

BSCEM Program

Mission:

The mission of the Construction Engineering Management program is to educate and prepare students to succeed in the construction engineering management profession by providing them with essential technical, managerial and communication skills and tools, which will enable them to perform current and future construction engineering management tasks and to promote the need for life-long learning.

Educational Objectives and Goals:

The Construction Engineering Management program educational objectives are to produce graduates, who after entering the construction engineering management practice with a fundamental knowledge of construction engineering management principles and current technologies, communication skills and practical construction experience, will:

1. Provide substantial contributions to the construction industry
2. Pursue life-long learning through continuing education and/or advanced degrees in construction engineering management or other related fields.
3. Continue to develop professionally through participation in professional organizations and/or participation in professional development activities in the industry
4. Progress to professional certifications

Specifically, the CEM program outcomes expected of all students receiving the BS degree in Construction Engineering Management are the following abilities:

1. Create written communications appropriate to the construction discipline.
2. Create oral presentations appropriate to the construction discipline.
3. Create a construction project safety plan
4. Create construction project cost estimates.
5. Create construction project schedules.
6. Analyze professional decisions based on ethical principles.
7. Analyze construction documents for planning and management of construction processes.
8. Analyze methods, materials, and equipment used to construct projects.
9. Apply construction management skills as a member of a multi-disciplinary team.
10. Apply electronic-based technology to manage the construction process.

11. Apply basic surveying techniques for construction layout and control
12. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process
13. Understand construction risk management.
14. Understand construction accounting and cost control.
15. Understand construction quality assurance and control.
16. Understand construction project control processes.
17. Understand the legal implications of contract, common, and regulatory law to manage a construction project
18. Understand the basic principles of sustainable construction.
19. Understand the basic principles of structural behavior.
20. Understand the basic principles of mechanical, electrical and piping systems.

Current objectives are listed with a mapping of the educational goals above onto the program strategic goals. The strategic goals are as follows:

- G1. Integration of current technologies into the CEM curriculum – The achievement of this goal will be measured by the number and extent that information technology will be integrated into the CEM curriculum. Appropriate software will be identified and integrated into current courses
- G2. Continuous enhancement of the quality of undergraduate program – to be measured by the implementation of our continuous quality improvement plan
- G3. Professional development of faculty – Encouraging CEM faculty to participate annually in national and international events including conferences and publications (The achievement of this goal will be measured by relevant data obtained from faculty annual reports).
- G4. Industry partnerships – A CECEM Advisory and Development Council (CECEM-ADC) has been established to help the CECEM program keep the curriculum up-to-date and high quality (The achievement of this goal will be measured by relevant data obtained from CECEM-ADC reports).
- G5. Global objective – Explore opportunities for students/faculty participate in global activities (The achievement of this goal will be measured by relevant data obtained from faculty annual reports).