

CONSTRUCTION MANAGEMENT

The baccalaureate program in construction is accredited by the American Council for Construction Education (<https://www.acce-hq.org/>) and is a charter member of the Associated Schools of Construction.

Faculty: Professors Elhouar, Khodair, Lee, Maillacheruvu (Interim Dean), Schattler (Chair); Associate Professors Hossain, Soltani, Spelman; Assistant Professors Ghannad, Terreno; Associate Professor in Residence Willis; Emeritus Professors Adrian, Al-Khafaji, Rebholz.

The Department of Civil Engineering and Construction offers undergraduate programs in both civil engineering (BSCE) and construction (BSC), a Construction minor, and accelerated 4+1 programs leading to a Master of Science in Civil Engineering (BSCE/MSCE and BSC/MSCE).

Mission and Objectives

Produce graduates who possess a keen awareness of the national and global dimensions of the construction industry, leadership skills required to serve our society, and the technical knowledge to pursue multiple career paths including advanced degrees. To achieve our mission, the Construction program will strive to achieve the following objectives:

1. **Leadership in Construction.** Graduates understand the need for teamwork, communication, skills, integrity, good citizenship, and service. They have the needed knowledge to become leaders in the construction industry.
2. **Professional Achievement.** Graduates have the needed understanding of ethical responsibilities, certification, the necessity for continuing education, and contemporary issues required for placement and career advancement.
3. **Globalization.** Offer programs to ensure that graduates have the needed awareness of global construction issues and cultures to help them thrive in an emerging world market.
4. **Industry Partnerships.** Partner with the construction profession to offer an innovative program that promotes cultural diversity and responds to the needs of the profession and society in the areas of sustainability, infrastructure, and emerging technology.

Student Outcomes

In order to meet these program educational objectives, students graduating from Bradley's construction program will attain the following outcomes.

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 methods, materials, and equipment used to construct projects
8. Apply electronic-based technology to manage the construction process
9. Apply basic surveying techniques for construction layout and control

10. Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process
11. Understand construction accounting & cost control
12. Understand construction quality assurance & control
13. Understand construction project control processes
14. Understand the legal implications of contract, common, and regulatory law to manage a construction project
15. Understand the basic principles of sustainable construction
16. Understand the basic principles of structural behavior
17. Understand the basic principles of mechanical, electrical and plumbing systems

The Department

Facilities. The curriculum is supported by 11 cutting-edge laboratory and computer facilities equipped with modern hardware and software. Laboratories include fluid mechanics/hydraulics, environmental, concrete, asphalt pavement, construction, structural, geotechnical, two design projects, transportation, and the college machine shop. In addition, the college has three computer classrooms with a wide range of up-to-date software available through the university Virtual Desktop Infrastructure (VDI) platform.

Scholarships. Currently nearly 30 annual and endowed scholarships are available to students through the department. The total endowed scholarship from industry of about 2 million is dedicated specifically to CEC students. This reflects the faith and trust that industry has in the quality of our programs.

Placement. For the past 20 years, job placement for construction graduates has been 100% in most years. Starting salaries for CEC graduates are very competitive nationwide. Employers recognize that our students have the knowledge, experience, and intellectual curiosity to succeed in their profession. High placement and scholarship opportunities for our students are a direct benefit from the strong partnerships that CEC has developed with our professional partners in industry, government, and academe.

Leadership. A focus of the department is the development of leadership skills in our students. Students are encouraged to participate in student professional organizations and academic honorary organizations by being officers or committee chairs. Leadership skills are also developed through service and outreach programs that teach our students the value of giving back to the community. Our students have been involved in many different community outreach activities through their involvement in building school playground projects, Illinois River Sweep, Habitat for Humanity, and others. The CEC department offers scholarships for leadership to applicants whose academic and leadership skills meet or exceed the requirements: (<https://www.bradley.edu/admissions/financial-aid/scholarships-grants>) (<https://www.bradley.edu/admissions/financial-aid/scholarships-grants/>)).

Faculty Qualifications. CEC faculty have received numerous awards for teaching excellence and scholarship, as well as for their professional contributions. They have conducted research for national, state, and local sponsors, benefitting society and our students.

Graduation. To graduate, students must meet all university and college graduation requirements. Construction students must achieve a minimum GPA of 2.0 in college of engineering courses. CEC students are

expected to attend a number of seminars and other events that promote leadership and service.

Internationalization. The CEC department believes that exposure to different world cultures can expand the professional capabilities, stimulate intellectual growth, and broaden the personal perspective of all participants. The CEC department and the university are committed to giving all of our students the opportunity to study overseas. Arrangements have been made with universities around the world to send our students overseas to take courses either during an interim semester, or the Fall/Spring semesters. Students with financial need have received financial support that enables them to study abroad for equal to or less than what it would cost to study on campus. As a part of the Study Abroad program, hundreds of CEC students have studied overseas in various countries.

Graduate Program. In addition to the undergraduate program described above, the Department offers a graduate program leading to the Master of Science in Civil Engineering (MSCE) degree. Our undergraduate students have the opportunity to pursue an accelerated 4+1 program leading to a Master of Science in Civil Engineering. The MSCE degree also provides students the ability to emphasize in Construction Management. Details of this program can be found in the Graduate Catalog and below for the 4+1 (BSCE/MSCE) program. The graduate program allows talented undergraduate students to engage in scholarly research activities and to enroll in advanced courses to meet their special interests and needs.