

UC Davis Minor in Construction Engineering Management (CEM)

**Offered by the Department of Civil and Environmental Engineering
209 Ghausi Hall ♦ (530) 752-8948**

California's construction industry continues to experience high growth as it continues to accommodate increasing population and as it faces renewal of much of the infrastructure built by previous generations. At the same time, the construction industry faces challenges of scarce materials, a need for decreased environmental impact in terms of the construction process itself and operation of the completed project, and a more complex operational, regulatory and social context in which it must do its work.

The purpose of this minor is to better prepare professional civil and environmental engineers to thrive in this challenging industry, and to improve the efficiency of delivery and sustainability of the civil infrastructure in the state through their future efforts.

It is expected that engineering students will enroll in this minor program, including Civil, Mechanical, Chemical, and Materials Science majors. Students who are interested in construction of infrastructure in their discipline can make use of the skills that will be learned through completion of this minor.

Admission information, selection criteria and completion of minor:

To declare this minor program offered by the Department of Civil and Environmental Engineering, students must complete ENG 106 with a C- or better. The online Minor Declaration form is available via the Online Advising Student Information System (OASIS) at <https://students.ucdavis.edu/>.

All prerequisites must have been taken for a letter grade; no grade lower than a C- will be accepted in any prerequisite course.

You are permitted to overlap multiple courses between this minor and your major.

Transcript notation must be requested no later than the quarter preceding graduation, and will appear as a minor in **Construction Engineering and Management**.

Minor Program in Construction Engineering Management (ECEM)

Total units for the minor: 24 units. All courses must be taken for a letter grade. No grade lower than a C- will be accepted

Minor Advisors: John Harvey (Civil & Environmental Engineering), Jeannie Darby (Civil & Environmental Engineering), Jay Lund (Civil & Environmental Engineering)

Three required courses (12units):

Dept	Course #	Title	Units	Prerequisites/Enrollment Restrictions
ECE	137	Construction Principles and Project Management	4	Upper division standing
ECE	123	Urban Systems and Sustainability	4	Upper division standing; pass 1 majors only
ECE	153	Deterministic Optimization and Design	4	MAT 21C, 22A, programming course

At least 12 units of courses from the following list:

Dept	Course #	Title	Units	Prerequisites/Enrollment Restrictions
ECE	179	Pavement Engineering	4	ENG 104 w/ C- or better
ARE	112	Fundamentals of Business Organization	4	Upper division standing; restricted to CAES majors in Pass 1
ARE	155	Quantitative Analysis for Business Decisions	4	ARE 100A, STA 103; restricted to AMGE majors in Pass 1; restricted CAES majors in Pass 2
ARE	157	Analysis for Production Management	4	ARE 100A, STA 103; restricted to AMGE majors in Pass 1
ARE	171	Principles of Finance	4	ARE 100A, ARE 106, MGT 11A, MGT 11B
ECN	134	Financial Economics	4	ECN 1A, 1B, and 100; MAT 16A, STA 13
ECN	162	International Economic Relations	4	ECN 1A, 1B or consent of instructor
ESP	161	Environmental Law	4	Upper division standing; One course in environmental science; POL 1 and UWP 1 recommended.

May include **one** the following lower division courses:

Dept	Course #	Title	Units	Prerequisites
MGT	11A	Elementary Accounting	4	
ARE	18	Business Law	4	Sophomore standing

Course substitutions which maintain subject coverage and unit requirement will be considered with approval of the minor faculty advisor and may not exceed two courses.