement Score: None.
- Corequisite Course: MUSC 109.

2024-2025 Course Descriptions

MUSC 258 Applied Lesson IV

Credit Hours: 2 / Billing Hours: 2

Concentrated one-to-one training in vocal/instrumental skills, techniques and repertory for Music majors only. Students must perform in Music Studio convocations and attend public concert events. A final jury or recital performance is adjudicated by a music faculty panel. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in MUSC 257 or Music Major Audition.
- Placement Score: None.
- Corequisite Course: MUSC 109.

MUSC 280 Private Composition

Credit Hours: 1 / Billing Hours: 1

Private coaching/instruction for music majors, 40 minutes per week, in musical composition, giving attention and suggestion to melody, harmony, chord substitution, and formal design. Students are required to attend live performances. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval Required.
- Placement Score: None.

MUSC 296 Music Internship

Credit Hours: 3 / Billing Hours: 3

A worksite experience that serves as a business-related course for music management students. Students will work at venues that support music performance, promotions, business, management, and/or recording. Regularly scheduled progress reports will be given and discussed with the supervising faculty member. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval Required.
- Placement Score: None.

2024-2025 Course Descriptions

MUSC 298 Composition and Sound Design

Credit Hours: 3 / Billing Hours: 3

Composition and Sound Design uses electronic based methods and techniques to compose music and sound content. Using loop/sample and synthesis-based instruments in a project-based environment, students will score compositions for film/video/broadcast, streaming, and gaming systems. The course emphasizes producing music and sound design for audio that is synchronized to picture. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in MUSC 197.
- Placement Score: None.
- Recommended: Computer experience; Music reading skills.

NCAS 102 Noncredit Academic Supprt-ENGL

Credit Hours: 0 / Billing Hours: 0

NCAS102 is a 2-hour per week, pass/fail lab open to students placing just below college-level in writing. Students co-enroll in the lab and a paired section of ENGL121. The lab follows the curriculum of the composition class and focuses on building skills in critical reading (text and visual information); writing/research strategies and processes; vocabulary expansion; and textbook navigation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.
- Corequisite Course: ENGL 121.

NCAS 103 Noncredit Academic Supprt-SOCL

Credit Hours: 0 / Billing Hours: 0

NCAS 103 is a 2-hour per week, pass/fail lab open to students enrolled in ENGL098. Students co-enroll in the lab and a paired section of SOCL 120 (Introduction to Sociology). The lab follows the curriculum of the sociology class and focuses on applying skills in critical reading (text and visual information); writing/research strategies and processes; vocabulary expansion; and textbook navigation to the Introduction to Sociology course work. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.
- Corequisite Course: ENGL 098 and SOCL 120.

2024-2025 Course Descriptions

NCAS 104 Noncredit Academic Supprt-PSYC

Credit Hours: 0 / Billing Hours: 0

NCAS104 is a 2-hour per week, pass/fail lab open to students enrolled in ENGL098. Students co-enroll in the lab and a paired section of PSYC 200 (Introduction to Psychology). The lab follows the curriculum of the psychology class and focuses on applying skills in critical reading (text and visual information); writing/research strategies and processes; vocabulary expansion; and textbook navigation to the Introduction to Psychology course work. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.
- Corequisite Course: ENGL 098 and PSYC 200.

NCAS 105 Noncredit Academic Supprt-BUSN

Credit Hours: 0 / Billing Hours: 0

NCAS105 is a 2-hour per week, pass/fail lab open to students enrolled in ENGL098. Students co-enroll in the lab and a paired section of BUSN118 (Introduction to Business). The lab follows the curriculum of the business class and focuses on applying skills in critical reading (text and visual information); writing/research strategies and processes; vocabulary expansion; and textbook navigation to the Introduction to Business course work. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.
- Corequisite Course: ENGL 098 and BUSN 118.

NCBD 050 Building/Design Special Topics

Credit Hours: 0 / Billing Hours: 0

Skilled tradespersons and job seekers who need to gain skills and knowledge in order to obtain or retain employment in building, design, and industries utilizing tradespersons. (Offered Fall, Spring)

- Prerequisite Course: None.

2024-2025 Course Descriptions

NCCC 101 College Connect

Credit Hours: 0 / Billing Hours: 0

This program is designed to help students transition to college with weekly college and career readiness sessions. Students will participate in reading, writing, and math refreshers. Additionally, these sessions will include information about college admissions, financial aid, and academic skills, like time management, studying, and notetaking. Students completing the College Connect program will be able to enroll in college-level English and/or Mathematics courses, with or without co-support courses.

NCCC 101E College Connect - English

Credit Hours: 0 / Billing Hours: 0

This course includes a review of essential reading and writing skills, focusing on main idea, supporting details, inferences, organizational patterns, topic sentences, thesis statements, paragraph and essay unity, and support for conclusions.

NCCC 101M College Connect - Math

Credit Hours: 0 / Billing Hours: 0

This course will provide students with assessments and opportunities to improve their math skills, including soft-skills such as test-taking strategies, learning and study skills, exposure to academic advising, tutoring services, and academic success coaches. Students will have access to the ALEKS software platform, which allows them to refresh specific math skill areas as determined by their interactive work on the platform.

NCCE 200 Creative Arts

Credit Hours: 0 / Billing Hours: 0

This non-credit series of courses focuses on personal creativity through music and the arts. Seminars provide students hands-on opportunities in the areas of instrumental or vocal music, photography, or the visual and performing arts. (Offered Fall, Spring)

- Prerequisite Course: None.

NCCE 700 Health and Wellness Seminars

Credit Hours: 0 / Billing Hours: 0

Seminars in this non-credit series are designed to promote personal well-being and increase awareness of physical and emotional health. Students will gain insight into strategies to enhance their daily life. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.

2024-2025 Course Descriptions

NCCT 200 Noncredit Industrial Trades

Credit Hours: 0 / Billing Hours: 0

Training in this series will focus on the needs of any industrial occupations. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.

NCCT 600 Noncredit Public Safety Svcs

Credit Hours: 0 / Billing Hours: 0

Training in this series will focus on topics within public safety services. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.

NCCT 800 Noncredit Career Preparation

Credit Hours: 0 / Billing Hours: 0

Training in this series will focus on topics towards career preparation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.

NCEL 034 ESL Combined Skills Level 3

Credit Hours: 0 / Billing Hours: 0

This course focuses on assisting students in further developing fluency and accuracy in speaking and reading skills for college and workplace success. Students will be able to develop and apply additional strategies for comprehending and processing written and spoken passages. Students will be able to expand their vocabulary building skills and improve their reading strategies, reading and listening comprehension, and speaking skills. Audio equipment and computers are available to aid students in developing proficiency. In addition to class time, students are expected to spend 4-6 hours/week on course work.

- Placement Scores: ESL Test AVERAGE 89-99 (ESOL 3; no score below 84), and Listening >50 (ESLL 1) or CASAS Life and Work Reading 201-210 / CASAS Life and Work Listening 200-209.
- Course Note: For any questions, please contact the Job Training Center at 517-483-1857.

2024-2025 Course Descriptions

NCEL 097 **ESL Listening-Speaking**

Credit Hours: 0 / Billing Hours: 0

Non-native speakers of English will develop effective listening and speaking skills for college and careers using real-life conversations, lectures, and presentations. Students will learn to communicate effectively by modifying their own speech to achieve conversational fluency and by applying strategies for communicating with different levels of formality, politeness, and directness. Co-enrollment in ESOL 098 or ESOL 099 is recommended. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: ESOL Level 4 or ESOL Level 5.

NCEL 101 **ESOL Skills Lab**

Credit Hours: 0 / Billing Hours: 0

This is a noncredit, zero credit course/lab. The focus is on providing direct, specific instruction to help you earn a passing grade in your college-level courses. The lab embeds discipline-specific academic ESOL skills instruction focused on the content of the college-level classes in which ESOL Level 4 and 5 students may enroll. Skill areas include critical reading (text and visual information), academic writing/research processes, academic vocabulary expansion, textbook navigation, study skills, and understanding of expectations for college-level credit classes. This course is graded P/Z. A grade of P represents satisfactory participation in lab activities and does not guarantee a passing grade in either ESOL Levels 4 or 5 or in concurrent-enrollment college-level classes. This lab is open to any non-native English speaker enrolled in a college-level class.

- Prerequisite Course: Minimum 2.5 in ESOL 090 and ESOL 095 or ESOL Level 4.
- Placement Score: None.

2024-2025 Course Descriptions

NCEL 160 ESOL for Health Careers Credit Hours: 0 / Billing Hours: 0

This 8-week non-credit course is focused on vocabulary specifically used in health-related situations. The vocabulary is essential for students planning to work in a field related to health care. The course also explores various careers in the health field, with an emphasis on short-term certificate programs that lead to employment in one-to-two semesters. This course is an accelerated course, using lecture and online instruction. Students will be able to expand their vocabulary building skills and improve their reading strategies, reading and listening comprehension, speaking skills, and writing skills. Audio equipment and computers are available to aid students in building fluency. Students are expected to work 4-6 hours/week in addition to class time.

- Prerequisite Course: Minimum 2.5 in ESOL 090 and ESOL 095 or score of P in NCEL 030 and NCEL 033
- Placement Score: Writing Level 2 from NexGen WRITE Placer test or Placement Score of Reading Level 2 and Writing Level 2 from NexGen READ and WRITE Placer tests or NCEL 033 or ESOL 098 or ESOL 099 concurrent.
- Course Note: For any questions, please contact the Job Training Center at 517-483-1857.

NCEL 170 ESOL for Business Credit Hours: 0 / Billing Hours: 0

This 8-week non-credit course focuses on vocabulary specifically used in business. The vocabulary is essential for students planning to work in a business-related field. The course also explores various careers in business, with an emphasis on short-term certificate programs that lead to employment in one-to-two semesters. This course is accelerated, using lecture and online instruction. Students will expand their vocabulary-building skills and improve their reading strategies, reading and listening comprehension, speaking skills, and writing skills. Audio equipment and computers are available to aid students in building fluency. Students are expected to work 4-6 hours/week in addition to class time.

- Prerequisite Course: None.
- Placement Score: Score of P in NCEL 034 + Placement Score of Writing Level 2 from NexGen WRITE Placer test or Placement Score of Reading Level 2 and Writing Level 2 from NexGen READ and WRITE Placer tests or NCEL 034 concurrent.

2024-2025 Course Descriptions

NCHE 102 AHA BLS Provider CPR

Credit Hours: 0 / Billing Hours: 0

This non-credit American Heart Association (AHA) seminar is designed to provide healthcare professionals the ability to recognize several life-threatening emergencies, provide Basic Life Support (BLS) also known as CPR, use an AED with BVM, how to work as a team, and choking management. The seminar is intended for individuals working or planning to work in the healthcare profession, and was formerly called CPR for Healthcare Professionals. This course meets the needs for anyone needing a BLS Provider CPR certification. Persons wishing to be certified must pass both the physical skills and written test sessions. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.
- Course Note: Cost of this seminar is \$95.00. If you have any questions, call Continuing Education at 517-483-1415.

NCHE 227 Health Special Topics

Credit Hours: 0 / Billing Hours: 0

This course offers students the opportunity to learn new health career skills and knowledge. Specific up-to-date content will vary with each topic presented. (Offered Fall, Spring, Summer)

- Prerequisite Course: Determined by Section

NCJT 100 Non-Credit Software and Tech

Credit Hours: 0 / Billing Hours: 0

Training in this series will focus on computers, software, and Information Technology (IT)

NCJT 200 Business and Management

Credit Hours: 0 / Billing Hours: 0

Training in this series will cover topics in business, management, and entrepreneurship.

2024-2025 Course Descriptions

NCLD 210 Leadership Practicum I

Credit Hours: 0 / Billing Hours: 0

This non-credit course provides an opportunity for Student Leadership Academy members to apply leadership skills in on-campus and community service settings. The practicum includes a minimum of 30 hours of volunteer service with a community agency of the student's choice, serving on college committees, and participation in other assigned Student Leadership Academy events and activities. Students will develop practical skills in servant leadership and evaluate their experiences as they relate to academic, professional, and personal goals. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (LEAD 110 and LEAD 111).

NCLD 211 Leadership Practicum II

Credit Hours: 0 / Billing Hours: 0

This non-credit course provides an opportunity for Student Leadership Academy members to apply leadership skills in on-campus and community service settings. The practicum includes a minimum of 30 hours of volunteer service with a community agency of the student's choice, serving on college committees, and participation in other assigned Student Leadership Academy events and activities. Students will develop practical skills in servant leadership and evaluate their experiences as they relate to academic, professional, and personal goals. (Offered Spring)

- Prerequisite Course: P (Pass) in NCLD 210.
- Placement Score: None.

NCMA 101 Math Refresher

Credit Hours: 0 / Billing Hours: 0

Refresher workshop for students who place below college level math and wish to review the mathematical concepts. The goal of this workshop course is to prepare students to retake the Accuplacer test so that they might improve their placement Math Level. An online learning platform will be utilized to determine the individualized content for each student. Problem solving and test taking strategies will be included. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.

2024-2025 Course Descriptions

NCMA 106 NC - Math Literacy with Review

Credit Hours: 0 / Billing Hours: 0

This noncredit math course provides the skills needed for college-level math courses. Topics include numeracy, mathematical thinking and investigations, proportional reasoning, basic algebraic concepts, functions (linear and exponential), and basic statistical concepts. Graphing calculator, spreadsheets and internet resources, as well as real-life applications are integrated throughout the course. Includes review of basic math skills as needed. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently) and Writing Level 2 and (Math Level 3 or CPT Arithmetic score minimum 20 or Accuplacer NG Arithmetic score 200-300).
- Course Notes:
 - 1) NCMA 106 prepares students for MATH 117, MATH 119, and STAT 170.
 - 2) Information about course materials will be available to students the first day of class or earlier from your instructor. All enrolled students are required to purchase the workbook bundle through LCC's bookstore to ensure a valid access code is obtained.
 - 3) A graphing calculator from the TI-83/84 family is required for course work.

NCMA 110 Fundamentals of Mathematics

Credit Hours: 0 / Billing Hours: 0

This course provides instruction in the skills needed to provide the foundation for success in transferable math courses, specifically MATH 120, MATH 119, STAT 170. Topics include operations with fractions, decimals, integers, percentages, scientific notation, exponents, and order of operations; properties of algebraic equations, graphs, formulas. In addition, students are introduced to mathematical concepts taught in the above college math courses. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 2 and (BSM1/CPT Arithmetic 20-76 or ACM1/Accuplacer Arithmetic 200-300 or ACM2/QRAS 200-240 or A02/ACT Math 1-14 or S12/SAT Math 200-390 or PS12/PSAT Math 200-390).

2024-2025 Course Descriptions

NCRW 100 Foundations for Success

Credit Hours: 0 / Billing Hours: 0

Designed to teach essential reading and writing skills and to introduce the student to the foundations of a successful student life. Also serves to prepare students for high school completion exams. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval Required.
- Placement Score: Reading Level 1 and Writing Level 1.

NCRW 101 Reading and Writing Refresher

Credit Hours: 0 / Billing Hours: 0

The purpose of this non-credit refresher is to prepare students to retake the placement tests for Reading and Writing. The course includes a review of essential reading and writing skills, focusing on main idea, supporting details, inferences, organizational patterns, topic sentences, thesis statements, paragraph and essay unity, and support for conclusions. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.

NDXT 100 Neuroanatomy and Physiology

Credit Hours: 3 / Billing Hours: 0

This course provides an introduction to neuroanatomy and physiology necessary for working in the diverse field of Neurodiagnostics. Students will discuss the structures and functions of the Nervous System. Topics include the Central Nervous System, Peripheral Nervous System, and blood supply. (Offered Fall)

- Prerequisite Course: None. Admission to the Neurodiagnostic Technology Program is required.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Corequisite Course: NDXT 101 and NDXT 102 and NDXT 120.
- Course Note: \$150 of the course fee is for supplies and is non-refundable.

2024-2025 Course Descriptions

NDXT 101 Neurodiagnostic Procedures

Credit Hours: 3 / Billing Hours: 0

This course provides an introduction to the routine Neurodiagnostic testing procedures performed. Students will discuss the Scope of Practice specific to the Neurodiagnostic Technologist. Topics will include medical terminology, diagnostic procedures, and common neurological disorders. (Offered Fall)

- Prerequisite Course: None. Admission to the Neurodiagnostic Technology Program is required.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Corequisite Course: NDXT 100 and NDXT 102 and NDXT 120.
- Course Note: \$200 of the course fee is for supplies and is non-refundable.

NDXT 102 EEG Applications

Credit Hours: 3 / Billing Hours: 0

This course provides the basic skills necessary to accurately measure and apply electrodes. Students will discuss the standards for electrode placement based on the International 10-20 System of Electrode Placement. Topics will include skin preparation, skin safety, and modification techniques. (Offered Fall)

- Prerequisite Course: None. Admission to the Neurodiagnostic Technology Program is required.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Corequisite Course: NDXT 100 and NDXT 101 and NDXT 120.
- Course Note: \$150 of the course fee is for supplies and is non-refundable.

NDXT 120 EEG Pre-Clinical Preparation

Credit Hours: 3 / Billing Hours: 0

This course prepares the EEG student for safe participation in clinical education within a Neurodiagnostic department. Students will explore and discuss the importance of patient safety, patient assessment, and equipment placement. While most of the course is delivered online, students will practice and master various procedures in a scheduled laboratory setting. (Offered Fall)

- Prerequisite Course: None. Admission to the Neurodiagnostic Technology Program is required.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Corequisite Course: NDXT 100 and NDXT 101 and NDXT 102.
- Course Note: \$200 of the course fee is for supplies and is non-refundable.

2024-2025 Course Descriptions

NDXT 130 Principles of EEG

Credit Hours: 2 / Billing Hours: 0

This course explores the history of electroencephalograms (EEG). Students will discuss the use of EEG's in the diagnosis of neurological diseases. Topics will include the national competency standards for performing EEG's, fundamentals of patient care, and HIPAA compliance. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (NDXT 100 and NDXT 101 and NDXT 102 and NDXT 120).
- Placement Score: None.
- Corequisite Course: NDXT 131 and NDXT 132 and NDXT 220.
- Course Note: \$100 of the course fee is for supplies and is non-refundable.

NDXT 131 Electricity Principles/Safety

Credit Hours: 1 / Billing Hours: 0

This course familiarizes the Neurodiagnostic student with the principles of electricity and electrical safety. Students will discuss digital EEG, EEG recordings, and the digital EEG display. Topics will include risks related to current, grounding, and factors contributing to electrical injury. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (NDXT 100 and NDXT 101 and NDXT 102 and NDXT 120).
- Placement Score: None.
- Corequisite Course: NDXT 130 and NDXT 132 and NDXT 220.
- Course Note: \$50 of the course fee is for supplies and is non-refundable.

NDXT 132 EEG Instrumentation I

Credit Hours: 2 / Billing Hours: 0

This course provides a foundation for EEG instrumentation. Students will discuss the basic requirements of the EEG system. Topics will include amplifier settings, filters, chart speeds, calibration methods, system selections, and post-acquisition setting adjustments. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (NDXT 100 and NDXT 101 and NDXT 102 and NDXT 120).
- Placement Score: None.
- Corequisite Course: NDXT 130 and NDXT 131 and NDXT 220.
- Course Note: \$100 of the course fee is for supplies and is non-refundable.

2024-2025 Course Descriptions

NDXT 200 EEG Procedures & Pathology I

Credit Hours: 1 / Billing Hours: 0

This course explores the normal EEG patterns in adults, during both awake and sleep cycles. Students will discuss the normal EEG variants. Topics will include waveform descriptions and medication effects on the EEG. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (NDXT 130 and NDXT 131 and NDXT 132).
- Placement Score: None.
- Corequisite Course: NDXT 201 and NDXT 202.
- Course Note: \$50 of the course fee is for supplies and is non-refundable.

NDXT 201 EEG Instrumentation II

Credit Hours: 2 / Billing Hours: 0

This course provides the EEG student with the technical skills needed to analyze waveforms and polarity. Students will discuss techniques needed to improve EEG recording quality. Topics will include recording annotations, patient considerations based on specific need, and challenges of performing bedside procedures. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (NDXT 130 and NDXT 131 and NDXT 132).
- Placement Score: None.
- Corequisite Course: NDXT 200 and NDXT 202.
- Course Note: \$100 of the course fee is for supplies and is non-refundable.

NDXT 202 EEG Quality Control

Credit Hours: 1 / Billing Hours: 0

This course explores the physiological and non-physiological artifacts found in routine EEG recordings. Students will discuss the factors that contribute to artifacts and troubleshoot the ways to eliminate them. Topics will include impedance and common mode rejection (CMR). (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (NDXT 130 and NDXT 131 and NDXT 132).
- Placement Score: None.
- Corequisite Course: NDXT 200 and NDXT 201.
- Course Note: \$50 of the course fee is for supplies and is non-refundable.

2024-2025 Course Descriptions

NDXT 220 EEG Clinical Practice I

Credit Hours: 3 / Billing Hours: 0

This is the first in a series of two clinical courses that provides the necessary supervised clinical education needed for the EEG student to competently perform routine procedures and recognize patient considerations that affect diagnosis. Emphasis will be placed on patient safety and comfort while professional values, attitudes, and behaviors are upheld. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (NDXT 200 and NDXT 201 and NDXT 202).
- Placement Score: None.
- Corequisite Course: NDXT 130 and NDXT 200.
- Course Note: \$250 of the course fee is for supplies and is non-refundable.

NDXT 221 EEG Clinical Practice II

Credit Hours: 3 / Billing Hours: 0

This is the second course in a series of two clinical courses that provides the necessary supervised clinical education needed for the EEG student to competently perform routine procedures and recognize patient considerations that affect diagnosis. Emphasis will be placed on patient safety and comfort while professional values, attitudes, and behaviors are upheld. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in NDXT 220.
- Placement Score: None.
- Corequisite Course: NDXT 230 and NDXT 231 and NDXT 232.
- Course Note: \$150 of the course fee is for supplies and is non-refundable.

NDXT 230 EEG Procedures & Pathology II

Credit Hours: 1 / Billing Hours: 0

This course provides the EEG student with skills to recognize EEG patterns related to seizures. Students will discuss the International Classification of Seizures and Information. Topics will include seizure classification, treatment, and seizure protocols. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in NDXT 200.
- Placement Score: None.
- Corequisite Course: NDXT 221 and NDXT 231.
- Course Note: \$50 of the course fee is for supplies and is non-refundable.

2024-2025 Course Descriptions

NDXT 231 EEG Procedures & Pathology III

Credit Hours: 1 / Billing Hours: 0

This course provides EEG students with skills to recognize EEG patterns related to seizures. This course familiarizes EEG students with the common neurological disorders found on electroencephalogram. Students will discuss the signs and symptoms related to various neurological disorders. Topics will include EEG patterns, diagnostic procedures, and patient considerations. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in NDXT 200.
- Placement Score: None.
- Corequisite Course: NDXT 221 and NDXT 230.
- Course Note: \$50 of the course fee is for supplies and is non-refundable.

NDXT 232 EEG Procedures & Pathology IV

Credit Hours: 1 / Billing Hours: 0

This course familiarizes EEG students with the skills needed to perform procedures on neonates and pediatric patients. Students will discuss the special considerations needed working with neonates and pediatric patients. Topics will include EEG patterns specific to age group, physiological variables, and challenges of working in critical care departments. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in NDXT 231.
- Placement Score: None.
- Corequisite Course: NDXT 221.
- Course Note: \$50 of the course fee is for supplies and is non-refundable.

NURS 101 Nursing Directed Study

Credit Hours: 0.25 to 3 / Billing Hours: 0.25 to 6

This course is designed to update or enhance knowledge, skills, and competencies for: returning Nursing students, remediation, self-study, lecture/lab sessions, and/or supervised clinical. The course's foundation is based on the six Aims for Improvement of Quality Healthcare. A learning contract specifying objectives, activities and outcomes is required. (Offered As Needed)

- Prerequisite Course: None. Program Approval is required.
- Placement Score: Determined by Section.

2024-2025 Course Descriptions

NURS 102 Nursing Directed Study Credit Hours: 0.25 to 3 / Billing Hours: 0.25 to 6

This course is designed to update or enhance knowledge, skills, and competencies for: returning Nursing students, remediation, self-study, lecture/lab sessions, and/or supervised clinical. The course's foundation is based on the six Aims for Improvement of Quality Healthcare. A learning contract specifying objectives, activities and outcomes is required. (Offered As Needed)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: Determined by Section.

NURS 118 Special Topics in Nursing Credit Hours: 0.25 to 8 / Billing Hours: 0.25 to 11

This course offers students the opportunity to practice and gain support for new nursing skills and knowledge. The foundation of this course is based on the six Aims for Improvement of Quality Healthcare. Specific up-to-date content will vary with each seminar and will be related to the nursing profession. (Offered As Needed)

- Prerequisite Course: Determined by Section.
- Placement Score: Determined by Section.

NURS 119 Special Topics in Nursing Credit Hours: 0.25 to 8 / Billing Hours: 0.25 to 11

Nursing Special Topics offer students the opportunity to practice and gain support for new nursing skills and knowledge. The foundation of this course is based on the six Aims for Improvement of Quality Healthcare. Specific up-to-date content will vary with each seminar and will be related to the nursing profession. (Offered As Needed)

- Prerequisite Course: Determined by Section.
- Placement Score: Determined by Section.

NURS 200 Nursing Pharmacology Credit Hours: 3 / Billing Hours: 3.5

NURS 200 provides nursing students with fundamental knowledge of pharmacology and the implications for nursing including assessment, teaching, monitoring and dosage calculation for patients across the lifespan. The focus is on commonly-used drug classes and prototypes. (Offered Spring, Summer)

- Prerequisite Course: Minimum 2.5 in [BIOL 202 and (MATH 119 or higher or STAT 170 or STAT 215 or Math Level noted below)].
- Placement Score: Math Level 6.

2024-2025 Course Descriptions

NURS 201 Patient-Centered Care

Credit Hours: 3 / Billing Hours: 3

NURS 201 introduces students to a model of health care in which patients and their families are acknowledged and valued for their unique attributes. Concepts of development, family dynamics, and adaptation to stress are presented. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.5 in [(MATH 119 or higher or STAT 170 or STAT 215) or concurrently or Math Level noted below].
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 5.
- Course Note: Students are required to attend four exams and one three-hour Communication Lab in-person on LCC's downtown campus. Additional information will be provided via D2L by the instructor the first week of class. \$23 of the course fee is non-refundable.

NURS 210 Transition to Prof Nursing

Credit Hours: 6 / Billing Hours: 10.5

The Transition Course introduces licensed paramedics, practical nurses, and respiratory therapists to the role of the professional nurse. The course builds on basic concepts to care for adult patients with common acute and chronic health problems. Clinical experiences will help students refine focused assessment and psychomotor skills in a variety of settings. (Offered Summer)

- Prerequisite Course: Minimum 3.0 in NURS 201 within 2 years of Nursing application. Admission to the Nursing Program is required.
- Placement Score: Reading Level 5 and Writing Level 6.
- Corequisite Course: NURS 212.
- Course Note: \$943 of the course fee is for medical supplies and is non-refundable.

NURS 211 Intro to Nursing Practice

Credit Hours: 8 / Billing Hours: 13.25

Introduces the role of the nurse as a member of the healthcare team focusing on basic care concepts addressing human needs. Nursing process is presented as a framework for the provision of safe patient care. Clinical experiences facilitate the development of assessment and beginning psychomotor skills. (Offered Fall, Spring)

- Prerequisite Course: None. Admission to the Nursing Program is required.
- Placement Score: Reading Level 5 and Writing Level 6.
- Corequisite Course: NURS 212.
- Course Note: \$1,003 of the course fee is for medical supplies and is non-refundable.

2024-2025 Course Descriptions

NURS 212 Concepts of Pharmacology

Credit Hours: 3 / Billing Hours: 3.5

Provides nursing students with fundamental knowledge of pharmacology and the implications for nursing, including assessment, teaching, monitoring and dosage calculation for patients across the lifespan. The focus is on commonly-used drug classes and prototypes. (Offered Fall, Spring)

- Prerequisite Course: None. Admission to the Nursing Program is required.
- Placement Score: Reading Level 5 and Writing Level 6.
- Corequisite Course: NURS 210 or NURS 211.

NURS 221 Nursing Practice I

Credit Hours: 6 / Billing Hours: 10.75

Builds on basic concepts to care for adult patients with common acute and chronic health problems. Clinical experiences will help students refine focused assessment skills and psychomotor skills. Students will practice in a variety of healthcare and community based settings. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Successful completion of Level I of the 2-Year or 2nd Degree Nursing program tracks is required.
- Placement Score: None.
- Course Note: \$173 of the course fee is for medical supplies and is non-refundable.

NURS 222 Childbearing Families

Credit Hours: 4 / Billing Hours: 5.5

Introduces concepts related to the child-bearing family. Emphasis is on health promotion, reproduction, sexual health, newborn assessment and care, and child growth and development. Clinical experiences promote the development of knowledge, skills, and attitudes to provide family-centered care in a variety of settings. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Successful completion of Level I of the 2-Year or 2nd Degree Nursing program tracks is required.
- Placement Score: None.

2024-2025 Course Descriptions

NURS 231 Nursing Practice II

Credit Hours: 6 / Billing Hours: 10

Builds on complex acute and chronic health concepts to provide collaborative care for adults with multi-system, emergent, and complex mental health problems. Clinical experiences help students refine nursing judgment skills. Students practice in a variety of inpatient acute care and community settings. (Offered Fall, Spring)

- Prerequisite Course: None. Successful completion of Level II of the 2-year or 2nd Degree Nursing Tracks is required.
- Placement Score: None.
- Course Note: \$289 of the course fee is for medical supplies and is non-refundable.

NURS 232 Children and Their Families

Credit Hours: 4 / Billing Hours: 5.5

Focuses on collaborative care for children with commonly occurring and complex health problems. Students will practice in a variety of health care and community-based settings and collaborate with the inter-professional health team to provide safe, family-centered care. (Offered Fall, Spring)

- Prerequisite Course: None. Successful completion of Level II of the 2-year or 2nd Degree Nursing Tracks is required.
- Placement Score: None.

NURS 241 Nursing Practice III

Credit Hours: 6 / Billing Hours: 11.75

Synthesizes professional nursing concepts within a seminar format. Intensive clinical experience help students apply nursing judgment and practice leadership and management skills in collaboration with the inter-professional team. (Offered Fall, Spring)

- Prerequisite Course: None. Successful completion of Level III of the 2-year or 2nd Degree or Advanced Standing Nursing Tracks is required.
- Placement Score: None.
- Course Note: \$75 of the course fee is for medical supplies and is non-refundable.

2024-2025 Course Descriptions

NURS 242 Professional Practice

Credit Hours: 2 / Billing Hours: 2

Focuses on the principles of leadership and management as they apply to coordination of care and the professional roles of the nurse. Examination of healthcare systems, legal regulations, and quality improvement will guide the student to apply delegation and supervision skills in their transition to practice. (Offered Fall, Spring)

- Prerequisite Course: None. Successful completion of Level III of the 2-year or 2nd Degree or Advanced Standing Nursing Tracks is required.
- Placement Score: None.

PARA 200 Paramedic Directed Study

Credit Hours: 1 to 4 / Billing Hours: 1 to 7

Provides selection of content from the Basic EMT or Paramedic curriculum to update or enhance current knowledge and skill for returning students and health care professionals. Through evaluation of previous learning, examinations, self study, and scheduling into needed lectures and labs students are advanced placed or readmitted into the Basic EMT or Paramedic program. (Offered As Needed)

- Prerequisite Course: None. Program Approval required.
- Placement Score: Determined by section.

PARA 221 Paramedic Medical Trauma I **3.75**

Credit Hours: 3.75 / Billing Hours:

This course provides information about the pre-hospital management of medical and traumatic conditions at the advanced life support level. Emphasis is placed on pathophysiology, recognition of signs and symptoms, review of basic life support management techniques, and strategies for advanced life support care. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in [BIOL 145 or (BIOL 201 and BIOL 202)]. Admission to Paramedic Program is required.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Corequisite Course: PARA 231 and PARA 241.

2024-2025 Course Descriptions

PARA 221A Paramedic Medical Trauma IA

Credit Hours: 2 / Billing Hours: 2

This course, the first of two modules, provides information about the pre-hospital management of medical and traumatic conditions at the advanced life support level. Emphasis in this module is on the role and responsibilities of an advanced life support provider. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Admission to the Military Medic to Paramedic Program is required.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

PARA 221B Paramedic Medical Trauma IB

Credit Hours: 2 / Billing Hours: 2

This course, the second of two modules, provides information about the pre-hospital management of medical and traumatic conditions at the advanced life support level. Emphasis in this module is on foundational topics for advanced practice of airway and IV therapy. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Admission to the Military Medic to Paramedic Program is required.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

PARA 222 Paramedic Medical Trauma II

Credit Hours: 4 / Billing Hours: 4

PARA222 incorporates previous knowledge gained at the basic EMT level and PARA221. Provides material for management of prehospital emergencies including assessment and management of neurological, behavioral, abdominal, metabolic, geriatric, and multiple trauma patients. The principles of triage, management of mass casualty incidents, and telecommunications are also included. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in PARA 221.
- Placement Score: None.
- Corequisite Course: PARA 232 and PARA 242.

2024-2025 Course Descriptions

PARA 222A Paramedic Medical Trauma IIA

Credit Hours: 1 / Billing Hours: 1

The PARA222 modules incorporate previous knowledge gained at the basic EMT level and PARA221. This course, the first of three modules, provides material for management of pre-hospital emergencies as an advanced life support provider. Emphasis in this module is a review of anatomy/physiology, triage, stress management, and rescue operations. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Admission to Military Medic Program is required.
- Placement Score: None.

PARA 222B Paramedic Medical Trauma IIB

Credit Hours: 1 / Billing Hours: 1

The PARA222 modules incorporate previous knowledge gained at the basic EMT level and PARA221. This course, the second of three modules, provides material for management of pre-hospital emergencies as an advanced life support provider. Emphasis in this module is on infectious disease, poisoning, and environmental emergencies. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 3.0 in PARA 222A.
- Placement Score: None.

PARA 222C Paramedic Medical Trauma IIC

Credit Hours: 2 / Billing Hours: 2

The PARA222 modules incorporate previous knowledge gained at the basic EMT level and PARA221. This last of three modules provides material for management of pre-hospital emergencies as an advanced life support provider. Emphasis in this module is on trauma care including soft tissue injuries and kinematics of trauma. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 3.0 in PARA 222B.
- Placement Score: None.

2024-2025 Course Descriptions

PARA 231 Paramedic Cardiology I

Credit Hours: 2.5 / Billing Hours: 2.5

This course provides the paramedic student with information about cardiovascular anatomy, physiology, and electrophysiology. Emphasis is placed on rhythm interpretation, recognition of life-threatening arrhythmias, electrical intervention and other prehospital patient management strategies. (Offered Fall)

- Prerequisite Course: None. Admission to Paramedic Program is required.
- Placement Score: None.
- Corequisite Course: PARA 221 and PARA 241.

PARA 231A Paramedic Cardiology IA

Credit Hours: 1 / Billing Hours: 1

This course provides the paramedic student with information about cardiovascular anatomy, physiology, and electrophysiology. Emphasis is placed on rhythm interpretation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Admission to the Military Medic to Paramedic Program is required.
- Placement Score: None.

PARA 231B Paramedic Cardiology IB

Credit Hours: 1.5 / Billing Hours: 1.5

This course is a continuation of Cardiology IA. Emphasis is placed on rhythm interpretation, recognition of life threatening arrhythmias, electrical intervention and other prehospital patient management strategies. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 3.0 in PARA 231A.
- Placement Score: None.

PARA 232 Paramedic Cardiology II

Credit Hours: 2.5 / Billing Hours: 2.5

Builds on information learned in PARA231 as a basis for more advanced arrhythmia interpretation. Management of cardiac arrest including medications, cardioversion, transcutaneous pacing, and defibrillation will be a major emphasis. Pacemakers, 12-lead ECG interpretation, and other advanced procedures, and arrhythmias will be presented. Application of theory, judgment, and decision-making strategies are evaluated. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in PARA 231.
- Placement Score: None.
- Corequisite Course: PARA 222 and PARA 242.

2024-2025 Course Descriptions

PARA 232A Paramedic Cardiology IIA

Credit Hours: 1 / Billing Hours: 1

This module expands on information presented in PARA231 to cover more advanced arrhythmia interpretation. Management of cardiac arrest, including medications, cardioversion, transcutaneous pacing, and defibrillation will be a major emphasis. Pacemakers, 12-lead ECG interpretation, and other advanced procedures, and arrhythmias will be presented. Application of theory, judgment, and decision-making strategies are evaluated. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 3.0 in PARA 231B.
- Placement Score: None.

PARA 232B Paramedic Cardiology IIB

Credit Hours: 1.5 / Billing Hours: 1.5

This course is a continuation of Cardiology IIA, building on information learned in PARA231 as a basis for more advanced arrhythmia interpretation. Management of cardiac arrest including medications, cardioversion, transcutaneous pacing, and defibrillation will be a major emphasis. Pacemakers, 12-lead ECG interpretation, and other advanced procedures, and arrhythmias will be presented. Application of theory, judgment, and decision-making strategies are evaluated. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 3.0 in PARA 232A.
- Placement Score: None.

PARA 241 Paramedic Pharmacology I

Credit Hours: 2.5 / Billing Hours: 2.5

Provides the student with information necessary for the preparation, calculation of doses, and administration of drugs used in the prehospital setting, including classification, action, use, and side effects. Information about other commonly prescribed drugs is also provided. (Offered Fall)

- Prerequisite Course: None. Admission to Paramedic Program is required.
- Placement Score: None.
- Corequisite Course: PARA 221 and PARA 231.

2024-2025 Course Descriptions

PARA 241A Paramedic Pharmacology IA

Credit Hours: 1 / Billing Hours: 1

One of two modules which provides the student with information necessary for the preparation, calculation of doses, and administration of drugs used in the prehospital setting, including classification, action, use, and side effects. This module focuses on core concepts including routes, calculations, equipment, and standards. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Admission to the Military Medic to Paramedic Program is required.
- Placement Score: None.

PARA 241B Paramedic Pharmacology IB

Credit Hours: 1.5 / Billing Hours: 1.5

One of two modules which provides the student with information necessary for the preparation, calculation of doses, and administration of drugs used in the prehospital setting, including classification, action, use, and side effects. This module focuses on pharmacokinetics/pharmacodynamics of medications and integration into patient care. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Admission to the Military Medic to Paramedic Program is required.
- Placement Score: None.

PARA 242 Paramedic Pharmacology II

Credit Hours: 2.5 / Billing Hours: 2.5

This course provides the paramedic student with additional in-depth information on Advanced Cardiac Life Support drugs including classification, action, use, and side effects. Information about other commonly used and prescribed drugs is also provided. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in PARA 241.
- Placement Score: None.
- Corequisite Course: PARA 222 and PARA 232.

2024-2025 Course Descriptions

PARA 242A Paramedic Pharmacology IIA

Credit Hours: 1 / Billing Hours: 1

One of two modules that provides the paramedic student with additional in-depth information on Advanced Cardiac Life Support drugs including classification, action, use, and side effects. Focus of this module is linking medication with patient condition. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 3.0 in PARA 241B.
- Placement Score: None.

PARA 242B Paramedic Pharmacology IIB

Credit Hours: 1.5 / Billing Hours: 1.5

One of two modules that provides the paramedic student with additional in-depth information on Advanced Cardiac Life Support drugs including classification, action, use, and side effects. Focus of this module is developing management plans for patient care. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 3.0 in PARA 242A.
- Placement Score: None.

PARA 251 Paramedic Skills I

Credit Hours: 2.5 / Billing Hours: 7.5

Provides introduction of paramedic skills required for advanced life support and provides the opportunity to apply theory to field practice in a discussion and skills lab setting. Skills will be demonstrated, practiced during supervised labs, and tested for competency. Students are also evaluated in the management of simulated emergencies. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (PARA 221 and PARA 231 and PARA 241) or concurrently. Program approval is required.
- Placement Score: None.
- Corequisite Course: PARA 261.

2024-2025 Course Descriptions

PARA 251A Paramedic Skills IA

Credit Hours: 1 / Billing Hours: 3

One of two modules which provides introduction of paramedic skills required for advanced life support and provides the opportunity to apply theory to field practice in a discussion and skills lab setting. Skills will be demonstrated, practiced during supervised labs, and tested for competency. Students are also evaluated in the management of simulated emergencies. Focus in this module is on basic life support skills review/testing/remediation, IV skills, and injections. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Admission to the Military Medic to Paramedic Program is required.
- Placement Score: None.

PARA 251B Paramedic Skills IB

Credit Hours: 1.5 / Billing Hours: 4.5

One of two modules which provides introduction of paramedic skills required for advanced life support and provides the opportunity to apply theory to field practice in a discussion and skills lab setting. Skills will be demonstrated, practiced during supervised labs, and tested for competency. Students are also evaluated in the management of simulated emergencies. Focus in this module is on advanced airway techniques, cardiac arrhythmias monitoring, and simulations. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Admission to the Military Medic to Paramedic Program is required.
- Placement Score: None.

PARA 252 Paramedic Skills II

Credit Hours: 2.5 / Billing Hours: 7.5

This course is a continuation of Skills I with the introduction of additional skills and continued application of theory. Measurement criteria for skills competencies becomes more stringent and students must become competent in all paramedic skills in preparation for the field internship component. Students are also evaluated in the management of simulated emergencies. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in PARA 251.
- Placement Score: None.
- Corequisite Course: PARA 262.

2024-2025 Course Descriptions

PARA 252A Paramedic Skills IIA

Credit Hours: 1 / Billing Hours: 3

One of two modules which provide continuation of Skills I with the introduction of additional skills and continued application of theory. Measurement criteria for skills competencies becomes more stringent and students must become competent in all paramedic skills in preparation for the field internship component. Students are also evaluated in the management of simulated emergencies. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 3.0 in PARA 251B.
- Placement Score: None.

PARA 252B Paramedic Skills IIB

Credit Hours: 1.5 / Billing Hours: 4.5

This course is a continuation of Skills IIA. Measurement criteria for skills competencies becomes more stringent and students must become competent in all paramedic skills in preparation for the field internship component. Students are also evaluated in the management of simulated emergencies. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 3.0 in PARA 252A.
- Placement Score: None.

PARA 261 Paramedic Clinical I

Credit Hours: 2.5 / Billing Hours: 4

The first of two courses that provide clinical experience for paramedic students in hospital units such as the emergency department, critical care units, obstetrics, and pediatrics; and designated EMS agencies under the supervision of licensed paramedics and clinical faculty. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (PARA 221 and PARA 231 and PARA 241) or concurrently. Program approval is required.
- Placement Score: None.
- Corequisite Course: PARA 251.

2024-2025 Course Descriptions

PARA 262 Paramedic Clinical II

Credit Hours: 2.75 / Billing Hours: 4

The second of two courses that provide clinical experience for paramedic students in hospital units such as emergency department, critical care units, obstetrics, and pediatrics; and designated EMS agencies under the supervision of licensed paramedics and clinical faculty. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in PARA 261.
- Placement Score: None.
- Corequisite Course: PARA 252.

PARA 262A Paramedic Clinical IIA

Credit Hours: 1 / Billing Hours: 1

This course provides clinical experience for paramedic students in areas including hospital units such as emergency departments, and designated EMS agencies under the supervision of licensed paramedics. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 3.0 in PARA 261.
- Placement Score: None.

PARA 262B Paramedic Clinical IIB

Credit Hours: 1 / Billing Hours: 1

This course provides clinical experience for paramedic students in areas including hospital units such as critical care units, surgery, and designated EMS agencies under the supervision of licensed paramedics. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 3.0 in PARA 262A.
- Placement Score: None.

PARA 262C Paramedic Clinical IIC

Credit Hours: 1 / Billing Hours: 1

This course provides clinical experience for paramedic students in areas including hospital units such as obstetrics, pediatrics, and designated EMS agencies under the supervision of licensed paramedics. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 3.0 in PARA 262B.
- Placement Score: None.

2024-2025 Course Descriptions

PARA 263 Paramedic Internship

Credit Hours: 4 / Billing Hours: 4

PARA 263 is a paramedic-level EMS agency field internship and a Summative Evaluation exam. Students are assigned to a preceptor to provide patient care and other professional duties. Oversight is provided by the program clinical coordinator and director. Successful completion of the Paramedic program qualifies students to take the NREMT certification exam, then apply for state licensure as a Paramedic upon passing exam. (Offered Summer)

- Prerequisite Course: Minimum 3.0 in (PARA 222 and PARA 232 and PARA 242 and PARA 252 and PARA 262).
- Placement Score: None.

PFFT 100 Total Fitness A-Fitness

Credit Hours: 2 / Billing Hours: 3

Total Fitness A encompasses fitness, nutrition, health, exercise and cognition, and wellness principles, with emphasis on physical fitness, including cardiovascular fitness, strength, and flexibility. Students will complete an assessment measuring aerobic fitness, strength, and flexibility. With instructor supervision, students will develop and participate in a personal exercise plan. Course features flexibility of attendance. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.
- Course Note: This is an open workout class. Students may attend at the downtown or west campus fitness center. Cannot be taken during the same semester with PFFT 101, PFFT 102, or PFFT 109. Course textbook "Anybody's Guide to Total Fitness" must be purchased prior to orientation. ALL STUDENTS MUST COMPLETE a 50-minute ORIENTATION during the first week of the semester. Log on to the [Fitness and Wellness webpage](#) and select Facilities for a detailed orientation schedule.

2024-2025 Course Descriptions

PFFT 101 Total Fitness B-Nutrition

Credit Hours: 2 / Billing Hours: 3

Total Fitness B encompasses fitness, health, exercise and cognition, and wellness principles with emphasis on nutrition and healthy eating choices. Students will complete a physical fitness assessment and develop and participate in a personal exercise plan. Healthy meal planning will be included. The course features flexibility of attendance. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.
- Course Note: This is an open workout class. Students may attend at the downtown or west campus fitness center. Cannot be taken during the same semester with PFFT 100, PFFT 102, or PFFT 109. ALL STUDENTS MUST COMPLETE a 50-minute ORIENTATION during the first week of the semester. Course textbook "Anybody's Guide to Total Fitness" must be purchased prior to orientation. Log on to the [Fitness and Wellness webpage](#) and select Facilities for a detailed orientation schedule.

PFFT 102 Total Fitness C-Weight Control

Credit Hours: 2 / Billing Hours: 3

Total Fitness C encompasses fitness, health, exercise and cognition, and wellness principles with an emphasis on weight management: loss, gain or maintenance. Students will complete a physical fitness assessment and will develop and participate in a personal exercise plan. The course features flexibility of attendance. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.
- Course Note: Students may attend at the downtown or west campus fitness center. Cannot be taken during the same semester with PFFT 100, PFFT 101, or PFFT 109. ALL STUDENTS MUST COMPLETE a 50-minute ORIENTATION during the first week of the semester. Course textbook "Anybody's Guide to Total Fitness" must be purchased prior to orientation. Log on to the [Fitness and Wellness webpage](#) and select Facilities for a detailed orientation schedule.

2024-2025 Course Descriptions

PFFT 109 Introduction to Fitness

Credit Hours: 1 / Billing Hours: 2

Introduction to Fitness is designed to introduce general fitness and wellness concepts to students. With supervision of an instructor, students will develop and participate in exercise plans tailored to their individual needs. This course features flexibility of attendance and modular teaching. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.
- Course Note: This is an open workout class. Students may attend at the downtown or west campus fitness center. Cannot be taken during the same semester with PFFT 100, PFFT 101, or PFFT 102. ALL STUDENTS MUST COMPLETE a 50-minute ORIENTATION during the first week of the semester. Course textbook "Anybody's Guide to Total Fitness" must be purchased prior to orientation. Log on to the [Fitness and Wellness webpage](#) and select Facilities for a detailed orientation schedule.

PFFT 113 Core Strength & Flexibilty Trng

Credit Hours: 1 / Billing Hours: 2

This course combines core training and flexibility exercises. Students will use calisthenics and floor exercises to improve muscle strength, increase flexibility, and develop core strength (back and abdominal muscles). Proper flexibility techniques and exercises will be emphasized. Students will experience a total body workout utilizing all major muscle groups. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.

PFFT 114 Police Academy Fitness Trng

Credit Hours: 2 / Billing Hours: 3

This course is designed for Law Enforcement students to incorporate strength conditioning, muscle endurance, flexibility, exercise and cognition, and cardiovascular training for a total body workout. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.

2024-2025 Course Descriptions

PFFT 119 Fire Academy Fitness Training

Credit Hours: 3 / Billing Hours: 4

This course provides Fire Academy students with techniques and practice to improve and maintain a high degree of physical fitness necessary to meet the demands of their profession. (Offered Fall, Spring)

- Prerequisite Course: None. Admission to Fire Academy is required.
- Placement Score: None.
- Corequisite Course: FIRE 101 and FIRE 102.

PFFT 170 Yoga: Beginning

Credit Hours: 1 / Billing Hours: 2

This course is an introduction to yogic breathing and yogic stretching exercises with emphasis on relaxation and meditation. Yoga postures will be utilized to reduce stress and tension. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.

PFFT 181 Lineworker Fitness A

Credit Hours: 1 / Billing Hours: 2

This course combines weight machines, core training, interval training and flexibility training to increase overall fitness for pole climbing. Proper technique will be emphasized to ensure safety and continued progress. There will be initial fitness testing and students will be responsible for tracking their progress. (Offered Summer)

- Prerequisite Course: None. Program Approval required for Acceptance into the Electrical Utility/Lineworker Curriculum.
- Placement Score: Reading Level 3 and Writing Level 2.

PFFT 182 Lineworker Fitness B

Credit Hours: 1 / Billing Hours: 2

Students will establish and/or build upon foundational fitness levels tested at the beginning of the course and begin to transition to obtaining more muscular and cardiovascular endurance. The class will also introduce basic knowledge of nutrition and the importance of hydration. (Offered Fall)

- Prerequisite Course: Minimum 3.0 in PFFT 181 or 2 minutes or better on LPAT score.
- Placement Score: Reading Level 3 and Writing Level 2.

2024-2025 Course Descriptions

PFFT 183 Lineworker Fitness C

Credit Hours: 2 / Billing Hours: 4

Students will continue to work on increasing muscular and cardiovascular endurance. Students will be expected to improve on all fitness levels tested at the beginning of the course and perform an advanced cardiovascular endurance test on Jacobs Ladder. This course will prepare students for the 10-week climbing school. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2.
- Recommended: Minimum 3.0 in PFFT 182.

PFWH 120 Health and Wellness for Police

Credit Hours: 0.5 / Billing Hours: 0.5

This course introduces the student to health-related topics, including physical fitness, nutrition, stress management, and the prevention of lifestyle-related illness. (Offered Fall, Spring)

- Prerequisite Course: None. Admission to the Mid-Michigan Police Academy is required.
- Placement Score: None.

PFWH 123 Human Nutrition

Credit Hours: 3 / Billing Hours: 3

An introductory course in human nutrition. Topics include digestion, absorption, metabolism, and biological functions of nutrients; nutrition needs throughout the life cycle; relationship of nutrition and eating patterns to health and disease; individual and societal influences on food choices; and the role of government in food safety and security. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: BIOL 145 or equivalent.

PFWH 163 Healthy Lifestyles

Credit Hours: 2 / Billing Hours: 3

This course introduces the student to lifestyle skills that lead to better health. The student will learn healthy nutritional habits, basic fitness concepts, positive stress reduction, and development of a personalized healthy lifestyle plan. Assessment skills and wellness concepts will be put into practice. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

PFHW 181 Stress Management

Credit Hours: 1 / Billing Hours: 1

This course helps students understand the basic components of the stress response and how they limit our physical, mental and emotional well-being. Students learn and apply basic principles that help to resolve stressful situations and lead to greater sense of ease and pleasure in life, work and relationships. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 4 and Writing Level 4.

PFKN 106 Group Fitness Instructor Prep

Credit Hours: 3 / Billing Hours: 4

This course prepares students to take a national Group Fitness Instructor certification exam. Students will learn how to safely instruct a variety of fitness classes and how to modify exercises for special populations. Human anatomy, exercise physiology, class design, cueing, injury prevention, and safe exercise techniques will be covered. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.

PFKN 170 Foundations of Kinesiology

Credit Hours: 3 / Billing Hours: 3

This course examines multiple aspects of the Kinesiology discipline and profession. This course reviews concepts in each major discipline and theoretical concepts of kinesiology as it impacts professional careers, research, and lifestyle. Current issues and historical perspectives related to the field will be presented. Kinesiology career preparation will be discussed. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: BIOL 145 or equivalent.

2024-2025 Course Descriptions

PFKN 200 Exercise Physiology

Credit Hours: 3 / Billing Hours: 3

This course is designed to acquaint the student with physiological principles of training, exercise prescription, and the role of physical activity in health and disease. Both acute and chronic effects of exercise on various body systems will be discussed. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in [BIOL 145 or (BIOL 201 and BIOL 202) or concurrently].
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 3.

PFKN 201 Exercise Physiology Lab

Credit Hours: 1 / Billing Hours: 2

This course will explore theory and practices related to exercise testing and prescription. It will include practical experience in body composition techniques, muscle strength and endurance testing, flexibility testing and cardiovascular endurance testing. The results of the testing will be used to form appropriate exercise prescriptions according to the American College of Sports Medicine guidelines. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in [BIOL 145 or (BIOL 201 and BIOL 202) or concurrently] and (PFKN 200 or concurrently).
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

PFKN 205 Sport & Exercise Psychology

Credit Hours: 3 / Billing Hours: 3

This course will provide an overview of concepts and applied principles of sport and exercise psychology. Emphasis will be placed on the effect of psychological factors on performance and participation in sport and exercise settings, and the effect of participation in sport and exercise on personal growth and development. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

PFKN 208 Biomechanics

Credit Hours: 3 / Billing Hours: 3

This course introduces students to the mechanical and anatomical principles that govern human motion. The student will understand the link between the structure of the human body and its function, especially as it applies to movement in exercise and sport. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in [BIOL 145 or (BIOL 201 and BIOL 202)].
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.

2024-2025 Course Descriptions

PFKN 210 Athletic Training Principles

Credit Hours: 3 / Billing Hours: 4

This course is an overview of prevention, management, and rehabilitation as each relates to athletic injury. It also provides an examination of various techniques used for the assessment, treatments, and rehabilitation of athletic injuries. Other topics include legal implications for the athletic trainer, first aid principles, and taping procedures. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: BIOL 145 or equivalent.

PFKN 250 Measurements in Kinesiology

Credit Hours: 3 / Billing Hours: 4

This is an introductory course which examines materials and methods used for assessment and analysis within Kinesiology. Emphasis will be placed on procedures and tools used within the various sub-disciplines. Measurement and evaluation methods will address motor skills, physical fitness, and psychological components associated with physical fitness. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 3.
- Recommended: PFKN 170.

PFKN 260 Growth and Motor Behavior

Credit Hours: 3 / Billing Hours: 3

This is a fundamental course which investigates the relationship between biological maturation and physical growth as it relates to motor performance and motor skills learning. The course will also cover fundamentals of motor learning, stages of skill acquisition, physical fitness, and motor abilities of children and youth. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: BIOL 145 or equivalent.

2024-2025 Course Descriptions

PFKN 270 Personal Trainer Preparation

Credit Hours: 4 / Billing Hours: 5

This Personal Trainer Certification preparatory course provides students with the theoretical and practical skills required to take a national certification exam in order to enter the profession of personal training. Focal topics include basic human anatomy, exercise physiology, nutrition, exercise programming, client assessment, injury prevention, legal issues, and business management. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in [BIOL 145 or (BIOL 201 and BIOL 202)].
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Recommended: BIOL 201 and BIOL 202 for Kinesiology majors; BIOL 145 for non-Kinesiology majors.

PFKN 280 Kinesiology Internship

Credit Hours: 3 / Billing Hours: 3

This course provides students the opportunity to apply acquired academic knowledge and practical skills in a Kinesiology related worksite location. A minimum of 108 worksite hours are required. In addition, lecture topics will include workplace etiquette, professionalism, mentorship, diversity, time management, ethical and legal issues. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Program Approval required for worksite location and intern prerequisites and responsibilities.
- Placement Score: Reading Level 5 and Writing Level 6.

PFWT 112 Intro to Weight Training

Credit Hours: 1 / Billing Hours: 2

This basic resistance (weight) training course is designed to introduce resistance training and proper lifting techniques to students. Safety rules, proper use of equipment, and concepts of lifting will be emphasized. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.

2024-2025 Course Descriptions

PFWT 123 Weight Training I

Credit Hours: 2 / Billing Hours: 3

This course is designed to promote physical fitness through progressive resistance (weight) training. Instruction will include principles, methods and techniques of resistance training. Using this material, students will design their own program with emphasis on muscle strengthening, muscle endurance and weight reduction. Principles of proper body mechanics will be applied. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.

PHIL 101 Introduction to Philosophy

Credit Hours: 3 / Billing Hours: 3

A survey introduction to the central topics, theories, and arguments from a range of philosophical traditions. Topics may include: theory of knowledge, the nature of truth and reality, science and technology, free will, the existence of god, the nature of consciousness, personal identity, moral responsibility, and the nature of justice. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: (Reading Level 5 and Writing Level 6) or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently).

PHIL 151 Intro to Logic & Critical Think

Credit Hours: 4 / Billing Hours: 4

Introduction to both informal and basic formal logic, including both deductive and inductive logic, validity (both formal and informal), soundness, informal fallacies, and an analysis of the pragmatic functions of language within argumentative speech and writing. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

2024-2025 Course Descriptions

PHIL 152 Introduction to Ethics

Credit Hours: 4 / Billing Hours: 4

Introduction to ethics, including an introduction to and evaluation of central normative ethical traditions, an introduction to basic metaethics, and a consideration of different areas of applied ethics. The course will include a consideration of cross-cultural material, when appropriate.

(Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

PHIL 211 Philosophy: Ancient & Medieval

Credit Hours: 4 / Billing Hours: 4

Surveys major developments in theories of knowledge, reality, ethics, and society, and their historical role in shaping cultures and human identity. Covers Chinese, Indian, Greek, Roman, Christian, Islamic, and European thought from mythic beginnings to the period of early scientific reasoning. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ENGL 121 or ENGL 131.

PHIL 212 Philosophy: Modern & Contemporary

Credit Hours: 4 / Billing Hours: 4

Surveys major developments in theories of knowledge, reality, ethics, and society, and their historical role in shaping cultures and human identity. Covers European, Asian, African, Native American, and American pragmatic thought from the scientific revolution to the present.

(Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ENGL 121 or ENGL 131.

2024-2025 Course Descriptions

PHIL 215 Philosophy of Religion

Credit Hours: 3 / Billing Hours: 3

This course presents an analysis of central themes in religion using applied philosophical methods. Students will engage religious topics to analyze philosophical concerns related to topics such as metaphysics, epistemology, critical thinking, and ethics. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

PHIL 265 Ethical Issues in Medicine

Credit Hours: 3 / Billing Hours: 3

This course will present some of the ethical dilemmas which arise in relation to health care and develop a framework for ethical decision-making with which to deal with these and other related problems. It is designed for both health care professionals and others who are interested in these issues. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

PHIL 295 Ind Study in Philosophy

Credit Hours: 1 to 4 / Billing Hours: 1 to 4

An opportunity for self-directed learners to explore topics related to, but not taught in the curriculum. Students spend at least two hours per week for each credit. A detailed proposal must be submitted by the student for approval by the Department and supervising instructor prior to registration. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None; Department approval required.

2024-2025 Course Descriptions

PHOT 111 Digital Photography I

Credit Hours: 3 / Billing Hours: 3

An introduction to photographic technology on both a theoretical and practical level. The student will learn camera types and related equipment, exposure controls, creative controls, and beginning and intermediate digital darkroom skills including correcting and enhancing digital images and preparing files for output on printing devices using image editing. This course is the introductory course in the Photographic Imaging Technology Program. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Notes:
 - 1) This course is the first course in the Photography Degree sequence and also may be taken for personal interest. A manually-adjustable Digital SLR/or mirrorless camera capable of shooting raw format is required.
 - 2) Adobe Lightroom software is used. Online, Hybrid, and ORT students are required to have semester-long access to Adobe Lightroom Classic to complete their assignments. Students have access to these in the Learning Commons Computer Lab located in the TLC building. See official syllabus.

PHOT 112 Digital Imag for Photographers

Credit Hours: 4 / Billing Hours: 4

An introduction to the capture, processing and manipulation of digital photographic images using image editing software. Students will learn to scan, capture, correct and enhance digital images and prepare files for output on black and white and color printing devices. Introduces students to theories, terminology, and applications of digital imaging technologies. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in PHOT 111 or concurrently.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Notes:
 - 1) A manually-adjustable Digital SLR/or mirrorless camera is required.
 - 2) Adobe Photoshop CC software is used. Online, Hybrid, and ORT students are required to have semester-long access to Adobe Photoshop CC to complete their assignments. Students have access to these in the Learning Commons Computer Lab located in the TLC building. See official syllabus.

2024-2025 Course Descriptions

PHOT 113 Lighting Concepts and Applic

Credit Hours: 3 / Billing Hours: 3

Introduces the student to the fundamental concepts of photographic lighting for image capture in the studio and on location. Students will learn to apply their knowledge by identifying and solving common photographic lighting problems. Students will use professional continuous lighting equipment to produce images. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in PHOT 120.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3.
- Course Note: A manually-adjustable Digital SLR or mirrorless camera is required. See official syllabus.

PHOT 114 Advanced Photographic Imaging

Credit Hours: 4 / Billing Hours: 4

An advanced-level study in the capture, processing, and manipulation of digital photographic images using image editing software. Students will acquire knowledge and skills to solve technical, aesthetic, and communication problems. Learners will apply color management and color image design principles in the production of professional-level color photographic images. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (PHOT 111 and PHOT 112 and PHOT 113).
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 3.
- Course Note: A manually-adjustable Digital SLR/or mirrorless camera is required. See official syllabus.

PHOT 119 Intermediate Lighting

Credit Hours: 3 / Billing Hours: 3

An exploration of intermediate lighting theories, practices and techniques. This course emphasizes the use and control of natural light and electronic flash as applied to people, locations and advanced studio settings. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (PHOT 111 and PHOT 113).
- Placement Score: Reading Level 3 and Writing Level 6 and Math Level 3.
- Course Note: A manually-adjustable Digital SLR or mirrorless camera is required. See official syllabus.

2024-2025 Course Descriptions

PHOT 120 Still/Motion Capture & Editing

Credit Hours: 3 / Billing Hours: 3

An introduction to the fundamentals of capturing, editing, and outputting video footage and still images for a variety of visual applications. Students will learn to light, capture, edit, manipulate, and export visual content in a variety of formats for print, web and soft display. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in ARTS 102 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: ARTS 171.

PHOT 200 Content on the Go

Credit Hours: 3 / Billing Hours: 3

An intermediate hands-on experience in the capturing, editing, and outputting still and moving images for a variety of visual applications using mobile devices, for example, cell phones. Students will learn to capture, edit, and export visual content on mobile devices for usage in print, web, and soft display. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in (ARTS 171 and DMAC 132 and PHOT 120).
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: A student will need either a 20GB (minimum) digital storage device or access to cloud-based digital storage. USB 3.0 is recommended.

PHOT 212 Advanced Still/Video Projects

Credit Hours: 3 / Billing Hours: 3

Students will learn the technical requirements to produce professional photographic illustrations and will use appropriate tools and techniques to produce professional photographic illustrations and DSLR video footage. Students will be introduced to appropriate medium format technologies and video capture as applied to professional photographic illustration. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in PHOT 114 and PHOT 119.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 3.

2024-2025 Course Descriptions

PHOT 213 Portrait Photography

Credit Hours: 3 / Billing Hours: 3

Introduces students to the techniques and technologies associated with professional portrait photography. Students will work in areas directly linked to the technical and expressive elements of portrait photography including proper lighting techniques and digital retouching methods. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in PHOT 114 and PHOT 119.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 3.
- Course Note: A manually-adjustable Digital SLR or mirrorless camera is required. See official syllabus.

PHYS 120 The Art of Physics

Credit Hours: 4 / Billing Hours: 5

This course reveals the wonders of the physical universe by giving students a basic understanding of motion, forces, acoustics, and optics. Designed for students in the Humanities; Art, Design & Multimedia; other non-science areas, or sonography. Extensive interactive activities and laboratory exercises supplement the course materials and instruction. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (MATH 105 or MATH 106) or P in (NCMA 106 or NCMA 110) or Math Level indicated below.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 4.
- Course Note: This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

PHYS 200 Intro to Applied Physics

Credit Hours: 4 / Billing Hours: 5

The basic principles of force, work, rate, resistance, energy, and power are applied to four systems: mechanical, fluid (liquids and gases), electrical, and thermal systems using unifying concepts through mathematical expressions. Activities and experiments explore physics behind real-world applications. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (MATH 109 or MATH 114) or Math Level indicated below.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 5.

2024-2025 Course Descriptions

PHYS 221 Introductory Physics I

Credit Hours: 4 / Billing Hours: 6

First semester of algebra-based physics with laboratory, designed to present the fundamental principles of physics, with applications. Topics in mechanics include one and two dimensional kinematics, forces, energy and work, momentum and impulse, circular motion and rotational dynamics, conservation laws, and elasticity. Experiments and hands-on activities are integrated with lecture topics. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (MATH 126 or MATH 141) or concurrently or Math Level 9 noted below.
- Placement Score: Reading Level 5 and Writing Level 6 and Math Level 9.
- Course Note: The PHYS221/222 courses are often taken by students going into fields of study related to health, the life sciences, and architecture.

PHYS 222 Introductory Physics II

Credit Hours: 4 / Billing Hours: 6

Second semester continuation of algebra- and trigonometry-based physics with laboratory, designed to present the fundamental principles of physics, with applications. Topics include simple harmonic motion, waves, sound, light, wave and geometric optics, and electricity and magnetism, including circuits. Experiments and hands-on activities are integrated with the lecture topics. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in PHYS 221 or Department Approval.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: The PHYS221/222 courses are often taken by students going into fields of study related to health, the life sciences, and architecture.

2024-2025 Course Descriptions

PHYS 251 Physics I with Calculus

Credit Hours: 5 / Billing Hours: 7

First in a two-semester sequence of calculus-based physics with laboratory for science and engineering students. Topics include forces and motion, momentum, work and energy, conservation laws of energy and momentum, rotational motion, static equilibrium, gravitation, and oscillations. May include relativity. Experiments and hands-on activities are integrated with lecture topics. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (MATH 152 or MATH 162) or concurrently.
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: The PHYS251/252 courses are often taken by students going into fields of engineering, physics, chemistry, and other fields requiring a Calculus-level understanding of physics.

PHYS 252 Physics II with Calculus

Credit Hours: 5 / Billing Hours: 7

Second in a two-semester sequence of calculus-based physics with laboratory for science and engineering students. Topics include electric and magnetic forces and fields, electromagnetic energy, currents and circuits, electromagnetic oscillations and waves, mechanical waves and sound, light waves, physical and geometrical optics. Experiments and hands-on activities are integrated with lecture topics. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in PHYS 251 and Minimum 2.0 in (MATH 152 or MATH 162)
- Placement Score: Reading Level 5 and Writing Level 6.
- Course Note: The PHYS251/252 courses are often taken by students going into fields of engineering, physics, chemistry, and other fields requiring a Calculus-level understanding of physics.

PHYS 260 Statics for Engineers

Credit Hours: 3 / Billing Hours: 3

This course will place emphasis on the understanding of principles through the solution of problems in analysis of vectors, torques, trusses, resultants, machines, force systems, centroids and center gravity, equilibrium and friction. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in PHYS 251.
- Placement Score: None.

2024-2025 Course Descriptions

POLS 120 American Political System

Credit Hours: 4 / Billing Hours: 4

An analysis of the American political system, emphasizing the federal system and government at the national level. This course studies national governmental institutions' activities, functions and methods of organizing resources and making policy. Emphasis is on political participation by an informed public. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

POLS 121 State and Local Government

Credit Hours: 4 / Billing Hours: 4

An overview of state and local government in the United States with an emphasis on the Michigan government. Study is focused on state and local governmental institutions' activities, functions, resource management and policymaking. Consideration is given to relationships between federal, state and local governments, the issues they confront, and public participation. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

POLS 201 Intro to Political Science

Credit Hours: 3 / Billing Hours: 3

This course is an introduction to the study of politics and the academic fields of Political Science. It examines the fundamental nature of politics, the exercise of power and their implications. Students will explore the need for governance, role of power, place of individuals in society and political institutions. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

POLS 205 Government Internship

Credit Hours: 3 / Billing Hours: 3

This course offers the student a chance to observe the actual workings of the political process by participating in it. Participation will provide students an exposure to public policy making and an opportunity to reflect on that process through course assignments. The program covers all levels of government, from city and township through the federal level. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

2024-2025 Course Descriptions

POLS 240 Introduction to Public Policy

Credit Hours: 3 / Billing Hours: 3

This course will provide an analysis of political and organizational processes which influence the formulation and implementation of public policy. Special attention will be given to the formulation, implementation, and evaluation of various selected public policies. Further, the course is intended to develop some skills for the evaluation and design of policies. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

POLS 250 Campaigns & Elections

Credit Hours: 3 / Billing Hours: 3

Emphasizes origins, structure, and functions of US and Michigan political parties. Examines the election process and factors influencing election results. Emphasis is placed on the importance of organizing effective political action and citizen participation, and the role of interest groups in American and Michigan politics. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

POLS 260 Comparative Political Systems

Credit Hours: 3 / Billing Hours: 3

An introduction to the institutions, processes, and policies of political systems throughout the world. The course will compare political cultures and behavior in the United States, the industrial nations of Europe and Asia, and the developing nations, with special emphasis on the themes of democracy, participation, and political change. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

POLS 270 International Relations

Credit Hours: 3 / Billing Hours: 3

A course in contemporary international relations, with emphasis on the effect political cultures in different countries have on the international system. Concepts, theories, and rudimentary methods of comparison and analysis are surveyed. The relationship between international politics and U.S. foreign and domestic policy is explored. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

POLS 295 Ind Study in Political Science Credit Hours: 1 to 4 / Billing Hours: 1 to 4

An opportunity for self-directed learners to explore topics related to, but not taught in the curriculum. Students spend at least two hours per week for each credit. A detailed proposal must be submitted by the student for approval by the Department and supervising instructor prior to registration. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None; Department approval required.

PSYC 175 Psyc of Death: Prep for Living Credit Hours: 3 / Billing Hours: 3

Examines psychological theories, concepts, and research that pertain to the study of death and personal death awareness. Topics include cross-cultural and historical perspectives, health care systems, medical ethics, grief/loss issues, funerals and body disposition, legal and social issues, death in modern society, suicide and beliefs about life after death. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

PSYC 180 Intro to Positive Psychology Credit Hours: 3 / Billing Hours: 3

A general overview of positive psychology and its place within psychology as a whole. Major topics are well-being, strengths and virtues, positive emotional and cognitive states, positive institutions, and the need for positivity with stigmatized groups. Attention will be paid to research underlying the formal study of these topics. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

2024-2025 Course Descriptions

PSYC 200 Introduction to Psychology

Credit Hours: 4 / Billing Hours: 4

The basic orientation to the field of psychology, designed as a general survey and as preparation for advanced courses in the field. Topics include methods, nervous systems, intelligence, development, learning, memory, personality, abnormality, therapy, and social behavior. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or ENGL 099 concurrently.
- Course Note: All sections of PSYC 200 allow concurrent enrollment with ENGL 099. Some face-to-face sections of PSYC 200 allow concurrent enrollment with ENGL 098 and NCAS 104. See an academic advisor for sections that allow concurrent enrollment with ENGL 098 and NCAS 104.

PSYC 202 Psychology of Personality

Credit Hours: 3 / Billing Hours: 3

A survey of the leading theories of personality and personality development. Topics include Freudian/psychodynamic, trait, behavioral, humanistic, and Yoga/Buddhist theories, assessment of personality, and major personality theorists. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in PSYC 200.
- Placement Score: Reading Level 5.
- Course Note: Writing Level 6 or Minimum 2.0 in (ENGL 121 or ENGL 131).

PSYC 203 Social Psychology

Credit Hours: 3 / Billing Hours: 3

A theoretical and empirical approach to understanding individual social and group behavior. Examines the person and the social environment with a focus on attitudes, attributions, interpersonal and intrapersonal behavior, and group processes. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (PSYC 200 or SOCL 120).
- Placement Score: Reading Level 5.
- Recommended: Writing Level 6 or Minimum 2.0 in (ENGL 121 or ENGL 131).

2024-2025 Course Descriptions

PSYC 205 Human Growth and Development Credit Hours: 3 / Billing Hours: 3

A study of the human life cycle from conception to death. Designed to investigate, describe, and explain changes in the physical, social, emotional, and cognitive areas that are a result of the continuous interaction of maturation and experience. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in PSYC 200.
- Placement Score: Reading Level 5.
- Recommended: Writing Level 6 or Minimum 2.0 in (ENGL 121 or ENGL 131).

PSYC 209 Cognitive Psychology Credit Hours: 3 / Billing Hours: 3

Cognitive psychology is the study of the human mind; its domain includes questions concerning how people perceive the world, remember information, use knowledge, understand language, learn, reason, and solve problems. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in PSYC 200.
- Placement Score: Reading Level 5.
- Recommended: Writing Level 6 or Minimum 2.0 in ENGL 121 or ENGL 131.

PSYC 210 Brain and Behavior Credit Hours: 3 / Billing Hours: 3

Brain and Behavior integrates psychology and biology, emphasizing how the nervous system controls behavior. The course provides an examination of the structure and function of the nervous system and the neurobiological bases of mental illness, drug abuse, movement, sleep, memory, feeding and drinking, sensory processing, and neurological disorders. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (PSYC 200 or BIOL 121 or BIOL 127).
- Placement Score: Reading Level 5.
- Recommended: Writing Level 6 or (Minimum 2.0 in ENGL 121 or ENGL 131).

2024-2025 Course Descriptions

PSYC 221 Child Psychology

Credit Hours: 3 / Billing Hours: 3

Explores theories and principles of child cognitive and physical development from conception to puberty. The course covers psychological, sociological, and biological aspects of maturation and development. Topics include issues such as moral development, social development, language development, and cultural and cross cultural influences on the developing child. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in PSYC 200.
- Placement Score: Reading Level 5.
- Recommended: Writing Level 6 or Minimum 2.0 in (ENGL 121 or ENGL 131).

PSYC 222 Adolescent Psychology

Credit Hours: 3 / Billing Hours: 3

Examines theoretical and empirical literature related to adolescence, emphasizing biological, psychological, and sociological aspects of maturation and development from puberty to young adulthood. Topics include the adolescent's search for identity; influences of culture, family, school and peer group; and problems and pathologies in adolescence. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in PSYC 200.
- Placement Score: Reading Level 5.
- Recommended: Writing Level 6 or (Minimum 2.0 in ENGL 121 or ENGL 131).

PSYC 240 Psychology of Human Sexuality

Credit Hours: 3 / Billing Hours: 3

An exploration of psychological aspects of human sexuality, including research methods, response, identity, development, attraction and intimacy, communication, orientation, attitudes, diseases, and disorders. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5.

2024-2025 Course Descriptions

PSYC 250 Abnormal Psychology

Credit Hours: 3 / Billing Hours: 3

A survey of the nature, development, diagnosis, and treatment of psychopathology viewed from a general-systems perspective (psychological, sociological, and biological). Major theories of causes, scientific research, and diagnostic and therapeutic techniques are studied with respect to various psychological disorders. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in PSYC 200.
- Placement Score: Reading Level 5.
- Recommended: Writing Level 6 or Minimum 2.0 in (ENGL 121 or ENGL 131).

RELG 150 Intro to World Religions

Credit Hours: 4 / Billing Hours: 4

This course will provide students with a global perspective on the human religious experience through an introductory examination of the beliefs and practices of the world's largest religions: Christianity, Islam, Hinduism, and Buddhism. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

RELG 210 Comparative Religions

Credit Hours: 3 / Billing Hours: 3

This course will introduce students to various topics and themes across major religions in order to analyze the nature of reality and determinations of truth, while cultivating a global perspective on the nature of religious belief, religious practice, and the religious experience of The Sacred. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently).

2024-2025 Course Descriptions

RELG 211 Asian Religions and Traditions

Credit Hours: 4 / Billing Hours: 4

This course offers an exploration of the historical development and contemporary practice of religions and philosophies of East and South Asia, including but not limited to: Hinduism, Buddhism, Islam, Confucianism, and Taoism. The course also considers the influences of these religions on contemporary culture in North America and globally. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

RELG 230 Introduction to Christianity

Credit Hours: 3 / Billing Hours: 3

In this course, students will analyze the historical and cultural contexts of Jesus' teachings and the New Testament. The student will interpret scriptures and acknowledge the contributions of historical figures that shaped Christianity's beliefs and practices. Three expressions of Christianity will be studied: Catholicism, Orthodox, and Protestantism. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently).

RELG 232 Introduction to Islam

Credit Hours: 3 / Billing Hours: 3

This course will introduce students to the historical and cultural contexts for understanding the teachings of The Prophet Muhammad, the beliefs and practices derived from the Qur'an and Sunnah (Hadith), and early caliphates or dynasties. The student will be introduced to three expressions of Islam: Sunni, Shi'a, and Sufism. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6 or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) or (Reading Level 5 and Writing Level 4 and NCAS 102 concurrently).

2024-2025 Course Descriptions

SCIN 287 Science Technology Internship Credit Hours: 2 to 4 / Billing Hours: 2 to 4

This course provides on-the-job training for an applied degree in science technology. Placement is made at an approved training site to earn credits for satisfactory work performance. This internship may be a paid or unpaid work experience. Students will apply knowledge and skills learned in academic courses to real world situations. (Offered Fall, Spring, Summer)

- Prerequisite Course: Department Approval.

SCIS 297 Independent Study in Science Credit Hours: 1 to 4 / Billing Hours: 1 to 4

An opportunity for self-directed learners to explore topics related to, but not taught in the curriculum. Students spend at least two hours per week for each credit. A detailed proposal must be submitted by the student for approval by the Department and supervising instructor prior to registration. (Offered Fall, Spring, Summer)

- Prerequisite Course: Department Approval.

SIGN 160 Intro to the Deaf Community Credit Hours: 3 / Billing Hours: 3

This course is designed to introduce the student to the various aspects of life in the dDeaf community including cultural identity, education, language, the medical perspective, civil rights, disability law, advocacy, audiology, and oppression. Students will be taught up to 300 American Sign Language vocabulary words and phrases, Fingerspelling, and numbers. A grade of 2.0 fulfills the General Education-Applied Degrees English Composition (second course)/Communication requirement. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.
- Course Note: May be taken concurrently with SIGN 161. Non-degree students may waive SIGN 160.

2024-2025 Course Descriptions

SIGN 161 American Sign Language I

Credit Hours: 3 / Billing Hours: 3

This course is an introduction to the basic skills in developing production and comprehension skills in American Sign Language (ASL). Students will learn ASL vocabulary, structure, and grammar. Course content also includes the manual alphabet and numbers. Students will develop basic conversational abilities and culturally appropriate behaviors, and learn about the culture and history of dDeaf communities. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in SIGN 160 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 4.
- Course Note: May be taken concurrently with SIGN 160.

SIGN 162 American Sign Language II

Credit Hours: 3 / Billing Hours: 3

This course is designed to continue student development, production, and comprehension skills in American Sign Language (ASL). Students will learn additional ASL vocabulary, structure, and grammar. Students will develop basic conversational abilities, culturally appropriate behaviors, and learn about the culture and history of dDeaf communities. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in SIGN 161.
- Placement Score: Reading Level 5 and Writing Level 4.

SIGN 163 American Sign Language III

Credit Hours: 3 / Billing Hours: 3

This course is an introduction to intermediate skills in developing production and comprehension skills in American Sign Language (ASL). Students will learn ASL vocabulary, structure, and grammar. Course content also includes the manual alphabet and numbers. Students will develop and refine their conversational abilities, culturally appropriate behaviors, and learn about the culture and history of dDeaf communities. (Offered Spring, Summer)

- Prerequisite Course: Minimum 2.0 in SIGN 162.
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

SIGN 164 American Sign Language IV

Credit Hours: 3 / Billing Hours: 3

This course is designed to continue development of American Sign Language (ASL) skills. Students will learn ASL vocabulary, structure, and grammar. Students will develop and refine intermediate conversational abilities, culturally appropriate behaviors, and learn about the culture and history of dDeaf communities. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in SIGN 163.
- Placement Score: Reading Level 5 and Writing Level 4.

SIGN 166 Fingerspelling

Credit Hours: 3 / Billing Hours: 3

This course provides the student with concentrated instruction and practice in both expressive and receptive fingerspelling and numbering skills. Designed for students intending to become sign language interpreters. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in SIGN 161.
- Placement Score: Reading Level 5 and Writing Level 4.
- Recommended: SIGN 162 or concurrently.

SIGN 167 Beginning Sign to Voice

Credit Hours: 3 / Billing Hours: 3

Designed to increase the student's receptive skills in conversational sign language focusing on comprehension of the various manual communication systems utilized by dDeaf persons. Sign-to-voice techniques and practice will be introduced through use of prepared videotapes. Intended for students who plan to become sign language interpreters. (Offered Spring, Summer)

- Prerequisite Course: Minimum 2.0 in SIGN 163 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 4.

SIGN 170 Expressive/Receptive ASL

Credit Hours: 3 / Billing Hours: 3

This course focuses on grammatical elements of American Sign Language (ASL) using expressive skills. Conversational behaviors will be discussed. Student's receptive and voicing skills will focus on ASL vocabulary recognition, English sentence structure, and vocal tone and volume. (Offered Summer)

- Prerequisite Course: Minimum 2.0 in SIGN 163 or concurrently.
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

SIGN 200 Sign Practicum Seminar

Credit Hours: 2 / Billing Hours: 2

Prepares students to develop working relationships within the field of interpreting. This course will focus on ethics, professional behavior, and networking. This course will prepare students for directed observation and application of practical interpreting skills required in the consecutive semesters. Student must complete ninety (90) practicum hours during the semester. (Offered Fall)

- Prerequisite Course: None; Department Approval required.
- Placement Score: Reading Level 5 and Writing Level 4.
- Restrictions: Student must successfully pass ITP screening in order to take SIGN 200.

SIGN 240 Intro to Transliterating

Credit Hours: 3 / Billing Hours: 3

American Sign Language vocabulary will continue to be developed while learning about the interpreting and transliterating process. Students will analyze text and demonstrate the ability to facilitate communication in both ASL sentence structure or English word order. The class involves expressive and receptive skill development. Course is designed for students intending to be sign language interpreters. Student must complete ninety (90) practicum hours during the semester. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.
- Restriction: Student must successfully pass ITP screening in order to take SIGN 240.

SIGN 250 Deaf Culture and History

Credit Hours: 3 / Billing Hours: 3

This course looks closely at the unique experiences of those in the Deaf Community by examining the history of the Deaf Community in America and the sociology of Deaf, Deaf-Blind, and Hard of Hearing people. Designed for students intending to become sign language interpreters. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in SIGN 163.
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

SIGN 260 Linguistic Principles of ASL

Credit Hours: 3 / Billing Hours: 3

An overview of the linguistic principles of American Sign Language (ASL) including its basic phonology, morphology, syntax, variation, results of language contact with English and other signed languages, pragmatics, bilingualism and language as art. Topics relating to interpreting, the Deaf Community, and Deaf Culture will be emphasized. Designed for students intending to become sign language interpreters. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in SIGN 163.
- Placement Score: Reading Level 5 and Writing Level 4.

SIGN 263 Intermediate Sign to Voice

Credit Hours: 3 / Billing Hours: 3

This course develops and refines necessary basic skills and fluency in receptive sign language and for voicing all levels of communication of deaf individuals. Techniques taught include interpreter task analysis, listening, attending, internal message formulation, vocabulary search, and monitoring output. Designed for students intending to become sign language interpreters. Student must complete ninety (90) practicum hours during the semester. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (SIGN 200 and SIGN 240).
- Placement Score: Reading Level 5 and Writing Level 4.
- Course Note: Student must have completed ninety (90) practicum hours prior to taking SIGN 263.

SIGN 266 Post-Secondary Interpreting

Credit Hours: 2 / Billing Hours: 2

Designed for students intending to become sign language interpreters, this course provides simulated testing settings using live or pre-recorded movies of hearing and deaf instructors giving classroom-appropriate lectures. Students will develop teaming skills, feedback skills, and interpreting skills. Students will practice interpreting approaches and skills for a variety of academic topics. Students will analyze lectures at message level and begin to apply principles of discourse analysis. Student must complete sixty (60) practicum hours during the semester, for a minimum of 240 hours, while also satisfying the individual category requirements. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in (SIGN 263 and SIGN 267).
- Placement Score: Reading Level 5 and Writing Level 4.
- Course Note: Student must have completed one hundred eighty (180) practicum hours prior to taking SIGN 266.

2024-2025 Course Descriptions

SIGN 267 Sign Practicum I

Credit Hours: 3 / Billing Hours: 3

Combines student transliterated lectures and supervised placement in various interpreting settings to allow directed observation and application of practical interpreting skills. Designed for students intending to become sign language interpreters. Student must complete ninety (90) practicum hours during the semester. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (SIGN 200 and SIGN 240).
- Placement Score: Reading Level 5 and Writing Level 4.
- Course Note: Student must have completed ninety (90) practicum hours prior to taking SIGN 267.

SIGN 268 Sign Practicum II

Credit Hours: 3 / Billing Hours: 3

For students intending to become sign language interpreters, combines student-interpreted lectures and supervised placement in various settings to allow directed observation and application of practical interpreting skills. Student must complete sixty (60) practicum hours during the semester for a minimum of 240 hours, while also satisfying the individual category requirements. (Offered Summer)

- Prerequisite Course: Minimum 2.5 in (SIGN 263 and SIGN 267)
- Placement Score: Reading Level 5 and Writing Level 4.
- Course Note: Student must have completed one hundred eighty (180) practicum hours prior to taking SIGN 268.

SIGN 270 Advanced Interpreting

Credit Hours: 3 / Billing Hours: 3

This course continues the development of skills necessary for interpreter evaluation/qualification. Students will be provided with simulated testing situations using interactive videotapes of hearing/deaf individuals requiring students to interpret/transliterate. Designed for students intending to become sign language interpreters. Student must complete eighty (80) practicum hours and satisfy the individual category requirements during the semester. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (SIGN 266 and SIGN 268).
- Placement Score: Reading Level 5 and Writing Level 4.
- Course Note: Restriction: Student must have completed the sophomore year practicum requirement prior to taking SIGN 270.

2024-2025 Course Descriptions

SIGN 271 Advanced Sign to Voice

Credit Hours: 3 / Billing Hours: 3

This course provides advanced skill development and fluency in voicing for a variety of dDeaf individuals in diverse settings. Techniques taught are voice projection, breathing and relaxation, analysis of sign information, anticipation and prediction, closure, modality switching, correction, decalage, and pacing. Designed for students intending to become sign language interpreters. Student must complete eighty (80) practicum hours and satisfy the individual category requirements during the semester. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in SIGN 270.
- Placement Score: Reading Level 5 and Writing Level 4.
- Course Note: Student must have completed eighty (80) practicum hours prior to taking SIGN 271.

SIGN 293 Principles of Interpreting

Credit Hours: 3 / Billing Hours: 3

Surveys professional interpreting through lecture, role-playing, and classroom discussion. Reinforces the ethics of interpreting while analyzing the specific roles and responsibilities of a professional interpreter. Examines necessary skills of the interpreter in various settings, such as educational, mental health, vocational rehabilitation, legal, religious, phone, television, medical, DeafBlind, and minimal language skills. Student must complete eighty (80) practicum hours during the semester. (Offered Fall)

- Prerequisite Course: Minimum 2.5 in (SIGN 266 and SIGN 268).
- Placement Score: Reading Level 5 and Writing Level 4.
- Restrictions: Student must have completed the sophomore year practicum requirement prior to taking SIGN 293.

SIGN 296 Specialized Interpreting

Credit Hours: 2 / Billing Hours: 2

This course allows students to learn best practices for interpreting in a variety of settings. These settings may include community, religion, video relay, education, medical, and legal. Designed for students intending to become sign language interpreters. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in (SIGN 270 and SIGN 293).
- Placement Score: Reading Level 5 and Writing Level 4.

2024-2025 Course Descriptions

SOCL 120 Introduction to Sociology

Credit Hours: 4 / Billing Hours: 4

A survey of major theoretical perspectives, concepts, and methods of sociology. Emphasis is placed on societal transformation, social organization, culture, cultural diversity, socialization, social stratification, social institutions, and social change within a national and global context. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently)
- Course Notes:
 - 1) All sections of SOCL 120 allow concurrent enrollment with ENGL 099; some sections also allow concurrent enrollment with ENGL 098 and NCAS 103. See an academic advisor for sections that allow concurrent enrollment with ENGL 098 and NCAS 103.
 - 2) The textbook for this course is an open educational resource, provided to students at no cost. Access to the textbook will be available on the first day of class.
 - 3) Online students are required to travel to LCC campus or request an approved non-LCC testing site to complete their SOCL120 Departmental Final Exam.
 - 4) Online, Hybrid and ORT sections of this course require internet access to complete quizzes and/or other assessments.

SOCL 254 Marriage and Family

Credit Hours: 3 / Billing Hours: 3

A survey of theoretical perspectives on the institutions of marriage and family. Topics include the historical context of family, gender roles, sexual behavior, values, psychological needs, divorce, parenting, family problems, and social policy. Variations in family types and lifestyles among diverse groups within the U. S. and elsewhere are examined. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (SOCL 120 or PSYC 200).
- Placement Score: Reading Level 5.
- Recommended: Writing Level 6 or Minimum 2.0 in (ENGL 121 or ENGL 131).

2024-2025 Course Descriptions

SOCL 255 Contemporary Social Problems

Credit Hours: 3 / Billing Hours: 3

This course is a theoretical and empirical survey of the nature and causes of social problems such as poverty, crime, racial and gender inequality, demographic and environmental changes, health care, education and family stability. Examples from other societies will be used for comparative analysis and establishing global links. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in SOCL 120.
- Placement Score: Reading Level 5.
- Recommended: Writing Level 6 or Minimum 2.0 in (ENGL 121 or ENGL 131).

SOCL 260 Race and Ethnicity

Credit Hours: 3 / Billing Hours: 3

Sociological study of race and ethnicity in the U.S. and globally. Emphasis is placed on theories of race, racial and ethnic group formation, ethnic stratification, identity formation, immigration and struggles for equality. Racial and ethnic group experiences in Western and non-Western societies are traced historically and viewed comparatively. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in SOCL 120.
- Placement Score: Reading Level 5.
- Recommended: Writing Level 6 or Minimum 2.0 in (ENGL 121 or ENGL 131).

SOWK 101 Introduction to Social Work

Credit Hours: 3 / Billing Hours: 3

This course introduces the principles of professional social work practice. Emphasis is on the history of social work, social welfare policy, empowerment, and human diversity. There is an overview of social work ethical practice, roles, and careers with relevance to the diverse social and client needs. This course complies with the Social Work Competencies, Council on Standards for Social Work Education. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.

2024-2025 Course Descriptions

SPAN 106 Spanish for Health Care

Credit Hours: 3 / Billing Hours: 3

This course is designed to develop spoken and written communication skills in health care Spanish. Emphasizes question-answer patterns, high-frequency expressions and key vocabulary in health care. Students will perform reading and writing exercises, practice vocabulary and dialogues essential to specific health care-related situations, and study cultural topics relevant to Spanish in health care settings. (Offered Spring)

- Prerequisite Course: Reading Level 5.
- Recommended: Previous experience with the Spanish language is strongly advised.

SPAN 121 Elementary Spanish I

Credit Hours: 4 / Billing Hours: 4

First course of a two-semester sequence in elementary Spanish. Designed for persons with no knowledge of Spanish who wish to develop basic language skills. Elementary practice in listening comprehension, speaking, reading, and writing. Provides useful information about the Spanish-speaking world. Class is taught largely in Spanish. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

SPAN 122 Elementary Spanish II

Credit Hours: 4 / Billing Hours: 4

Second course of a two-semester sequence in elementary Spanish. Introduces more complex structures while developing a foundation in the essentials of the language. Emphasizes practice in listening comprehension, speaking, reading, and writing. Provides useful information about the Spanish-speaking world. Class is taught largely in Spanish. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in SPAN 121 or equivalent.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

SPAN 201 Intermediate Spanish I

Credit Hours: 4 / Billing Hours: 4

First course of a two-semester sequence in intermediate Spanish. Begins with review of grammar, and continues with intensive vocabulary building, listening comprehension, and writing compositions. Encourages conversation by introducing discussions about the cultures of the Spanish-speaking world. Class is taught entirely in Spanish. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in SPAN 122 or equivalent.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

2024-2025 Course Descriptions

SPAN 202 Intermediate Spanish II

Credit Hours: 4 / Billing Hours: 4

Second course of a two-semester sequence in intermediate Spanish. Continues a review of grammar, intensifies vocabulary building, strengthens listening comprehension and composition writing, and improves oral fluency through intense discussions on the cultures of the Spanish-speaking world. Class is taught entirely in Spanish. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in SPAN 201 or equivalent.
- Placement Score: Reading Level 5 or (Reading Level 4 and ENGL 099 concurrently).

STAT 170 Introduction to Statistics

Credit Hours: 4 / Billing Hours: 4

This is an introductory course in statistics, with a focus on data analysis. Topics include methods for collecting data, graphical and numerical descriptive statistics, correlation, linear regression, basic concepts of probability, confidence intervals and hypothesis tests for means and proportions, and chi-square tests. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (MATH 105 or MATH 106 or MATH 107) or P in (NCMA 106 or NCMA 110) or (MATH 097 concurrently) or a Math Placement Score indicated below.
- Placement Score: (Reading Level 5 and Writing Level 4) or (Reading Level 4 and Writing Level 4 and ENGL 099 concurrently) and (BSM2/CPT Algebra 77-120 or ACM2/QRAS 260-300 or ACM3/AAF 220-244 or A02/ACT Math 20-21 or S12/SAT Math 520-540 or PS12/PSAT Math 520-540 or HS GPA 2.5 w/in 10 years or GEDM/GED Math 165 w/in 10 years).
- Course Notes:
 - 1) Graphing calculator required; TI 83-84 series calculator highly recommended.
 - 2) A student should take either STAT 170 or STAT 215 (not both), depending on their transfer institution.
 - 3). This course includes on-site proctored exam(s) for all online and/or hybrid sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

2024-2025 Course Descriptions

STAT 215 Intro to Probability and Stats

Credit Hours: 4 / Billing Hours: 4

This is an introductory course in probability and statistics. Topics include descriptive statistics, probability, random variables, normal distribution, t distribution, chi-square distribution, F distribution, confidence intervals, hypothesis testing, correlation, and linear regression. In addition, students will solve applied problems by completing required computer assignments. (Offered Fall, Spring, Summer)

- Prerequisite Course: Minimum 2.0 in (MATH 120 or above) or a Math Placement Score indicated below.
- Placement Score: Reading Level 5 and Writing Level 4 and (BSM7/Accuplacer CLM 80-99 or ACM3/AAF 260-300 or A02/ACT Math 26-28 or S12/SAT Math 620-680 or PS12/PSAT Math 620-680).
- Recommended: Knowledge of Windows software.
- Course Notes:
 - 1) A graphing calculator from the TI-83/84 series is required for course work.
 - 2) A student should take either STAT 170 or STAT 215 (not both), depending on their transfer institution.
 - 3). This course includes on-site proctored exam(s) for all online sections. Students will need to travel to an LCC campus or request an approved non-LCC testing site (additional fees may apply) to take the exam(s).

STPR 145 Foundations Sterile Processing

Credit Hours: 5 / Billing Hours: 6.5

This course introduces students to basic skills needed in the Sterile Processing Department of health care facilities, including processing patient care equipment, supplies, and instruments for use in all departments. Students will also learn the principles and practices of decontamination, cleaning, disinfection, sterilization, and distribution of medical/surgical supplies. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 4.
- Corequisite Course: STPR 148.
- Course Note: Students will be charged an additional fee of \$50 for ACEMAPP required documentation. Required:
 - Minimum age of 18 required to enroll in this course.
 - Completion of Bloodborne Pathogens and HIPAA Training online; information provided at first class session.

2024-2025 Course Descriptions

STPR 148 Sterile Processing Externship

Credit Hours: 2 / Billing Hours: 2

This course prepares individuals to function competently in the Sterile Processing Department in hospitals. It builds on the principles and practices taught in STPR 145 and includes on-the-job training and hands-on practice in a hospital. Successful completion of the course qualifies a student to take the national certification examination for Sterile Processing and Distribution through the Certification Board for Sterile Processing and Distribution (CBSPD). (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in [STPR 145 or (CHSE 120 and CHSE 145) or concurrently].
- Placement Score: Reading Level 5 and Writing Level 4.
- Corequisite Course: STPR 145.
- Course Note: Required:
 - Minimum age of 18 required.
 - Completion of Bloodborne Pathogens and HIPAA Training online; information provided on course D2L site.
 - Negative 2-step TB (tuberculosis) skin test within the last year.
 - Student must pass an [ICHAT](#) criminal background check prior to clinical placement; information provided on course D2L site.

SURG 100 Fundamentals of Surgical Tech

Credit Hours: 3 / Billing Hours: 3

Introduction to role and function of the surgical technologist as a member of the surgical team. Lectures present all skills, procedures, and protocol necessary to participate in the operating room. (Offered Fall)

- Prerequisite Course: None. Admission to Surgical Technology Program is required.
- Placement Score: None.
- Corequisite Course: SURG 101 and SURG 108 and SURG 109 and SURG 121 and SURG 122.

2024-2025 Course Descriptions

SURG 101 The Surgical Patient

Credit Hours: 2 / Billing Hours: 2

Lectures will present the protocol and procedures directly affecting the care and safety of the patient. This includes the ethical, legal, and moral responsibilities of the technologist, the concepts of patient care, and preoperative routines, along with elements of proper documentation and risk management. (Offered Fall)

- Prerequisite Course: None. Admission to Surgical Technology Program.
- Placement Score: None.
- Corequisite Course: SURG 100 and SURG 108 and SURG 109 and SURG 121 and SURG 122.

SURG 103 Surgical Asepsis

Credit Hours: 2 / Billing Hours: 2

This course defines and describes pathogenic microorganisms and the causes and prevention of infection in the hospital. The student will be introduced to sterilization, disinfection, and other methods of controlling microbial growth. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.

SURG 108 Surgical Pharmacology

Credit Hours: 2 / Billing Hours: 2

This course introduces the student to basic types of anesthesia, anesthesia agents, indications and contraindications of medications, and the calculations of maximum dosages of various drugs. The student will become familiar with a wide array of pharmacological agents specifically related to the peri-operative care being provided for the surgical patient. (Offered Fall)

- Prerequisite Course: None. Admission to Surgical Technology Program is required.
- Placement Score: None.
- Corequisite Course: SURG 100 and SURG 101 and SURG 109 and SURG 121 and SURG 122.

2024-2025 Course Descriptions

SURG 109 Basic Surgical Procedures

Credit Hours: 4 / Billing Hours: 4

An introduction to basic types of surgical procedures, with a primary focus on the sequential steps. Surgical anatomy, physiology, and pathophysiology will be addressed relative to basic surgical intervention. Students will learn anatomy, physiology, pathophysiology, and diagnostic indication for the surgical procedure, and explore how to prepare and plan for the intraoperative phase of the surgical procedure. (Offered Fall)

- Prerequisite Course: None. Admission to Surgical Technology Program is required.
- Placement Score: None.
- Corequisite Course: SURG 100 and SURG 101 and SURG 108 and SURG 121 and SURG 122.

SURG 110 Advanced Surgical Procedures

Credit Hours: 4 / Billing Hours: 4

This course introduces the student to intermediate and advanced surgical procedures with a primary focus on the sequential steps involved in these procedures, higher difficulty cases, and specialized instrumentation. Surgical anatomy, physiology, and pathophysiology will be addressed. The biomedical sciences will also be addressed: robotics, physics, computers, and electricity. (Offered Spring)

- Prerequisite Course: None. Successful completion of 1st semester of the Surgical Technology Program is required.
- Placement Score: None.
- Corequisite Course: SURG 111 and SURG 123 and SURG 124.

SURG 111 Surgical Specialty/Prof Prep

Credit Hours: 4 / Billing Hours: 4

An introduction to basic types of surgical procedures, with a primary focus on the sequential steps. Surgical anatomy, physiology, and pathophysiology will be addressed relative to basic surgical intervention. Students will learn anatomy, physiology, pathophysiology, and diagnostic indication for the surgical procedures, and explore how to prepare and plan for the intraoperative phase of the surgical procedure. (Offered Spring)

- Prerequisite Course: None. Successful completion of 1st semester of the Surgical Technology Program is required.
- Placement Score: None.
- Corequisite Course: SURG 110 and SURG 123 and SURG 124.

2024-2025 Course Descriptions

SURG 121 Applied Surgical Techniques I

Credit Hours: 2 / Billing Hours: 4

This course covers the application of theory in the use of surgical supplies and equipment which will prepare students to scrub in for actual surgical procedures. A specified number of competencies will need to be successfully completed to advance to SURG122. (Offered Fall)

- Prerequisite Course: None. Admission to Surgical Technology Program is required.
- Placement Score: None.
- Corequisite Course: SURG 100 and SURG 101 and SURG 108 and SURG 109.
- Course Note: \$255 of the course fee is non-refundable.

SURG 122 Applied Surgical Techniques II

Credit Hours: 2 / Billing Hours: 4

This course prepares students for the actual operating room experience through application of theory and clinical skills in mock surgical procedures. Basic surgical procedures will be presented, with some hands-on experience utilizing surgical simulators, along with additional competencies pertaining to circulating duties, disinfection, and sterilization. (Offered Fall)

- Prerequisite Course: Pass grade in SURG 121 or concurrently.
- Placement Score: None.
- Corequisite Course: SURG 100 and SURG 101 and SURG 108 and SURG 109.

SURG 123 Applied Surgical Tech III

Credit Hours: 4 / Billing Hours: 8

This clinical session at a hospital provides the student with the application of theory and clinical skills in basic and advanced surgical procedures and specialty areas. (Offered Spring)

- Prerequisite Course: None. Successful completion of 1st semester of the Surgical Technology Program is required.
- Placement Score: None.
- Corequisite Course: SURG 110 and SURG 111.

2024-2025 Course Descriptions

SURG 124 Applied Surgical Techniques IV

Credit Hours: 4 / Billing Hours: 8

A continuation of SURG 123, this course is a clinical session at a hospital. It covers the application of theory and clinical skills in basic and advanced surgical procedures and surgical specialty areas. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in SURG 123 or concurrently.
- Placement Score: None.
- Corequisite Course: SURG 110 and SURG 111.

TECH 100 Safety-OSHA10

Credit Hours: 2 / Billing Hours: 3

This course covers safety on construction/general industry worksites. Included are local, state, and federal safety regulations. The course will focus on the prevention of accidents but will also teach the correct response if an accident should occur. OSHA-10 Construction Certification and First Aid/CPR/AED certificates will be issued upon successful completion. (Offered Fall, Spring)

- Placement Score: Reading Level 2 and Writing Level 2.

TECH 102 General Industry Safety

Credit Hours: 2 / Billing Hours: 3

This course covers safety in the industrial workplace. Included are local, state and federal safety regulations. The focus will be on the prevention of accidents but will teach the correct response if an accident should occur. OSHA-30 General Industry Certification, and First Aid/CPR/AED certificates will be issued upon successful completion. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2.

THEA 110 Introduction to Theatre

Credit Hours: 3 / Billing Hours: 3

Introduction to Theatre includes definition and analysis of theatrical art, incorporating script analysis, theatre history, the relationship between theatre and the culture from which it comes, and the roles of theatre practitioners. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 or ENGL 099 concurrently.

2024-2025 Course Descriptions

THEA 114 Intro to Technical Theatre

Credit Hours: 3 / Billing Hours: 3

Introduction to technical theatre for performing arts. Students will be introduced to the basic elements of scenic, lighting, costume, media, and properties design, and the execution of these design elements in a theatrical production. Students will be instructed on tool usage and on costume and scene shop safety, and will gain a practical understanding of the backstage elements in a theatrical performance. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.

THEA 115A Tech Thea II-Set/Light Design

Credit Hours: 2 / Billing Hours: 3

Intensive learning and application experience in set/lighting design. Assist at the beginning levels in set/lighting design while working on the season and studio productions for Performing Arts. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in THEA 114.
- Placement Score: None.
- Recommended: THEA 110.

THEA 115B Tech Thea II-Prop Design/Const

Credit Hours: 2 / Billing Hours: 3

Intensive learning and application experience in property design and construction. Assist at the beginning levels of property design and construction while working on the season and studio productions for Performing Arts. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in THEA 114.
- Placement Score: None.
- Recommended: THEA 110.

THEA 115C Tech Thea II-Costume Des/Const

Credit Hours: 2 / Billing Hours: 3

Intensive learning and application experience in costume design and construction. Assist at the beginning levels of costume design and construction while working on the season and studio productions for Performing Arts. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in THEA 114.
- Placement Score: None.
- Recommended: THEA 110.

2024-2025 Course Descriptions

THEA 115D Tech Thea II-Produc/Stage Mgmt

Credit Hours: 2 / Billing Hours: 3

Intensive learning and application experience in production and stage management. Assist at the beginning levels of production and stage management while working on the season and studio productions for Performing Arts. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in THEA 114.
- Placement Score: None.
- Recommended: THEA 110.

THEA 120 Introduction to Acting

Credit Hours: 2 / Billing Hours: 3

Explores various acting techniques and introduces the beginning student to the skills necessary to maintain a sustained dramatic performance. Theatre games and improvisation exercises to overcome stage fright and to develop concentration and listening skills are heavily emphasized. Students present final short scene. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.

THEA 131 Studio Theatre Performance I

Credit Hours: 1 / Billing Hours: 2

Course includes rehearsal, performance, and evaluation of a contemporary script. Focus is on an understanding and implementation of skills acquired in THEA 141 and the relationships experienced between actor and director. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Corequisite Course: THEA 141.

THEA 132 Studio Theatre Performance II

Credit Hours: 1 / Billing Hours: 2

Rehearsal, performance, and evaluation of a script which incorporates heightened language and movement. Focus is on expanding the actor's physical and vocal expressiveness. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in THEA 141 and (Minimum 2.0 in THEA 143 and THEA 173) or concurrently or department approval.
- Placement Score: None.

2024-2025 Course Descriptions

THEA 141 Acting I - Contemporary

Credit Hours: 2.5 / Billing Hours: 4

Fundamentals of acting, including improvisational techniques; the physical, vocal, and internal development of character; analysis and scoring by beats of a contemporary script. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in THEA 120 or concurrently.
- Placement Score: None.
- Corequisite Course: THEA 131.

THEA 143 Stage Voice for the Actor

Credit Hours: 3 / Billing Hours: 4

Course will cover exercises in vocal production: posture, support, relaxation, resonance, projection, and enunciation. Focus will be on exercises to develop vocal flexibility from Rodenburg, Linklater, and/or Berry techniques. Students will experience vocal techniques which lead to greater emotional awareness and responsiveness. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None.

THEA 150 Acting for the Camera

Credit Hours: 3 / Billing Hours: 4

Acting techniques and methods relevant to camera work will be explored. Student work is videotaped and critiqued. Acting for the Camera applies and builds on fundamentals established in Introduction to Acting. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in THEA 120 or concurrently or Department Approval.
- Placement Score: None.

THEA 160 Stage Combat

Credit Hours: 2 / Billing Hours: 3

Students learn to use a variety of weapons and hand to hand combat styles on stage. Students learn the style of combat used in theatre/film industry. Students explore fight scenes, basics of mechanics of choreographing fight scenes, and are instructed on basic safety procedures for choreographing/executing fight sequences. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.
- Recommended: THEA 120.

2024-2025 Course Descriptions

THEA 171 Play Analysis

Credit Hours: 3 / Billing Hours: 3

An analysis of modern contemporary classics of the theatre. The student will read and analyze a minimum of four modern or contemporary scripts. The student will develop a comprehensive production concept for one of these scripts. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None.

THEA 173 Movement for the Actor

Credit Hours: 2 / Billing Hours: 3

Students will learn methods of physical transformation which can be applied to acting and character development. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.

THEA 181 Improvisation

Credit Hours: 2.5 / Billing Hours: 4

By using the improvisational techniques of mask work and developmental exercises, this course will train the student in long-term, in-depth character development. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.

THEA 210 Theatre History

Credit Hours: 4 / Billing Hours: 4

Examines the history of Western Theatre, including the literature, performance conventions, the physical theatre, and major figures from the Greek to Modern eras. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: Reading Level 5 and Writing Level 6.
- Recommended: THEA 110.

2024-2025 Course Descriptions

THEA 220 Play Directing

Credit Hours: 3 / Billing Hours: 4

Introduction to the fundamentals of directing a play, including play analysis, stage composition and working with actors. Practical experience through scene work and class exercises will be emphasized. Students will demonstrate their mastery of the principles taught by directing and presenting a short one-act play for an audience. (Offered Fall)

- Prerequisite Course: Minimum 2.0 in THEA 110 or Department Approval.
- Placement Score: None.

THEA 225 Building a Character

Credit Hours: 2 / Billing Hours: 2

This course will focus on giving theatre majors an "acting toolbox" for creating fully realized characters on stage. Class will focus on the Chekhov Technique, which emphasizes the psycho-physical development of character, as well as the language-based techniques of John Barton. Master Classes by professional actors from the Stratford Shakespeare Festival may be included. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Corequisite Course: THEA 240.

THEA 233 Studio Theatre Performance III

Credit Hours: 2 / Billing Hours: 4

Students will rehearse and perform a Shakespeare play. (Offered Summer)

- Prerequisite Course: Minimum 2.0 in (THEA 143 and THEA 225 and THEA 240) or department approval.
- Placement Score: None.

THEA 240 Acting-Shakespeare

Credit Hours: 3 / Billing Hours: 4

Students will explore the unique demands of acting and speaking Shakespeare and the qualities of his verse, including alliteration, assonance, rhymes, antithesis, puns, onomatopoeia, imagery, and iambic rhythms. Status, social, and historical context will be addressed. (Offered Spring)

- Prerequisite Course: Minimum 2.0 in (THEA 131 and THEA 141 and THEA 143) or department approval.
- Placement Score: Reading Level 5.
- Corequisite Course: THEA 225.

2024-2025 Course Descriptions

THEA 283 Audition Workshop

Credit Hours: 2 / Billing Hours: 3

Students will learn audition and resume preparation and will prepare and polish two contrasting monologues for auditions. Students will learn the audition and application processes for advanced training. (Offered Fall)

- Prerequisite Course: None.
- Placement Score: None.

THEA 285 Stage Makeup

Credit Hours: 2 / Billing Hours: 3

A course in the application of stage makeup to develop a character and to assist the actor in sustaining the character in performance. Emphasizes skills in the use of different kinds of makeup, hair styling, and appearance changes. (Offered Spring)

- Prerequisite Course: None.
- Placement Score: None.

WELD 103 Combination Welding

Credit Hours: 4 / Billing Hours: 6

This is a beginning theory and practice course which will introduce the safe operations and applications of oxyacetylene welding, torch cutting, plasma cutting, brazing and shielded metal arc welding. Practice will consist of these methods of joining steel in the horizontal, flat and vertical positions. Destructive testing will also be provided. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2.
- Recommended: Math Level 3.
- Course Note: Students need to bring their own safety glasses, pliers, leather welding gloves and leather work boots to start welding on the first day of class.

2024-2025 Course Descriptions

WELD 105 Advanced ARC Welding

Credit Hours: 4 / Billing Hours: 6

Students will develop the skills necessary to produce quality multiple pass fillet and groove welds on steel plates. Conventional and low hydrogen electrodes are used in preparation of passing performance tests in all positions. Destructive testing methods, weld profiles and welding symbols as related to arc welding are introduced. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in WELD 103.
- Placement Score: Reading Level 3 and Writing Level 2.
- Course Note: Students need to bring their own safety glasses, pliers, leather welding gloves and leather work boots to start welding on the first day of class.

WELD 108 Welding for Non-Majors

Credit Hours: 4 / Billing Hours: 6

This is a beginning theory and practice course which will introduce the safe operations and applications of torch cutting, plasma cutting, Gas Metal Arc Welding, and Shielded Metal Arc Welding. Practice will consist of these methods of joining steel in the horizontal, flat, and vertical positions. Destructive testing will also be performed. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: This course is for Mechatronics major students only. Students need to bring their own safety glasses, pliers, leather welding gloves and leather work boots to start welding on the first day of class.

WELD 110 Gas Metal ARC Welding

Credit Hours: 4 / Billing Hours: 6

Provides technical understanding and applications of gas metal arc welding and flux cored arc welding. Fundamentals, safety, equipment adjustments, metal transfers and shielding gases will be covered. Develops manual skill in all positions on different thicknesses and types of metals, including mild steel, aluminum and stainless steel. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2.
- Course Note: Students need to bring their own safety glasses, pliers, leather welding gloves and leather work boots to start welding on the first day of class.

2024-2025 Course Descriptions

WELD 111 Gas Tungsten ARC Welding

Credit Hours: 4 / Billing Hours: 6

Students will develop the skills, principles and applications of gas tungsten arc welding. Welds will be done on different thickness of ferrous and non-ferrous metals in all positions. Proper material cleaning, fit up and safety are also introduced. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (WELD 103 or AUTO 100 or AUTB 114).
- Placement Score: Reading Level 3 and Writing Level 2.
- Course Note: Students need to bring their own safety glasses, pliers, leather welding gloves and leather work boots to start welding on the first day of class.

WELD 115 Robotic MIG Welding

Credit Hours: 4 / Billing Hours: 6

Students will learn to program a MIG welding robot through a teach pendant, edit programs, set weld schedules, as well as learn some basic fixture building skills. This course also provides fundamental safety precautions while programming and operating the robotic component. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in WELD 110.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 3 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).
- Course Note: Students need to bring their own safety glasses, pliers, leather welding gloves and leather work boots to start welding on the first day of class.

WELD 125 Structural Print Reading/Weld

Credit Hours: 2 / Billing Hours: 2

This course is for students, apprentices, technicians, and others who must develop the ability to read and accurately interpret prints and welding symbols, which are the universal language of the welding industry. Teaches advancements in metallurgy, welding processes, and consumables, along with strict code enforcement used in industry today. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4 or [minimum 2.0 in (MATH 105 or MATH 106)] or P in (NCMA 106 or NCMA 110).

2024-2025 Course Descriptions

WELD 140 Creative Welding

Credit Hours: 2 / Billing Hours: 3

This is a course for people with an interest in artwork in a metal medium. Participants will become familiar with welding, cutting, and basic design processes for the purpose of exploring creative expression. (Offered Fall, Spring)

- Prerequisite Course: None.
- Placement Score: None.
- Recommended: Course work or experience in art/design.
- Course Note: Students need to bring their own safety glasses, pliers, leather welding gloves and leather work boots to start welding on the first day of class.

WELD 170 Special Topics in Welding Credit Hours: 0.25 to 8 / Billing Hours: 0.25 to 11

This course offers students the opportunity to learn new or advanced skills in welding and other related topics. Specific content may vary with each offering but will be related to the Welding Program and profession. (Offered Fall, Spring, Summer)

- Prerequisite Course: None.
- Placement Score: None.

WELD 191 Welding Project Lab Credit Hours: 1 to 4 / Billing Hours: 1 to 4

An opportunity for students to expand upon welding skills in maintenance welding, production welding, resistance welding and/or tool and die welding, depending on the direction the student would like to take their welding skills. Actual projects must be discussed and agreed upon by both the instructor and the student. (Offered Fall, Spring, Summer)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.

2024-2025 Course Descriptions

WELD 201 Tool and Die Welding

Credit Hours: 3 / Billing Hours: 4.5

Theory and practice methods involved in welding various alloyed metals, preheating and postheating of metals, recognition of materials, alloying elements and their effects. The proper usage of air, oil and water hardening steels will also be covered. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.0 in (METM 190 and WELD 105 and WELD 111).
- Placement Score: Reading Level 3 and Writing Level 2.
- Course Note: Students need to bring their own safety glasses, pliers, leather welding gloves and leather work boots to start welding on the first day of class. \$10 of the Course Fee is non-refundable.

WELD 205 Pipe Welding

Credit Hours: 4 / Billing Hours: 6

Theory, cutting, fit up and practice on different sizes of pipe using shielded metal arc welding. Varied weld and base metal testing methods are used to the strict code requirements. Focus on low hydrogen type electrodes in groove welds in the 2G, 5G, and 6G positions. (Offered Spring)

- Prerequisite Course: Minimum 2.5 in WELD 105.
- Placement Score: Reading Level 3 and Writing Level 2.
- Course Note: Students need to bring their own safety glasses, pliers, leather welding gloves and leather work boots to start welding on the first day of class.

WELD 220 Structural Fab & Inspection

Credit Hours: 4 / Billing Hours: 6

Introduction to steel fabrication in accordance with the American Welding Society Structural Welding Code D1.1 applications and requirements. The student will be introduced to the numerous destructive and nondestructive methods of welding inspections. Satisfactory completion of this course will assist the student in passing a welding certification test. (Offered Fall, Spring)

- Prerequisite Course: Minimum 2.5 in (WELD 105 and WELD 110 and WELD 125).
- Placement Score: Reading Level 3 and Writing Level 2 and Math Level 4.
- Course Note: Students need to bring their own safety glasses, pliers, leather welding gloves and leather work boots to start welding on the first day of class.

2024-2025 Course Descriptions

WELD 250 Welding Internship

Credit Hours: 3 / Billing Hours: 3

This course provides welding students with practical work experience in industry. Students work for an employer in a supervised environment which provides an opportunity to apply knowledge and skills learned in the classroom and lab to an actual job situation. (Offered Fall, Spring)

- Prerequisite Course: None. Department Approval is required.
- Placement Score: None.
- Course Note: 2.5 GPA or greater.