

CEE Majors Interested in Construction Engineering Spring 2019 Advising (AY 2019-2020)

The suggested courses will help you prepare for entry-level positions in the construction industry or with agencies or firms that require a construction specialty. Employment for specific positions in construction will also depend on the extent of your construction related experience and the types of projects being constructed, for example, buildings, highways, power plants, dams, and airports—to name a few. Courses marked * are currently on the CEE upper division engineering/science electives list.

Course	Title	Credits	Quarter Offered and Instructor
Primary Courses			
CEE 291	AutoCAD	2 credits	A, W, Sp—Le
CEE 401	Pavement Design for Roads	1 credit	Sp—Mahoney
CEE 402	Energy Infrastructure	1 credit	Sp—Mahoney
CEE 404	Infrastructure Construction	4 credits	W—Muench
CEE 410	Traffic Engineering Fundamentals	3 credits	Sp—Avery
CEE 420	Engineering with Developing Communities	3 credits	Sp--Kaminsky
CEE 421	Pavement Design and Construction	4 credits	A—Mahoney
CEE 424	GIS for Civil Engineers	3 credits	A—Ahmed
CEE 429	Sustainability in Building Infrastructure	3 credits	Sp—Kim
CEE 436	Foundation Design	3 credits	A—Mauer
CEE 498	Sustainable Roadway Design and Construction	3 credits	A—Muench
CEE 440	Professional Practice Studio	2 credits	W—TBD
CEE 441	Construction/Transportation Capstone (or 442, 444 or 445)	5 credits	Sp—TBD
CEE 454	Design of Timber Structures	3 credits	W—Reed
CM 332*	Construction Equipment Management	3 credits	Sp--Migliaccio
CM 335	Sustainable Construction	3 credits	Sp—Bender
CM 420*	Temporary Structures	3 credits	Sp—Nemati
CM 415*	Heavy Construction Practices (must take CM 332 before taking CM 415)	3 credits	A—Schaufelberger
CM 450*	Construction Project Management	5 credits	Su—Abdel Aziz
Secondary Courses			
CM 331*	Construction Estimating I	3 credits	Sp—LEE/Byork/Warnaca
CM 411 *	Project Planning and Control	4 credits	A—Abdel Aziz
CM 417	Residential Project Management	3 credits	W--Shaiman
CM 421*	Project Management	3 credits	W—Holm
CM 422*	Computer Applications in Construction (must take CM 411 (4 credits) prior to taking CM 422)	2 credits	W—Abdel Aziz
CM 428	Heavy Construction Techniques	3 credits	W- Nemati
CM 423*	Construction Law	3 credits	Sp—Tramountanas
CEE 451	Design of Metal Structures	3 credits	A—TBD
CEE 452	Design of Reinforced Concrete Structures	3 credits	A—Stanton
CEE 477	Open-Channel Engineering	3 credits	W—Jessup
CEE 490	Air Pollution Control	4 credits	Sp—Larson

Commentary for Selected Construction Management Courses

- **CM Minor:** Minors offer you a way to explore a specialty theme with less commitment of time than a major. Where a major requires at least 50 credits, most minors require about 25 credits. The CM minor represents a set of mostly CM courses that lead to a “Minor in Construction Management.” This is noted on your transcript if you successfully complete the required coursework. You can find more information at <https://blogs.uw.edu/ceadvice/2018/01/23/construction-management-minors-and-courses/> or email the CM advisor Jessica Pak at pakjm@uw.edu for an advising appointment.
- **CM 450 Construction Project Management** is oriented toward heavy construction. This course is one of the best CM courses for CEE students but **only offered during the Summer Q**. If you take this course, then do not take CM 421. The description for CM 450 is “Examines management of construction projects focusing on construction contracting, cost estimating, project scheduling, and resource management.”
- **CM 415 Heavy Construction Practices** involves the development of a detailed cost estimate, construction schedule, and project management plans for a highway project. It is assumed that students have prior knowledge of construction equipment utilization and techniques for estimating equipment productivity, hence, **CM 332 Construction Equipment Management (3) is a required prerequisite**.
- **Courses highly recommended by the CM Department for CEE majors** (most are listed on the preceding page). Most, but not all, courses which follow are on the CEE approved list for Upper Division Engineering and Science.
 - **CM 321** Mechanical Systems
 - **CM 322** Electrical Systems
 - **CM 331** Construction Estimating I (required course in the CM Minor)
 - **CM 332** Construction Equipment Management
 - **CM 333** Construction Safety (required course in the CM Minor)
 - **CM 411** Project Planning and Control (required course in the CM Minor)
 - **CM 414** Virtual Construction
 - **CM 415** Heavy Construction Practices
 - **CM 421** Project Management
 - **CM 423** Construction Law
 - **CM 428** Heavy Construction Techniques
 - **Note: Professor Bender makes significant efforts to accommodate CEE majors in CM classes. He also noted accommodations will specifically apply to CEE students that have applied for the CM minor.**

Additional CEE course requirements include

- 15 CEE Technical Electives (CEE 400 level only). **Take at least one core course from three of the six areas of department emphasis** (the six areas are; construction (CESI), transportation, geotechnical, structures, hydrology/hydrodynamics, environmental).
- 12 Upper Division Engineering and Science electives (can include the CM and ARCH courses). Students may submit a petition to the Advising Office to have a course not on the approved list considered as an Upper-Division (UD) Engineering and Science Elective. This is quick and straightforward to do.
- CEE 440 Professional Practice and CEE 441 Construction/Transportation Capstone (or any of the other capstones—but you must take one of those offered).

Potential Changes

- The courses, course instructors and the quarter offered are not firm as of late February 2019; however, we doubt much will change.

AutoCAD

- If you have not taken CEE 291 AutoCAD prior to your senior year, then you need to do so. It is offered A, W and Sp Quarters. **Officially, it is not required that you take CEE 291** but you should be proficient with this tool before you graduate. CEE 291 is an excellent way to achieve and demonstrate that proficiency.