

CONSTRUCTION ENGINEERING TECHNOLOGY, BS

Bachelor of Science in Construction Engineering Technology (299103BS)

More on the Construction Engineering Technology major (<https://www.uakron.edu/engineering/CE/undergraduate/construction-tech/>)

Program Contact

Prof. Marcia Belcher
Program Director
Schrank Hall (South) 221J
330-972-2055
mcbelcher@uakron.edu

Program Description

The BS in Construction Engineering Technology degree program is an upper-level degree program designed to provide the student with additional education beyond the AAS degree in Construction Engineering Technology. This degree is also designed to meet the formal education requirements for registration as a Professional Engineer in the State of Ohio.

This degree program is defined as follows:

- The first two years are completed as an AAS degree in Construction Engineering Technology or similarly based program.
- Two years of additional prescribed coursework.
- A cooperative work experience in the construction field. The student normally enters the co-op segment between the junior and senior years.

The B.S. in Construction Engineering Technology degree program includes classroom, laboratory and industry experiences which prepares students for careers in the construction industry and other allied industries.

This program is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org> (<http://www.abet.org/>)

Career Opportunities Available

Individuals working in the field of construction engineering technologies use knowledge of construction methods, business operations and management skills to support construction projects. They work on residential or commercial buildings, bridges, roads, dams, wastewater treatment systems, or other similar projects. Common jobs assumed by graduates of this program include:

- **Field Engineer** - Monitors activities at construction sites. Works to ensure construction progresses as scheduled and contract specifications are adhered to. Inspects construction site daily and works with contractors to complete scope items.
- **Project Engineer** - Under the supervision of the Project Manager, provides technical support to construction staff. Reviews plans and other technical documents, answers questions regarding the scope and/or timing of the project, and monitors costs and project progress.

- **Construction Manager** - plan, organize, direct and coordinate building projects. Often called project managers, constructors, construction superintendents, project engineers, construction supervisors, or general contractors.
- **Construction Inspector** - ensure that construction, alteration, or repair complies with building codes and ordinances, zoning regulations, and contract specifications
- **Construction Coordinator** - coordinates construction scheduling and communication and acts as a liaison to project management concerning bids, subcontracting, progress and delays.
- **Cost Estimator or Cost Engineer** - responsible for creating the budget for a project to bid on it or aid in the project's management. Monitors and analyzes project cost estimates, expenditures, and forecasts.
- **Scheduler** - planning and scheduling of construction work and work crew. Gathers and analyzes information to prepare reports on the progress of projects.
- **Engineering Technician** - use the principles and theories of science, engineering, and mathematics to solve technical problems in research and development, manufacturing, sales, construction, inspection, and maintenance.

Requirements for Admission

Applicants for the Construction Engineering Technology program must hold an associate degree in Construction Engineering Technology from an accredited program or provide evidence of an equivalent academic background. The applicant must have a minimum cumulative grade-point average of 2.0 out of a possible 4.0.

Applicants with an associate degree in a discipline other than Construction Engineering Technology will be required to complete a specific formal set of courses as specified at the time of admission. Final approval for admission is based upon recommendations from the Director of the Construction Engineering Technology Program.

Cooperative Work Study Requirement

The required cooperative work study experience of the Construction Engineering Technology program may begin after the student has completed 64 hours of course work in the Construction Engineering Technology program. This requirement may be satisfied by one of the following options:

1. One semester¹ co-op registered with the Center for Career Management.
2. 120 service hours with a credible construction organization.²
3. One calendar year of full-time, continuous, and ongoing employment in a construction management related position.²

¹ Summer I and II combined count as one semester for the co-op.

² For options B and C, a portfolio of work must be submitted to and approved by the Program Director. The portfolio will include but not be limited to a description of the various work, evidence of work such as supervisor letters or certificates, and a technical paper, addressing a relevant topic associated with the work.

Requirements for Graduation

- Compliance with the requirements of the general education program as outlined in this Bulletin.

- Completion of the requirements for the associate degree in Construction Engineering Technology at The University of Akron or an approved associate degree program

Successful completion of a minimum of 121 credits in the B.S. in Construction Engineering Technology Program including the associate degree program, the general education courses, co-op/work study, and Year 3 and Year 4 course requirements.

The following information has official approval of the **Department of Engineering and Science Technology** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

3rd Year

Fall Semester		Hours
2030:356	Technical Calculus II	3
2990:352	Field Management & Scheduling (Sch. lab) ¹	2
2990:354	Foundation Construction Methods ¹	3
3002:256 or 7750:244	Diversity in American Society or Death & Dying	3
Select one of the following:		4
3400:210	Humanities in the Western Tradition from Ancient Times to 1500	
3400:221	Humanities in the World since 1300	
Humanities Requirement		
Hours		15

Spring Semester

2990:356	Safety in Construction ²	3
2990:358	Advanced Estimating ²	3
2990:371	Green & Sustainable Building Practices ²	3
6200:201 or 2420:211	Accounting Principles I or Essentials of Financial Accounting	3
Select one of the following:		3
7100:210	Visual Arts Awareness	
7500:201	Exploring Music: Bach to Rock	
7900:200	Viewing Dance	
Arts Requirement		
Hours		15

Summer Semester

Corporate Work Study (15 Weeks)		
Hours		0

4th Year

Fall Semester

2990:462	Mechanical Service Systems	3
2990:468	Construction Management ¹	3
2990:469	Contracts and Specifications	2
Technical Elective ³		3

Select one of the following:		3
3300:252	Shakespeare & His World	
3600:101	Introduction to Philosophy	
Arts or Humanities Requirement		
Hours		14
Spring Semester		
2040:243	Contemporary Global Issues	3
2990:453	Legal Aspects of Construction ²	2
2990:463	Electrical Service Systems	3
2990:466	Hydraulics ²	3
5550:211	First Aid & Cardiopulmonary Resuscitation	2
Complex Systems Tag Requirement		3
Hours		16
Total Hours		60

¹ Traditionally Fall only.

² Traditionally Spring only.

³ Technical Electives are subject to enrollment demands and classroom schedules. See the list below.

Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your *required* General Education English, Mathematics, and Communications (Speech) requirements.

Technical Electives

Code	Title	Hours
2870:332	Management of Technology Based Operations	3
2990:310	Residential Building Construction	3
2990:312	Neighborhood Revitalization Project	3
2990:359	Construction Cost Control	3
2990:361	Construction Formwork	3
2990:362	Advanced Elements of Structures	3
2990:465	Heavy Construction Estimating	3
2990:471	Understanding LEED Guidelines	3
2990:489	Special Topics in Construction	1-3
2990:490	Workshop in Construction	1-3
2990:497	Honors Project	1-3
2990:498	Independent Study in Construction	1-3