

ACCE Required Public Information

Objectives of the Program

Program Goals:

The goal of the Construction Management Technology program is the preparation of well educated professionals for challenging careers in the construction industry. Emphasis is placed on preparing professionals who are capable of managing the total construction process. Graduates qualify for employment with general contracting and subcontracting firms and in government.

Student Learning Outcomes:

Students who complete the B.S. degree in Construction Management Technology will be expected to demonstrate successful achievement of the following:

- Demonstrate an operational knowledge of the techniques associated with the design, construction and maintenance of residential and commercial structures.
- Exercise independent judgment in expediting and scheduling work without jeopardizing its effectiveness, safety or cost.
- Organize and manage personnel, materials and equipment for carrying out construction, maintenance and operation of complex structural systems.
- Demonstrate effective communication of ideas by means of spoken and written language as well as graphic techniques.
- Solve technical problems that translate ideas into functioning, machines, structures and systems.
- Improve the professional technical practice of Construction Management through continuing education and community service.
- Demonstrate humanistic values and responsibilities that promote active participation as productive citizens.

Program Admission Requirements

The Department of the Built Environment's Construction Management Technology program follows the admission guidelines for the University, i.e.

- **First-time Student Applicant** – the minimum GPA for consideration is a 2.0. This, however, does not guarantee admission. SAT/ACT scores are waived for applicants for Spring and Fall 2021.
- **Transfer Student Applicant** - 2.0 GPA on all college course work attempted. If less than 30 credit hours, applicant must be admissible as a first-time student.
- **International Student Applicant** – Follow the same criteria as above. English language requirement can be met by taking the TOEFL, Duo Lingo or SAT. The documents are not required for admissions, but would be needed should the student applicant choose to enroll.

Rate and Types of Employment of Graduates

Placement Rate of Graduates – Spring 2016 – Spring 2019 (41 graduates surveyed)

Accepted Job Offer	Has Not Accepted Job Offer	Graduate Studies	No Response
59%	0%	2%	39%

Job Titles

- Assistant Project Manager
- Assistant Resident Engineer
- Associate Banker
- Construction Manager
- Construction Specialist
- Field Construction Manager

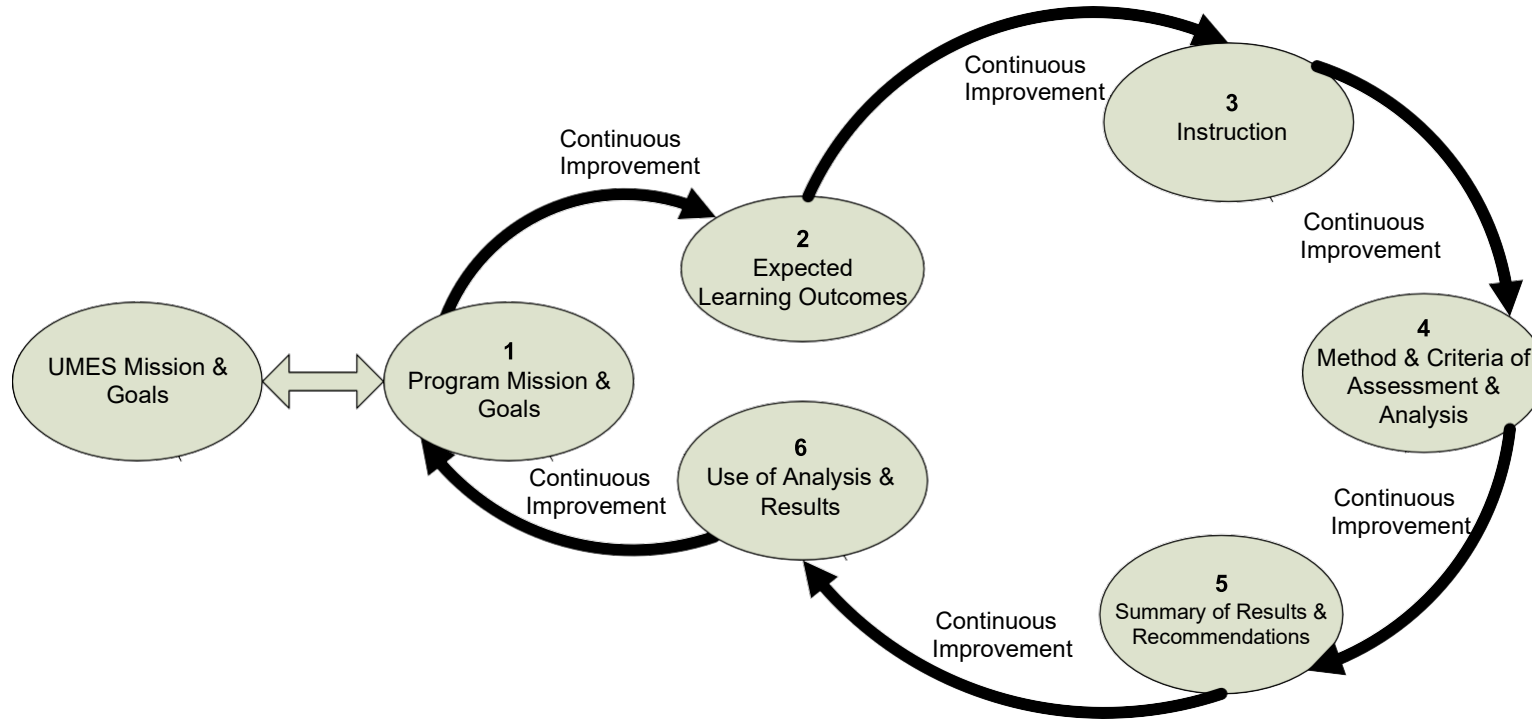
- Field Engineer
- Hardware Engineer
- Operations Manager
- President/CEO
- Project Engineer
- Project Estimator/Engineer
- Project Manager
- Project Superintendent
- Senior Project Manager
- Student
- Vice President

Hiring Companies

- Accolade Kitchens, Baths, Interiors
- Associated Builders & Contractors Chesapeake Shores
- Barton Malow Company
- Capital Construction Group, LLC
- CCE Services International
- Clark Construction
- Consolidated Waterproofing Company
- Diversified Site Works
- Harkins Builders, Inc.
- James G. Davis Construction
- Jacobs Engineering
- JP Morgan Chase & Co.
- Justin Electrical Services, LLC
- Kumi Construction Management Corp.
- Maryland Stadium Authority
- NGS Electric, Inc.
- Northrop Grumman
- Ruark Bradley Construction
- San Francisco Public Works
- The Whiting-Turner Contracting Co.
- Travelers
- WMA Contractors

Program Quality Improvement Plan

Figure 1: UMES Student Learning Outcomes Assessment Process (SLOAP)



Department of Technology: Bachelor's Degree in Construction Management Technology

Program Goals	Expected Student Learning Outcomes	Instruction	Method & Criteria of Assessment & Analysis	Summary of Results	Use of Results
<p>Goal</p> <p>The goal of the Construction Management Technology program is the preparation of well-educated professionals for challenging careers in the construction industry. Learning experiences are combined from the fields of construction technology, architecture and business administration to prepare professionals with the ability to manage and supervise the total construction process. Graduates qualify for employment with general contracting firms and in government.</p>	<p>Students that complete the Bachelor of Science degree in Construction Management Technology will be able to:</p> <p>Demonstrate an operational knowledge of the techniques associated with the design, construction and maintenance of residential and commercial structures.</p> <p>Exercise independent judgment in expediting and scheduling work without jeopardizing its effectiveness, safety or cost.</p> <p>Organize and manage personnel, materials and equipment for carrying out construction, maintenance and operation of structural systems.</p> <p>Demonstrate effective communication of ideas by means of spoken and written language as well as graphic techniques.</p> <p>Solve technical problems that translate ideas into</p>	<p>Capstone courses include the following:</p> <p>CMTE 295 - Construction Management Internship I</p> <p>CMTE 395 - Construction Management Internship II</p>	<p>Internships: Six to eight week summer management assignment with a residential or commercial contractor or construction management firm.</p> <p>Employer Evaluation Criteria: -Number of times absent/times late -Attention to detail (Technical skills) - -Appearance/Presentation -Attitude (willingness to participate) -Cooperation (ability to get along with co-workers) -Communications oral activities carried out satisfactorily -Completion of written assignments</p> <p>Instrument rating scale: 4 – Exceptional</p>	<p>A summary of the results of graduate surveys, senior exit surveys, employer surveys, advisory council suggestions and student performance on tests, quizzes, laboratory activities, projects, research papers, reports and internships are reviewed and evaluated individually and collectively by faculty each semester.</p> <p>Students performing below average are identified and advised.</p> <p>Special tutoring support is provided as needed.</p>	<p>The results are analyzed to determine if changes need to be made.</p> <p>If a significant number of students are deficient, changes are made in instructional strategies or methods.</p> <p>Curriculum changes are also predicated on accreditation standards/reviews and recommendations by the American Council for Construction Education (ACCE).</p>

Program Goals	Expected Student Learning Outcomes	Instruction	Method & Criteria of Assessment & Analysis	Summary of Results	Use of Results
	<p>functioning, machines, structures and systems.</p> <p>Improve the professional technical practice of Construction Management through continuing education and community service.</p> <p>Demonstrate humanistic values and responsibilities that promote active participation as productive citizens.</p> <p>Readily find employment in construction and related industries.</p>		<p>3 - Competent 2 - Needs improvement 1 - Unsatisfactory</p> <p>Faculty Visitation: -Interview/feedback from supervisor</p> <p>Final Assessment Grading is: S – satisfactory U – unsatisfactory</p> <p>-If student performance is overall positive an S is given.</p> <p>-If student performance is considered to be deficient an unsatisfactory is given.</p> <p>Senior Seminar: Oral Presentation: -Appearance, professionalism, voice projection, verbal skills, etc. -Use of graphics, charts, visual aids,, etc. -Logic, order, clarity, technical accuracy,</p>		

Program Goals	Expected Student Learning Outcomes	Instruction	Method & Criteria of Assessment & Analysis	Summary of Results	Use of Results
			<p>organization, etc. -Response to questions concerning written research findings. Written Paper: -Content original and specific to the topic. -Organization, and appearance, etc. -Spelling, grammar, etc. -Assumptions and Qualifications -Completeness</p> <p>Instrument rating scale same as above.</p>		

Program Assessment Measures

- UMES Undergraduate Exit Interview
- UMES Graduating Senior Exit Survey
- UMES CMT Alumni Survey
- Industry Advisory Board Members Survey
- Employers surveyed by telephone or by mail every three years.

Information Obtained from Assessment Measures

The Department of the Built Environment's Construction Management Technology Program initiated new user-friendly surveys beginning in Spring 2019 to enhance our assessment efforts.

UMES CMT Graduating Senior Exit Survey

What campus were you enrolled?

- Main campus – 5 responses
- Shady Grove campus – 2 responses

Students indicated their perception of their level of competency for each learning outcome using a scale from 1-4 with 1 being no competency and 4 being above average/high level of competency. Below are the overall rating averages.

1. Create written communications appropriate to the construction discipline. – 3.43%
2. Create oral presentations appropriate to the construction discipline. – 3.57%
3. Create a construction project safety plan. – 2.86%
4. Create construction project cost estimates. – 3.29%
5. Create construction project schedules. – 3.14%
6. Analyze professional decisions based on ethical principles. – 3.57%
7. Analyze construction documents for planning and management of construction processes. – 3.29%
8. Analyze methods, materials, and equipment used to construct projects. – 3.29%
9. Apply construction management skills as an effective member of a multidisciplinary team. 3.43%
10. Apply electronic-based technology to manage the construction process. – 3.43%
11. Apply basic surveying techniques for construction layout and control. 3.29%
12. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in

- the design and construction process. - 3.43%
13. Understand construction risk management. – 3.43%
 14. Understand construction accounting and cost control. – 3.00%
 15. Understand construction quality assurance and control. – 3.43%
 16. Understand construction project control processes. 3.14%
 17. Understand the legal implications of contract, common and regulatory law to manage a construction project. – 3.14%
 18. Understand the basic principles of sustainable construction. – 3.57%
 19. Understand the basic principles of structural behavior. 3.14%
 20. Understand the basic principles of mechanical, electrical and plumbing systems. 2.86%

Overall rating average – 3.29%

Survey of Construction Management Technology Alumni

The Construction Management Technology also initiated a new Alumni Survey. Graduation dates range from December 1993 to May 2019. All are employed full time with two beginning employment in less than three months following graduation and two beginning more than six months following graduation. All of those that responded are making an annual salary of more than \$50,000. The results from 4 alumni are below.

Present title

- President/CEO
- Project Engineer – 2 responses
- Risk Control Manager

Please provide a brief description of your present job related responsibilities.

- As an owner, I am responsible for day-to-day management, oversight and administration of contracts, budgets and schedules. I also oversee the growth, stability, and direction of the firm.
- Submittals, RFI's.
- Assessment of contractors' safety programs which includes auto, drivers, losses, post injury management, contracts, insurance requirements, and program effectiveness. Managing several accounts and evaluating field operations as well as office operations. Evaluate high risks and work together to develop controls for the risks to eliminate any losses.

At what level do you think the faculty in the Department of Technology (now the Department of the Built Environment) exhibited technical competence and professionalism?

- Excellent – 25%
- Above Average – 50%
- Average – 25%

In your opinion, did the knowledge and skills you acquired while enrolled in the Construction Management Technology Program at UMES enhance your chances of being employed in the field which you are now working?

- Yes – 100%

What CMT subjects have been most helpful to you?

- Cost Estimating
- CPM Scheduling
- Management Courses
- Business Classes

Specify the subjects you think should be added or taught in more detail within the CMT program.

- Cost Estimating
- CPM Scheduling
- 3D Modeling
- Soils
- Personally, the program is great at preparing one for industry; the only recommendation I would have is to possibly implement some of the newer construction management applications/programs into the curriculum.

In what manner, if any, are you continuing your education?

- Attend seminars on a regular basis.
- Enrolled in part-time program leading to a graduate degree

If you are planning on earning a graduate degree, please provide the program name.

- MBA

How would you rate the advisement and counseling you received from faculty while a student in the CMT program? (3 responses)

- Above average – 50%
- Average – 25%

Please feel free to make any additional comments relative to the CMT Program which we can use in providing an improved quality of education (curriculum, physical facilities, laboratory equipment, relationships with industry, faculty and administration).

- I would suggest developing a course related to the new construction programs such as ProCore. I believe they offer student versions that can be used in a classroom. With this, you would truly prepare students for what will be expected from them upon graduation as it truly is a big insight to the importance of submittals, RFI's and overall quality control of a project from beginning to end.
- More labs needed to be incorporated in the class.