

2011-13 Cal Poly Catalog

Civil & Environmental Engineering Department

MS Civil and Environmental Engineering

General Characteristics

The Master of Science program in Civil and Environmental Engineering has the following objectives:

- Job-entry education for the more complex areas of engineering, such as research and development, innovative design, systems analysis and design, and managerial engineering;
- Updating opportunities for practicing engineers;
- Graduate preparation for further study in engineering, leading to the Doctor of Engineering or Ph.D. degree.

Prerequisites

For admission as a classified graduate student, an applicant must hold a bachelor's degree in engineering or a closely related physical science with a minimum GPA of 3.0 in the last 90 quarter units (60 semester) attempted. Applicants are required to submit satisfactory scores for the General (Aptitude) Test of the Graduate Record Examination. An applicant who meets these standards but lacks prerequisite coursework may be admitted as a conditionally classified student and must make-up any deficiencies before advancement to classified graduate standing.

Information pertaining to specific requirements for admission to graduate standing (classified or conditionally classified) may be obtained from the Graduate Coordinator, Civil and Environmental Engineering Department.

Program of Study

Graduate students must file a formal study plan with their advisor, department, college and university graduate studies office by no later than the end of the quarter in which the 12th unit of approved courses is completed. The formal program of study must include a minimum of 45 units (at least 24 of which must be at the 500 level). With the graduate advisor's approval, students select their elective units in one of the following areas of study: geotechnical engineering, structural engineering, transportation and planning, or water resources and environmental engineering.

The broad curriculum requirements for the MS in Civil and Environmental Engineering are:

- * a core of 11 units as required;
- * a minimum of 20 units of advisor approved electives within the major;
- * a minimum of 8 units of advisor-approved electives outside the department;
- * at least 24 units of the 45 unit program at the 500 level;
- * a comprehensive written examination (non-thesis option) or an oral defense examination (thesis option).

Two program options are available:

Thesis option. 36 units of advisor-approved coursework, 9 units of thesis research/design, and an oral thesis defense examination administered by a panel of three faculty.

Non-thesis option. 45 units of advisor-approved coursework and a written comprehensive examination administered by a panel of three faculty (maximum of three opportunities to pass this examination). Not an option for the blended BS+MS program.

| | <i>Units</i> |
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| Required Courses | 11 |
| CE 591 Graduate Seminar I (1) | |
| CE 592 Graduate Seminar II (1) | |
| CE 599/ENVE 599 Design Project (Thesis) (9) <i>or</i> additional 9 units of advisor approved analysis and design electives within the major (non-thesis option) and Comprehensive Examination. | |
| Advisor approved analysis and design electives within the major (normally to be selected from the following list after consultation with your academic advisor and the CE/ENVE graduate coordinator) | 20-26 |
| CE 400 ¹ , 401, 405, 407, 421, 422, 423, 424, 431, 432, 433, 434, 440, 454, 455, 456, 457, 458, 459, 464, 481, 482, 484, 486, 487, 488, 500 ¹ , 501, 502, 504, 505, 521, 522, 523, 525, 527, 528, 529, 533, 535, 537, 539, 552, 555, 557, 559, 571, 573, 574, 581, 582, 583, 584, 585, 586, 588, 589 | |
| ENVE 400 ¹ , 411, 421, 434, 436, 438, 439, 443, 450, 455, 466, 467, 500 ¹ , 535, 536, 542, 551, 552 | |
| Advisor approved electives outside the major (to be selected after consultation with your academic advisor and the CE/ENVE graduate coordinator). | 8-14 |
| | 45 |

¹ No more than 4 total units of technical elective credit from CE 400, 500 and ENVE 400, 500 combined.