



## **Building and Construction Trades G.A.**

Career Community: Building and Construction Trades

Curriculum Code: 1851

Effective: Fall 2025 – Summer 2030

### **Purpose of the Major**

The Building and Construction General Associate Degree at Lansing Community College introduces students to the expansive world of construction, focusing on key areas such as Building Construction, Construction Management, Civil Technology, and Architecture. Emphasizing practical applications and industry-relevant training, this degree program equips students with the skills needed to thrive in dynamic and demanding roles within the construction field.

### **Milestone**

In addition to the required General Education courses in Math and English, completion of DCTM 102 or TECH 102 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 Trades Technology Department, West Campus, telephone number 517-483-1336, or Student Services, West Campus, telephone number 517-483-5509.

### **Building and Construction Trades Career Community Courses**

*These courses are required for all Building and Construction Trades programs (Building Construction, Civil Technology, Construction Management, Energy Management Specialist, Heating and Air Conditioning)). 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
DCTM 102 or TECH 102	Industrial/Construction Safety General Industry Safety	2 / 3 2 / 3
COMM 110 or COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMM 260 or ENGL 122 or ENGL 132	Communication in the Workplace 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 3 / 3 4 / 4 4 / 4
ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131	Composition I Technical Writing Business Writing Honors Composition I	4 / 4 3 / 3 3 / 3 4 / 4
MATH 115 or MATH 119 or MATH 120 or MATH 126 or STAT 170	Technical Mathematics Math – Applications for Living College Algebra Precalculus Introduction to Statistics	4 / 4 4 / 4 4 / 4 5 / 5 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 majors in Building Construction, Civil Technology, Construction Management, and Energy Management Specialist, choose DCTM 102. For Heating and Air Conditioning and HVAC/R-Energy Management Engineering Technology, choose TECH 102.

For HVAC/R-Energy Management Engineering Technology, choose COMM 130, ENGL 121 or ENGL 124, and MATH 126.

Students considering future transfer, choose MATH 119, MATH 120, MATH 126, or STAT 170.

**Major Required Courses, Limited Choice – Humanities and Fine Arts or Social Sciences or Applied Social Sciences** - Select one as recommended 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
GEOG 200	World Regional Geography	4 / 4
MGMT 234	Diversity in the Workplace	3 / 3
SOCL 120	Introduction to Sociology	4 / 4

Notes:

- For HVAC/R-Energy Management Engineering Technology, choose GEOG 200.
- Students considering future transfer, choose GEOG 200 or SOCL 120.

**Major Required Courses, Limited Choice – Natural Sciences or Applied Sciences and Technology Lab** - Select one as recommended 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
PHYS 120	The Art of Physics	4 / 5
PHYS 200	Intro to Applied Physics	4 / 5
PHYS 221	Introductory Physics I	4 / 6

### Major 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. HUMS 160 meets 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
ACCG 101	Accounting Info for Management	3 / 3
ARCH 113	Materials & Methods of Constr.	4 / 6
ARCH 125	Environmental Systems	4 / 4
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 160	Steel Framing	4 / 6
CIVL 101	Civil Drafting	3 / 4
CIVL 110	Density Certification	2 / 2
CIVL 120	Surveying	4 / 6

Course Code	Course Title	Credit/ Billing Hours
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
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 101	Drafting/Intro to CAD	3 / 4
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
DCTM 220	BIM for Construction	4 / 6
ELTE 110	Practical Electricity	4 / 6
ELTE 141	National Electrical Code I	4 / 4
ELTE 150	Electric Motor Maintenance	2 / 3
GSCI 210	Global Positioning Systems	3 / 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 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 140	Residential Energy	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
LEGL 215	Business Law-Basic Principles	3 / 3
METS 140	Rigging	3 / 4.5
WELD 103	Combination Welding	4 / 6

## 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
DCTM 102 or TECH 102 - Milestone
ENGL 098 and NCAS 103 (if needed) or ENGL 099 (if needed), ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131
GEOG 200 or MGMT 234 or SOCL 120
Limited Choice course for students completing the Building and Construction Trades GA
Semester II
COMM 110 or COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMMM 260 or ENGL 122 or ENGL 132
MATH 115 or MATH 119 or MATH 120 or MATH 126 or STAT 170
Limited Choice course(s) for students completing the Building and Construction Trades GA
Semester III
BIOL 120 or CHEM 135 or PHYS 120 or PHYS 200 or PHYS 221
Limited Choice course(s) for students completing the Building and Construction Trades GA

Semester III
Students who have decided on an academic program within the Building and Construction Trades 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 Building and Construction Trades GA
Students who have decided on an academic program within the Building and Construction Trades 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
DCTM 102 or TECH 102 - Milestone
ENGL 098 and NCAS 103 (if needed) or ENGL 099 (if needed), ENGL 121 or ENGL 124 or ENGL 127 or ENGL 131
GEOG 200 or MGMT 234 or SOCL 120

Semester II
COMM 110 or COMM 120 or COMM 130 or COMM 200 or COMM 240 or COMMM 260 or ENGL 122 or ENGL 132
MATH 115 or MATH 119 or MATH 120 or MATH 126 or STAT 170
Limited Choice course(s) for students completing the Building and Construction Trades GA

Semester III
BIOL 120 or CHEM 135 or PHYS 120 or PHYS 200 or PHYS 221
Limited Choice course(s) for students completing the Building and Construction Trades GA
Students who have decided on an academic program within the Building and Construction Trades 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 Building and Construction Trades GA
Students who have decided on an academic program within the Building and Construction Trades 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 Building and Construction Trades GA
Students who have decided on an academic program within the Building and Construction Trades 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.*