

Lakeland

COMMUNITY COLLEGE

PROGRAM GUIDE

Applied Studies Division

Civil Engineering Technology/ Construction Management

- Associate of Applied Science Degree in Civil Engineering Technology
- Associate of Applied Science Degree in Construction Management

 **Opportunity**
starts **HERE**
lakelandcc.edu

Civil Engineering/ Construction Management (CIVT)



Graduates with degrees in civil engineering technology and construction management gain the education they need to find rewarding careers in many relevant fields across the nation.

Civil engineering technology (CET) students study architectural drafting and design; construction estimating and scheduling; construction administration and inspection; applied hydraulics and environmental technology; soil mechanics and foundations; concrete and masonry design and construction; structural steel and timber construction; and surveying field practice and computer applications. Construction management (CM) students gain an education in materials testing; drafting and design; construction estimating and scheduling; construction administration and inspection; contract law, building codes and standards; safety regulations; site planning and development; and business and financial management principles

Job Outlook

Job demand for qualified CET or CM technicians is expected to remain strong because of growth and advances in production and design. In addition, many technicians in these fields are nearing retirement, creating more job openings for those wishing to enter or advance their careers. Job titles for construction management graduates include: construction and building inspector, jobsite superintendent, project manager, cost estimator, drafter, facility manager, surveyor, cartographer, and photogrammetrist. Civil engineering technology graduates find employment as architects, engineers, constructors and surveyors.

Career Opportunities

Upon completion of Lakeland's degree programs, graduates have the training needed to gain immediate employment. Companies continually approach Lakeland's CIVT department wishing to hire graduates. Graduates of the programs are working for a variety of organizations, including: surveying, engineering and architectural firms; federal, state, county, and city engineers and building code departments; contractors: project management firms; residential builders; and construction material testing laboratories.

Lakeland's Program

Lakeland's CIVT program prepares students with a solid foundation for independent educational and professional growth as well as encourages and prepares the graduates to continue their formal education toward completion of a baccalaureate degree. Lakeland's CIVT department currently offers Associate in Applied Science degrees in construction management and civil engineering technology. Students can also choose from four certificate programs with specializations in: architectural technology, construction management, facilities management, and surveying technology.

The Lakeland Advantage

- Expert classroom instruction and hands-on training using state-of-the-art equipment and software.
- Paid cooperative education field experience, and visits to area organizations and project sites to gain greater knowledge of the field first-hand.
- Membership in the Civil Engineering Technology Student Association CETSA - a student chapter of the Northeast Chapter of the American Institute of Constructors (AIC), a national organization (website: aicnet.org) representing individual constructors around the country.
- Programs that effectively blend relevant construction and business courses.

Lakeland Community College Admission Requirements

For admission into Lakeland, students must be a high school graduate or have obtained a high school diploma equivalency. Please consult Lakeland Community College's Enrollment Guide (available on Lakeland's website at lakelandcc.edu/enrollment) for specific admissions requirements and procedures.

For more information

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Civil Engineering Technology (9410)









Associate of Applied Science Degree

The Civil Engineering Technology program (9410) is designed to prepare students for immediate employment with architectural firms, engineering consulting firms, construction management firms, surveyors, contracting firms, residential builders, and with federal, state, county, and city governments. The diverse curriculum allows for students to gain specialized training for careers in architecture, construction, facility management, and surveying. Graduates may also transfer directly to a bachelor's degree program in civil engineering technology, construction technology, surveying, or architecture.






The Department of Civil Engineering Technology's mission is to provide a quality learning opportunity within the civil engineering technology department and to prepare students to further their education at a four-year institution and/or employment in the field of engineering technology. Graduates will be able to:

1. Solve technical problems typical of those encountered in civil engineering technology careers using creativity, current technology and the principles of mathematics and applied science;
2. perform and evaluate standard field testing and laboratory experiments, interpret and report on the results, and make recommendations for improvement in methods or materials;
3. work and communicate effectively in a diverse multi-disciplinary team in an industrial or academic setting; and
4. understand the need to pursue lifelong learning for personal and professional growth.


Certificates are also available.

Course	Title	Credit Hours
First Semester		
CIVT 1011	Construction Methods and Materials 	3
CIVT 1012	Reading Construction Drawings 	1
ENGL 1110 or ENGL 1111	English Composition I (A) ¹ or English Composition I (B)	3
ENGR 1000	Introduction to Engineering Technology	2
FYEX 1000	First Year Experience	1
MATH 1180	Technical Mathematics I	4
PHYS 1200	Applied Physics Heat and Thermodynamics	3
	Credit Hours	17
Second Semester		
CIVT 1016	Civil Drafting 	3
MATH 1280	Technical Mathematics II	4
MECT 1150	Technical Communications	3
MECT 2110	Engineering Mechanics I	3
PHYS 1100	Applied Physics Mechanics	3
	Credit Hours	16
Summer		
CIVT 2111	Surveying I 	2
CIVT 2112	Surveying II 	2
	Credit Hours	4
Third Semester		
CIVT 1021	Construction Materials Testing 	2
CIVT 2017	Construction Estimating and Scheduling 	3
CIVT 2019	Applied Hydraulics 	3
MECT 2230	Strength of Materials	3
Select course(s) from the Arts and Humanities Electives list		3
	Credit Hours	14












Fourth Semester

CIVT 2026	Soil and Foundations 	3
CIVT 2027	Concrete and Masonry Construction 	3
CIVT 2028	Steel and Timber Construction 	3
CIVT 2029	Environmental Technology 	3
Select course(s) from the Technical Electives list 		2
Credit Hours		14
Total Credit Hours		65

¹ English course selection is based on placement test results (ENGL 1111 English Composition I (B) is 4 credits, only 3 credits apply to the degree).

 This course is designated as a technical course in the program. Students must earn a "C" grade or higher in the course to fulfill the college's graduation requirements policy.

Electives













Course	Title	Credit Hours
Technical Electives		
BUSM 2100	Business Law I 	3
CIVT 1019	Architectural Building Codes and Standards 	2
CIVT 1025	Architectural Design 	3
CIVT 1028	Mechanical and Electrical Systems 	2
CIVT 2020	Green Building and LEED (R) Rating System 	3
CIVT 2024	Construction Administration and Inspection 	3
CIVT 2025	Safety in Construction 	2
CIVT 2030	Introduction to GPS Satellite Surveying 	2
ENGR 2800	Engineering Co-Op Experience 	2
GEOG 1700	Map Design and Interpretation 	3
GEOG 2700	Geographic Information Science 	3
Arts and Humanities Electives		
ARTS 1120	Art Appreciation	3
ARTS 2220	Survey of Art I	3
ARTS 2230	Survey of Art II	3
ENGL 2250	Survey of American Literature I	3
ENGL 2260	Survey of American Literature II	3
ENGL 2280	Survey of British Literature I	3
ENGL 2290	Survey of British Literature II	3
HUMX 1100	Introduction to Humanities	3
HUMX 1200	The American Experience in the Arts	3
MUSC 1200	Music Appreciation	3
MUSC 1215	World Music	3
MUSC 1800	Popular Music: Rock, Jazz, Country, and Hip-Hop	3
MUSC 2200	Music History and Literature I	3
MUSC 2250	Music History and Literature II	3
PHIL 1500	Introduction to Philosophy	3
PHIL 2000	Comparative Religion	3
PHOT 1000	History of Photography	3

Construction Management (9413)


Associate of Applied Science Degree

This program prepares students for careers in the construction field with an emphasis on residential and light commercial building construction. The curriculum blends two major content areas: building construction technologies and business management.

Professionals in this field need to have a thorough background in site development, building methods and materials, contract documents, plans and specifications, estimating, bidding, scheduling, building codes, legal principles, project administration, inspection, quality assurance, finances, sound business practices, and people skills. Graduates can enter the workforce in management positions with homebuilders, commercial builders, equipment installers, facility managers, general contractors, specialty contractors, building departments, and construction material manufacturers and retailers. Job classifications may include estimators, superintendents, project managers, inspectors, facility managers, and sales and technical support technicians.

Course	Title	Credit Hours
First Semester		
CIVT 1011	Construction Methods and Materials 	3
ENGL 1110 or ENGL 1111	English Composition I (A) ¹ or English Composition I (B)	3
ENGR 1000	Introduction to Engineering Technology	2
FYEX 1000	First Year Experience	1
MATH 1180	Technical Mathematics I	4
1st 8 weeks		
CIVT 1012	Reading Construction Drawings 	1
2nd 8 weeks		
CIVT 1019	Architectural Building Codes and Standards 	2
Credit Hours		16
Second Semester		
BUSM 1300	Introduction to Business	3
CIVT 1016	Civil Drafting 	3
CIVT 1021	Construction Materials Testing 	2
MECT 1150	Technical Communications	3
PHYS 1100 or PHYS 1610	Applied Physics Mechanics ³ or General Physics I	3-5
Credit Hours		14-16
Third Semester		
BUSM 1620	Introduction to Entrepreneurship	3
BUSM 2100	Business Law I 	3
CIVT 1410	Building Construction I 	3
CIVT 2018	Construction Estimating 	3
CIVT 2025	Safety in Construction 	2
Select course(s) from the Arts and Humanities Electives list		3
Credit Hours		17
Fourth Semester		
BUSM 1400	Professional Personal Selling	3
CIVT 2016	Scheduling and Building Information Modeling 	3
CIVT 2020	Green Building and LEED (R) Rating System 	3
CIVT 2024	Construction Administration and Inspection 	3
Select course(s) from the Social & Behavioral Sciences list		3
Credit Hours		15
Total Credit Hours		62-64

- ¹ English course selection is based on placement test results (ENGL 1111 English Composition I (B) is 4 credits, only 3 credits apply to the degree).
- ² Students planning to transfer to Kent State University must take MATH 1650 College Algebra.
- ³ Students planning to transfer to Kent State University must take PHYS 1610 General Physics I.

 This course is designated as a technical course in the program. Students must earn a "C" grade or higher in the course to fulfill the college's graduation requirements policy.

Electives

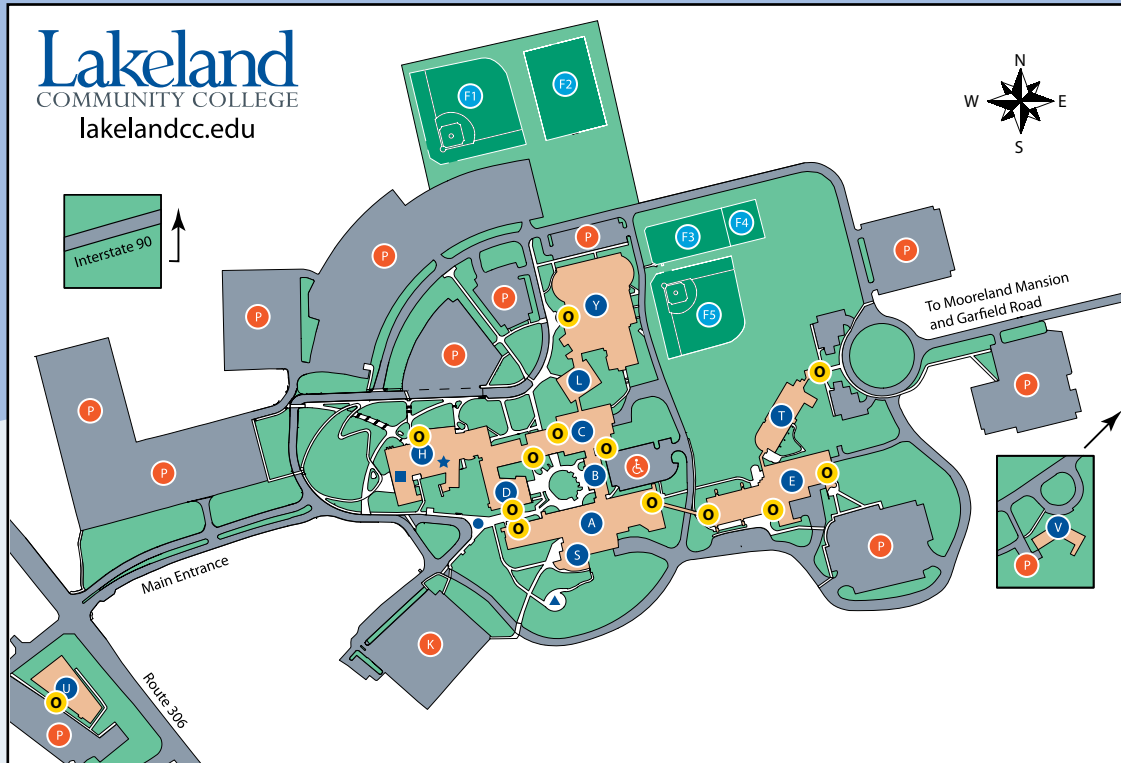
Course	Title	Credit Hours
Arts and Humanities Electives		
ARTS 1120	Art Appreciation	3
ARTS 2220	Survey of Art I	3
ARTS 2230	Survey of Art II	3
ENGL 2250	Survey of American Literature I	3
ENGL 2260	Survey of American Literature II	3
ENGL 2280	Survey of British Literature I	3
ENGL 2290	Survey of British Literature II	3
HUMX 1100	Introduction to Humanities	3
HUMX 1200	The American Experience in the Arts	3
MUSC 1200	Music Appreciation	3
MUSC 1215	World Music	3
MUSC 1800	Popular Music: Rock, Jazz, Country, and Hip-Hop	3
MUSC 2200	Music History and Literature I	3
MUSC 2250	Music History and Literature II	3
PHIL 1500	Introduction to Philosophy	3
PHIL 2000	Comparative Religion	3
PHOT 1000	History of Photography	3
Social and Behavioral Sciences Electives		
ANTH 1160	Introduction to Cultural Anthropology	3
ECON 1150	Basic Economics	3
ECON 2500	Principles of Macroeconomics	3
ECON 2600	Principles of Microeconomics	3
GEOG 1500	Introduction to Geography	3
GEOG 1600	World Regional Geography	3
GEOG 2500	World Cultural Geography	3
HIST 1150	Western Civilization I: Antiquity Through the Reformation	3
HIST 1250	Western Civilization II: Age of Revolution Through the Present	3
HIST 2150	U.S. History: Colonization Through Reconstruction	3
HIST 2250	U.S. History: Reconstruction to the Present	3
POLS 1300	U.S. National Government	3
POLS 2500	Modern Political Ideologies	3
PSYC 1500	Introduction to Psychology	3
SOCY 1150	Principles of Sociology	3

Construction Management Certificate (4131)

Course	Title	Credit Hours
BUSM 2100	Business Law I	3
CIVT 1011	Construction Methods and Materials	3
CIVT 1012	Reading Construction Drawings	1
CIVT 1016	Civil Drafting	3
CIVT 1019	Architectural Building Codes and Standards	2
CIVT 1021	Construction Materials Testing	2
CIVT 2016	Scheduling and Building Information Modeling	3
CIVT 2018	Construction Estimating	3
CIVT 2020	Green Building and LEED (R) Rating System	3
CIVT 2024	Construction Administration and Inspection	3
CIVT 2025	Safety in Construction	2
ENGR 1000	Introduction to Engineering Technology	2
ENGR 2800	Engineering Co-Op Experience	1
MATH 1180	Technical Mathematics I	4
PHYS 1100	Applied Physics Mechanics	3
Total Credit Hours		38

Facility Management Certificate (4141)

Course	Title	Credit Hours
BUSM 2100	Business Law I	3
CIVT 1011	Construction Methods and Materials	3
CIVT 1012	Reading Construction Drawings	1
CIVT 1016	Civil Drafting	3
CIVT 1019	Architectural Building Codes and Standards	2
CIVT 1028	Mechanical and Electrical Systems	2
CIVT 2017	Construction Estimating and Scheduling	3
CIVT 2024	Construction Administration and Inspection	3
CIVT 2025	Safety in Construction	2
ENGR 1000	Introduction to Engineering Technology	2
ENGR 2800	Engineering Co-Op Experience	1
MATH 1180	Technical Mathematics I	4
MECT 1150	Technical Communications	3
Total Credit Hours		32



CAMPUS MAP

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|--|-------------------------------------|--|
| A A-Building/
Student Service Center | F4 Multi-Purpose Court | V Mooreland Mansion |
| B B-Building | F5 Softball Field | Y Athletic & Fitness Center |
| C C-Building | H H-Building | ● Clocktower |
| D D-Building | K Faculty Staff Lot | ★ Dental Hygiene Clinic |
| E E-Building | L Teaching Learning Center | ♿ Handicap Parking |
| F1 Baseball Field | P Parking | ■ HIVE |
| F2 Soccer Field | S S-Building/Breakers Dining | ▲ Mind Ladders |
| F3 Tennis Courts | T T-Building | ○ Open Entrances and Temperature
Check Station during COVID-19 |
| | U Holden University Center | |

Quality Education

Professors at Lakeland are experts in their fields with real-world experience. Lakeland prepares you for a high-demand career or for transfer to a four-year college or university. Access to bachelor's and graduate degrees is available on campus from partner institutions through Lakeland's Holden University Center (lakelandcc.edu/uc).

Affordable Tuition

Lakeland's tuition is about one-third the cost of most four-year schools. More than 50 percent of Lakeland students receive some form of financial assistance (lakelandcc.edu/tuition).

Convenience

Lakeland offers convenient day, evening, weekend and online courses (lakelandcc.edu/schedule).

Focus on Students

Lakeland offers a variety of student services to help you succeed, such as counseling, tutoring, computer labs, career services, free parking and affordable child care.

Opportunity starts HERE

Visit us on campus or online. Call 440.525.7900, email recruitmentcenter@lakelandcc.edu or visit lakelandcc.edu/visit for a campus tour.

Apply online: lakelandcc.edu/apply

Accreditation

Lakeland Community College is accredited through the Higher Learning Commission (HLC) and participates in the Academic Quality Improvement Program (AQIP). The Higher Learning Commission, 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604-1413, phone: 800.621.7440, hlcommission.org.