

General Education Requirements

The Construction Management Department strongly believes that the construction education program must be a balance between profession-specific courses and those that prepare the CM graduate to be a well-educated member of society.

General education requirements are divided into six categories or Areas. Each Area is further divided into sub-areas with their own unit requirements. The University Catalog provides a list of courses you can choose from in each of the sub-areas and is also a helpful reference when determining the prerequisites for each course. Refer to: www.ge.calpoly.edu/.

Students are expected to complete all **GE Area A** classes during their freshmen year. Completion of Area A is a prerequisite for many other GE classes.

Prior to graduation students must complete the **U.S. Cultural Pluralism (USCP)** requirement. The USCP requirement can be completed by taking a course that satisfies one of the GE sub-areas. The university catalog contains a list of these courses.

All students must complete the **Graduation Writing Requirement (GWR)** prior to graduation. Information on currently available ways to meet this graduation requirement may be obtained from the Writing Skills Office at www.writingskills.calpoly.edu.

There is a requirement that 12 general education units must be upper-division (300-400 level) and those 12 units must be taken while enrolled as a Cal Poly student. If you are a transfer student and come to Cal Poly with GE certification, you are still required to take 12 upper-division GE units.

The College of Architecture and Environmental Design (CAED) Advising Center provides academic advising services to all students within the CAED in conjunction with each student's departmental faculty advisor. The Advising Center is located in Building 05 Room 210.

Construction Management GE 2011-2013 Requirements

To be selected in accordance with the general education and breadth requirements. Refer to the 2011-2013 University Catalog.

72 Total GE units required. 20 of which are specified in Support Courses *.

Upper-Division GE Units Taken in Residence 12

AREA A COMMUNICATION 12

- _____ A1 Expository Writing.....(4 units)
- _____ A2 Oral Communication.....(4 units)
- _____ A3 Reasoning, Argumentation, & Writing....(4 units)

AREA B SCIENCE & MATH 16*

- _____ B1 Mathematics/Statistics.....(*8 units in Support)
- _____ B2 Life Science.....(4 units)
- _____ B3 Physical Science.....(*4 units in Support)
- _____ B4 One lab taken with B2 or B3 course

AREA C ARTS & HUMANITIES 20

- _____ C1 Literature.....(4 units)
- _____ C2 Philosophy.....(4 units)
- _____ C3 Fine/Performing Arts.....(4 units)
- _____ C4 Upper-division elective.....(4 units)
- _____ Area C Elective (Choose one from C1-C4)...(4 units)

AREA D/E SOCIETY/INDIVIDUAL 20*

- _____ D1 The American Experience.....(4 units)
- _____ D2 Political Economy.....(*4 units in Support)
- _____ D3 Comparative Social Institutions..(4 units)
- _____ D4 Self Development.....(4 units)
- _____ D5 Upper-division elective.....(*4 units in Support)

AREA F TECHNOLOGY (upper-division) 4

- _____ Elective.....(4 units)

TOTAL GE UNITS 72

_____ USCP (U. S. Cultural Pluralism Requirement)

_____ GWR (Graduate Writing Requirement)

198 Total Units

First Year Courses

CM 102 is usually offered during winter and spring quarters.

CM 115 is offered every quarter to both CM and ARCE majors. Students should attempt to register for this class as soon as they've completed their first physics course.

CM 221 is only offered during fall and spring quarters. Students will not be allowed to register for CM 213 until they've completed CM 221. Since CM 221 is not taught every quarter it is important to plan ahead.

EDES 101 is offered during fall quarter only.

ARCH 106 is offered winter quarter only. This course is a pre-requisite for CM 115. Since it is taught only once per year you must make sure to take it during winter quarter of your first year.

Note for Transfer Students: Transfer credit for EDES 101 and ARCH 106 is not necessarily automatic. Transfer students who have taken a similar course will need to bring evidence of previous work for evaluation and credit by their faculty advisor.

MATH 141 is a high demand course and is offered each quarter. It is highly recommended that students take a supplemental math workshop. This greatly increases their ability to succeed in Calculus. More info can be found at: <http://sas.calpoly.edu/swm/index.html>.

MATH 142 or MATH 182 follows MATH 141 and should be taken immediately upon successfully completing the 141 course. It is highly recommended that students take a supplemental math workshop in conjunction with this course.

PHYS 141 can be taken as soon as students complete MATH 141. Students will utilize the calculus learned in MATH 141 to solve problems in physics. It is recommended that students take a supplemental workshop with this course.

PHYS 132 should be taken immediately after completing PHYS 141. A student may take CHEM 124 instead of PHYS 132.

BRAE 239 is required for a number of different majors at Cal Poly and therefore it is highly impacted and usually fills quickly during registration. It is highly recommended that this course is taken as soon as possible.

General Education courses should be included whenever possible to maintain a full course load. Students are expected to complete all **GE Area A** classes during their freshmen year. Completion of Area A is a prerequisite for many other GE classes.

1st Year			
Fall		Winter	Spring
Major Courses	INTRO TO CM CM 102 (2)		FUNDAMENTALS OF CONSTRUCTION MANAGEMENT CM 115 (6) (ARCH 106, MATH 141, and PHYS 141)
			CONCRETE & FORMWORK CM 221 (3) (ARCH 106)
	INTRO ARCH & ENV DESIGN EDES 101 (2)		MATERIALS OF CONSTRUCTION ARCH 106 (2)
	CALCULUS I MATH 141 (4) (Refer to Catalog) B.1	CALCULUS II MATH 142/182(4) (MATH 141) B.1	ENGINEERING SURVEYING BRAE 239 (4) (MATH 119 or Equivalent)
Support Courses	GENERAL PHYSICS 1A PHYS 141(4) (MATH 141) B.3		PHYS OR CHEM PHYS 132(4) (PHYS 141) CHEM 124(4) (Refer to Catalog) B.3 & B.4
	GE & B UNITS (Refer to Catalog) (8 Units)	GE & B UNITS (Refer to Catalog) (4 Units)	
GEs			
14		16	17

Second Year Courses

Before entering the second year of the Construction Management program, students are expected to have completed most, if not all, of the first year courses. It is highly recommended that if a student is missing multiple courses they take summer classes to catch up.

CM 213 is offered every quarter. Students must complete CM 102, CM 115, and CM 221 prior to taking this course. Students need to have completed or be concurrently enrolled in BUS 207, ARCE 211, and BRAE 239.

CM 331 and CM 332 are not offered every quarter. Check with the CM office to see when these courses are anticipated to be taught. Students must complete pre-requisites before enrolling.

CM 311 is offered every quarter and students must be finished with CM 213, PHYS 132 or CHEM 124, and CM 332 before enrolling.

ARCE 211, 212, and 226 are sequential courses meaning they must be taken, and successfully completed, in the order shown. The prerequisite requirements are rigorously enforced. Students will not be allowed to complete the series of five ARCE courses (211, 212, 226, 315 and 316) in fewer than five quarters.

BUS 207, BUS 212, BUS 215, ECON 221, and ECON 222 are high demand courses required by a number of majors on campus. These courses are not necessarily offered every quarter so students are encouraged to take them as soon as possible.

Students should continue to make progress in fulfilling their **General Education** requirements. If students are unable to get into all the major and support courses listed for the second year, they should plan to take as many GE as possible to maintain a full course load.

2nd Year		
Fall	Winter	Spring
HEAVY CIVIL CONSTRUCTION MANAGEMENT CM 213 (6) (CM 102, CM 115, CM 221) (pre-req or concurrent enrollment for BUS 207, ARCE 211, BRAE 239)		RESIDENTIAL CONSTRUCTION MANAGEMENT CM 311 (6) (CM 213, PHYS 132 or CHEM 124, CM 332)
	EVALUATION OF COST ALT CM 332 (3) (GE AREA D2 & MATH 142/182)	CONSTRUCTION ACCOUNTING CM 331 (3) (BUS 212/214)
STRUCTURES I ARCE 211 (3) (PHYS 141 & MATH 142 or 182)	STRUCTURES II ARCE 212 (3) (ARCE 211)	STRUCTURES FOR ARCHITECTS ARCE 226 (3) (ARCE 212)
MICRO ECON ECON 221 (4)	MACRO ECON ECON 222 (4) D.2	
BUSINESS LAW BUS 207 (4)	FINANCIAL ACCOUNTING BUS 212 (4)	MANAGERIAL ACCOUNTING BUS 215 (4) (BUS 212)
<div> GE & B UNITS (Refer to Catalog) (4 Units) </div>		
17	18	16

Third Year Courses

Before entering the third year of the Construction Management program, students are expected to have completed most, if not all, of the second year courses. It is highly recommended that if a student is missing multiple courses they take summer classes to catch up.

CM 313 is offered every quarter and has a pre-requisite of CM 311.

CM 411 is offered every quarter and lists a large number of pre-requisites. These pre-requisites are in place to ensure that students are completely caught up with their previous requirements before proceeding into their fourth year CM courses. Note: The pre-requisites for CM 411 and CM 413 are identical. Students who have completed CM 313 can opt to take either course.

Technical Electives can be taken at any point provided that the pre-requisites have been met. Many courses are automatically approved as technical electives and do not require advisor approval. These classes include any course in CM that is not already required for the degree, any course in the CAED that is not already required as a support course, and any course that is a part of the business minor. Students wanting to use a course outside of these three areas must talk to their advisor to get approval.

Co-operative Education (CM 485) can be used towards the technical elective requirement. Co-op provides students with an opportunity to intern for a company and gain valuable practical experience that will enhance their resume. See the department website for further details.

ARCE 315 and ARCE 316 are taught most quarters although sections are limited. Pre-reqs are strictly enforced and you will not be allowed to take these courses concurrently.

ENGL 310 is required by many majors on campus and is highly impacted. Students must almost always use a priority to secure a spot in this class. The strategic use of priorities is important so when a student decides to take ENGL 310, they should also plan to register for any ARCE, CM, or GE courses that they've had difficulty getting into.

STAT 251 is offered every quarter and should be taken before the end of the third year.

A **Request for Graduation Evaluation** form should be submitted to the Academic Records Office four quarters prior to graduation. If a student is on track to graduate in four years this form should be submitted to Records during spring quarter of their junior year.

Students should continue to complete their **General Education** requirements.

3rd Year		
Fall	Winter	Spring
COMMERCIAL CONSTRUCTION MANAGEMENT CM 313 (6) (CM 311)		SPECIALTY CONTRACTING CONSTRUCTION MANAGEMENT CM 411 (6) (CM 115, 213, 311, 313, 331, 332, ARCE 212, and BUS 207)
ADVISOR APPROVED TECHNICAL ELECTIVE (3)	ADVISOR APPROVED TECHNICAL ELECTIVE (3)	
SMALL SCALE STRUCTURES ARCE 315 (4) (ARCE 226)	LARGE SCALE STRUCTURES ARCE 316 (4) (ARCE 315)	
STATISTICS FOR MANAGEMENT STAT 251 (4) (Refer to Catalog) B.1		CORPORATE COMMUNICATION ENGL 310 (4) (Completion of GE Area A) GWR
	GE & B UNITS (Refer to Catalog) (8 Units)	GE & B UNITS (Refer to Catalog) (8 Units)
17	15	18

Fourth Year Courses

Before beginning the fourth year, students are expected to have completed all of the first year, second year, and third year course requirements.

CM 413 is offered every quarter and lists a large number of pre-requisites. These pre-requisites are in place to ensure that students are completely caught up with their previous requirements before proceeding further into their fourth year CM courses.

CM 415 is offered every quarter and should be taken after you have completion of both CM 411 and CM 433.

CM 443 is typically only offered twice per year. Contact the CM Department for more information regarding class scheduling. CM 413 must be complete before enrolling in this course.

CM 463 is typically only offered twice per year. Contact the CM Department for information regarding class scheduling. Students have the option of completing an individual senior project (CM 461 and CM 462) instead of taking the CM 463 course. This is a three quarter process and should be initiated with the student's assigned faculty advisor three quarters prior to graduation. See the Senior Project Guidelines on the CM Department website for more information.

GEOL 201 can be taken at any point as long as MATH 119 or higher is completed. If a student did not take GEOL 201 earlier they should plan to take it during their fourth year.

ARCE 421 is offered every quarter and will complete the ARCE sequence. Note that GEOL 201 and ARCE 212 are pre-reqs so it is likely the student could take this course earlier if time permits in their schedule.

ECON 303 fulfills both area D5 and the USCP requirement.

General Education Requirements must all be complete prior to graduation. That includes the 72 units required (12 of which must be in-residence and upper-division), along with the **GWR requirement** and the **USCP requirement**.

If for any reason a student needs to change their expected graduation date they must fill out a Change to Expected Graduation Date Form found at Academic Records.

4th Year		
Fall	Winter	Spring
JOBSITE CONSTRUCTION MANAGEMENT CM 413 (6) (CM 115, 213, 311, 313, 331, 332, ARCE 212, and BUS 207)		INTERDISCIPLINARY PROJECT MANAGEMENT CM 415 (5) (CM 411 and CM 433)
	INTEGRATED PROJECT DELIVERY CM 433 (2) (CM311)	PROFESSIONAL PRACTICE CM 463 (3) (CM 433 & pre-req or concurrent enrollment in CM 443)
	MANAGEMENT OF THE FIRM CM 443 (4) (CM 413)	
PHYSICAL GEOLOGY GEOL 201 (3) (MATH 119 or Equivalent)	SOIL MECHANICS ARCE 421 (3) (ARCE 212 & GEOL 201)	
		ECONOMICS OF POVERTY ECON 303 (4) (Refer to Catalog) D5 & USCP
GE & B UNITS (Refer to Catalog) (8 Units)	GE & B UNITS (Refer to Catalog) (8 Units)	GE & B UNITS (Refer to Catalog) (4 Units)
17	17	16