



## **Computer Technology and Networking G.A.**

Career Community: Computer Technology and Networking

Curriculum Code: 1857

Effective: Fall 2025 – Summer 2030

### **Purpose of the Major**

The Computer Technology and Networking General Associates Degree at Lansing Community College introduces students to the expansive world of careers in computer technology, focusing on key areas such as Cloud Computing, Computer Networking Technology, Computer Programmer/Analyst, Computer Support Specialist, Computer Support Technician, Cybersecurity, E-business, and Geospatial Science Technician. Emphasizing practical applications and industry-relevant training, this degree program equips students with the skills needed to thrive in careers demanding skills in the areas of computer networking, computer technology, cybersecurity, and geospatial science.

### **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**

The majority of instruction is hands-on laboratory time, and most lab and lectures feature small class sizes to provide generous personal interaction with your instructors. All instructors bring their extensive years of experience working within their respective industry to the classroom, including all related certifications.

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 about career options, course substitutions and waivers, etc., contact the Computer Information Technologies Department, West Campus, telephone number 517-267-6406, or Student Services, West Campus, telephone number 517-483-5509.

### **Computer Technology and Networking Career Community Courses**

*These courses are required for all Computer Networking and Technology programs (Cloud Computing, Computer Networking Technology, Computer Programmer/Analyst, Computer Support Specialist, Computer Support Technician, Cybersecurity, E-business, and Geospatial Science Technician). They should be taken before other Major 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
CITP 110	Intro to Programming-Python	4 / 4
CITS 110	Helpdesk Support Specialist	3 / 3
COMM 110 or	Communication in the Workplace	3 / 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 124 or	Technical Writing	3 / 3
ENGL 127 or	Business Writing	3 / 3
ENGL 131	Honors Composition I	4 / 4
MATH 120 or	College Algebra	4 / 4
MATH 126 or	Precalculus	5 / 5
MATH 141 or	Calculus with Applications	4 / 4
STAT 170 or	Introduction to Statistics	4 / 4
STAT 215	Intro to Probability and Stats	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 specific articulation agreements with Eastern Michigan University in Cybersecurity choose STAT 170 or with Northwood University in Cybersecurity choose MATH 120. All other students considering future transfer should choose the highest MATH or STAT course into which they place to maximize options.

Students considering Computer Support Specialist or Computer Support Technician, select CITS 110.

**Major Required Courses, Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences** - *Select one as recommended below or select one from [LCC General Education Applied Degrees](#): Humanities and Fine Arts or Social Sciences or Applied Social Sciences. A minimum grade of 2.0 is required for General Education courses.*

Course Code	Course Title	Credit / Billing Hours
ANTH 270	Cultural Anthropology	3 / 3
ARTS 102	2D Design	3 / 4
ECON 201	Principles of Economics-Micro	4 / 4
ECON 202	Principles of Economics-Macro	4 / 4
GEOG 200	World Regional Geography	4 / 4
MGMT 234	Diversity in the Workplace	3 / 3
POLS 201	Intro to Political Science	3 / 3
SOCL 120	Introduction to Sociology	4 / 4

Notes:

- Students considering Geospatial Science choose GEOG 200.
- Students considering future transfer, choose ANTH 270, GEOG 200, POLS 201, or SOCL 120.
- Students considering transfer to Eastern Michigan University in Cybersecurity, choose ANTH 270 or POLS 201.

**Major Required Courses, Limited Choice – Natural Sciences or Applied Sciences and Technology Lab** - *Select one lab course as recommended below or select one from [LCC General Education Applied Degrees](#): Natural Sciences or Applied Sciences and Technology Lab. A minimum grade of 2.0 is required for General Education courses.*

Course Code	Course Title	Credit / Billing Hours
BIOL 120	Environmental Science	4 / 6
CHEM 135	Chemistry in Society	4 / 5
GEOL 230	Environmental Geology	4 / 6
ISCI 131	Integrated Physical Science	4 / 6
PHYS 120	The Art of Physics	4 / 5

Notes:

- Students considering Geospatial Science choose GEOL 230.
- Students considering future transfer to Central Michigan University choose BIOL 120.
- Students considering future transfer to Eastern Michigan University in Cybersecurity choose ISCI 131.

### **Major Required Courses, Limited Choice**

*Select 34 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
AVAU 100	Drone Flight Orien.-FAA Exam	2 / 2.5
AVAU 150	Drone Maintenance	2 / 3
AVAU 200	Advanced Drone Flight-Capstone	2 / 3
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
CITA 140	Microsoft Outlook	3 / 3
CITA 219	Advanced Microsoft Word	3 / 3
CITA 226	Microsoft Excel - Advanced	3 / 3
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
CITD 120	SQL Concepts	3 / 3
CITD 250	Database Concepts	3 / 3
CITF 110	Intro Computer Info Systems	3 / 3
CITF 120	Operating Systems Concepts	3 / 3
CITF 140	Information Technology Ethics	3 / 3
CITF 240	IT Project Management	3 / 3
CITF 260	Systems Analysis and Design	4 / 4
CITI 100	AI Foundations	3 / 3
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
CITN 220	Introduction to Networks	3 / 3
CITN 222	Wireless Networking & Security	3 / 3
CITN 225	Switch Route Wireless Essentls	3 / 3
CITN 230	Linux Operating Systems	3 / 3
CITN 240	Ent Networking Sec Automation	3 / 3
CITN 250	Microsoft Network Server	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
CITO 240	Machine Learning with AWS	3 / 3
CITP 130	Intro to Mobile App Devel	3 / 3

Course Code	Course Title	Credit/ Billing Hours
CITP 140	Software Testing	3 / 3
CITP 180	Intro to C#. NET Programming	4 / 4
CITP 190	Intro to Programming in JAVA	4 / 4
CITP 280	Advanced C#. NET Programming	4 / 4
CITP 290	Adv JAVA Programming for Busn	4 / 4
CITP 295	Programming Internship	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
CITW 150	Internet Literacy	3 / 3
CITW 160	Web Developmental HTML & CSS	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
GSCI 100	Intro to Geospatial Tech	3 / 3
GSCI 110	Beginning ArcGIS	3 / 5
GSCI 120	Advanced ArcGIS	3 / 5
GSCI 150	Drone Flight for Industry	3 / 4
GSCI 210	Global Positioning Systems	3 / 4
GSCI 240	Cartography in GIS	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 264	Web GIS	3 / 4
GSCI 271	Parcel Mapping	3 / 5
GSCI 275	GIS Proj Mgmt & Implementation	3 / 4

### General Education – Applied Degrees

- 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  
Major Required Limited Choice Courses meet this requirement.
- Mathematics or Applied Mathematics  
Career Community Courses meet this requirement.
- Natural Sciences Lab or Applied Science and Technology Lab  
Major Required Limited Choice Courses meet this requirement.

## 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

### Full-time

Semester I
ACAD 100
CITP 110 – Milestone
ENGL 098 and NCAS 103 (if needed) or ENGL 099 (if needed), ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131
Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Limited Choice course for students completing the Computer Technology and Networking GA

Semester II
CITS 110 or COMM 110 or COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
MATH 120 or MATH 126 or MATH 141 or STAT 170 or STAT 215
Limited Choice course(s) for students completing the Computer Technology and Networking GA

Semester III
Limited Choice – Natural Sciences or Applied Sciences and Technology Lab
Limited Choice course(s) for students completing the Computer Technology and Networking GA
Students who have decided on an academic program within the Computer Technology and Networking 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 Computer Technology and Networking GA
Students who have decided on an academic program within the Computer Technology and Networking Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.

**Part-time**

Semester I
ACAD 100
CITP 110 - Milestone
ENGL 098 and NCAS 103 (if needed) or ENGL 099 (if needed), ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131
Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences

Semester II
CITS 110 or COMM 110 or COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132
MATH 120 or MATH 126 or MATH 141 or STAT 170 or STAT 215
Limited Choice course(s) for students completing the Computer Technology and Networking GA

Semester III
Limited Choice – Natural Sciences or Applied Sciences and Technology Lab
Limited Choice course(s) for students completing the Computer Technology and Networking GA
Students who have decided on an academic program within the Computer Technology and Networking 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 Computer Technology and Networking GA
Students who have decided on an academic program within the Computer Technology and Networking 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(s) for students completing the Computer Technology and Networking GA
Students who have decided on an academic program within the Computer Networking and Technology Career Community should select that program through the Change of Program Request form and follow the coursework outlined for the associated pathway.

*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 titles, and make course changes as needed, without prior notice. The College also reserves the right to discontinue programs when warranted.*