



CALIFORNIA STATE UNIVERSITY

FULLERTON

COLLEGE OF ENGINEERING
AND COMPUTER SCIENCE

MASTER OF SCIENCE IN CIVIL ENGINEERING

DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING

Academic Year 2020-21

MESSAGE FROM THE DEPARTMENT CHAIR

On behalf of the Civil & Environmental Engineering Department, at California State University, Fullerton, I am delighted to welcome you to our MS in Civil Engineering program.

Our department is growing with all-time high undergraduate and graduate student populations. With 16 full-time well-recognized faculty members, our goal is to provide transformational educational experiences to our students. Our truly remarkable BS and MS degree programs provide our students with the professional skills and academic competence needed to excel in the areas of civil engineering. Our faculty-led research offers students unparalleled opportunities for hands-on experience in cutting edge fields. Supported in an inclusive environment and having benefitted from a rigorous, innovative curriculum and immersive experiences, our students continue to win national and international competitions. Celebrating the strength of our diversity, we prepare Titan engineers to become the leaders who will shape the future.

MASTER OF SCIENCE IN CIVIL ENGINEERING

The Master of Science degree in Civil Engineering (MSCE) is a practice-oriented degree, intended to meet the needs of students who wish to enhance their academic competence and professional skills in the areas of civil engineering. Coursework in the program builds upon typical civil engineering baccalaureate degree and advances technical expertise needed for career advancement, professional exams, consulting, research and doctoral studies. The program provides advanced study within the broad area of civil engineering and allows students to select coursework, with advisor approval, focusing on four areas, namely, construction engineering and management, geotechnical engineering, structural engineering, and water resources & environmental engineering.

CIVIL & ENVIRONMENTAL ENGINEERING FACULTY

Hakob Avetisyan, Ph.D.
Focus area: Construction Engineering

Huda Munjy, Ph.D.
Focus area: Structural Engineering

Pratanu Ghosh, Ph.D.
Focus area: Structural Engineering

Chandrasekhar Putcha, Ph.D., FASCE
Focus area: Structural Engineering

Uksun Kim, Ph.D., P.E., LEED AP
Focus area: Structural Engineering

Prasada Rao, Ph.D.
Focus area: Water Resources Engineering

Kristijan Kolozvari, Ph.D., P.E.
Focus area: Structural Engineering

Paulina Reina, Ph.D.
Focus area: Transportation Engineering

Jeff Kuo, Ph.D., P.E.
Focus area: Environmental Engineering

Deepak Sharma, Ph.D.
Focus area: Construction Engineering

Sudarshan Kurwadkar, Ph.D., P.E.
Focus area: Environmental Engineering

Garrett Struckhoff, Ph.D.
Focus area: Environmental Engineering

David Naish, Ph.D., P.E.
Focus area: Structural Engineering

Binod Tiwari, Ph.D., P.E.
Focus area: Geotechnical Engineering

Phoolendra Mishra, Ph.D.
Focus area: Water Resources Engineering

Xenia Wirth, Ph.D.
Focus area: Geotechnical Engineering

The Civil & Environmental Engineering Department also benefits from its part-time faculty members who have extensive industrial experiences and teach courses on a need by need basis.

ADMISSION PROCEDURE

Applying to the graduate degree program in the civil and environmental engineering department is a simple 2-step process. More detailed information is available at <http://www.fullerton.edu/ecs/future/graduate-admission.php>.

To schedule a general advisement appointment with the department chair or to learn more about the department and the MS degree program, please contact the department office at cee@fullerton.edu or 657-278-3012.

STEP 1

Apply online at <https://www2.calstate.edu/apply> and follow the instructions.

STEP 2

Send official transcripts to graduate admission coordinator from each university or college you have attended after high school.

Contact us

ECS Admissions Office
Phone Number: (657) 278 - 7786
Email: ecsgrad@fullerton.edu

Department Office: Room E-100 in the Engineering Building
Phone Number: (657) 278 - 3012
Email: cee@fullerton.edu

Send the transcripts to:
Graduate Admissions Coordinator
College of Engineering and Computer Science
California State University, Fullerton
P.O. Box 6870

DEFICIENCY COURSES

Our Master of Science in Civil Engineering (MSCE) students are expected to have broad civil engineering knowledge through their undergraduate education. Students with non-civil engineering undergraduate degrees are given conditional admission to the MSCE program, and they must take at least the following deficiency courses:

- EGCE 201 Statics (3)
- EGCE 301 Mechanics of Materials (3)
- EGCE 324 Soil Mechanics (3)
- EGCE 325 Structural Analysis (3)
- EGCE 428 Engineering Hydraulics (3)
- EGCE 408 Reinforced Concrete Design (3) or EGCE 430 Structural Steel Design (3)

- Students with BS/BA degrees in Non-Science/Non-Engineering majors will also need to take additional Math and Physics courses to meet the prerequisite requirements for the above deficiency courses.
- Students are expected to complete all of the deficiency courses before taking graduate courses. However, based on the student's academic background and interest, the graduate advisor may approve up to 9 units of graduate courses that can be taken while a student is completing deficiency courses.
- Based on a student's academic background, the department may add or remove deficiency courses.



Important Policies and Procedures

Grade Point Average (GPA) Requirements

A grade-point average (grade points divided by units attempted) of at least 3.0 is required for graduation with a master of science in Civil Engineering degree. This grade-point average applies to all 400- and 500-level units attempted. Each graduate course on the Study Plan must be completed with a grade of “C” (2.0) or better.

An MSCE student may request a change in the Study Plan to raise the Study Plan grade-point average by adding or repeating no more than a total of six units of approved course work. Such requests must be approved by the department and the Associate Vice President, Academic Programs (or designee) prior to registration.

When a course is added or repeated, the original course remains on the Study Plan and on the student’s transcript and both grades (original and added/repeated) are used in calculating the student’s grade-point average.

Transfer Credits

A maximum of 9 units of coursework with a grade of “B” or higher done at other universities or through open university may be transferred for course credit in the study plan. Coursework credit used for obtaining another degree cannot be transferred. In all cases, the use of transfer course work is subject to the acceptance and approval of the department and the associate vice president, Academic Programs (or designee).

Course work taken at another institution after admission to CSUF as a graduate student is rarely accepted for credit toward a master’s degree and can only be accepted if the student has received prior approval of the department and the associate vice president, Academic Programs (or designee).

Study Plan

The study plan must be approved before completing 13 units at CSUF toward an MSCE degree. The student initiates study plan approval process after completing all deficiency courses with a grade of “C” or better and meeting the university writing requirements. The student must prepare a [study plan](#) with the help and approval of the department’s Graduate Advisor.

Once the office of graduate studies approves study plan, the student is granted a classified standing, and it is valid as long as the student maintains continuous enrollment in regular semesters at the university; otherwise, it is necessary to reapply and meet any changes or additional requirements approved in the interim.

If a grade less than “C” (2.0) is received in a Study Plan course, the course must be repeated and passed with a grade of “C” (2.0) or better. A course may be repeated only once.

If a classified graduate student needs to make a change in the approved study plan, a request should be made to the office of graduate studies using the study plan change form. No course may be removed from the study plan after a student has taken it.

Comprehensive Exam/Oral defense

A written comprehensive exam (coursework option) or oral defense (6-unit Thesis or Graduate Project option) is a final evaluation (culminating experience) that marks the end of the graduate program.

Through culminating experiences, individual students demonstrate mastery of disciplinary materials. Because these demonstrations of mastery are specific to individual students, student theses or projects shall be composed of individual student work.

Continuous Enrollment Requirement

A graduate degree student is required to maintain continuous enrollment in every fall and spring semester from the beginning of the program of study until award of the degree. Unless granted an approved leave of absence, a graduate student who fails to register each semester has discontinued enrollment in the graduate degree program. In order to resume study, the student needs to reapply for admission to the university and to the degree program.

A graduate student who finds it impossible to attend during a certain semester and is not eligible for a leave of absence must register in Graduate Studies 700. Registration in this course is restricted to conditionally classified or classified graduate students. It carries no unit credit and does not require class attendance

Leave of Absence

Graduate students may request a leave of absence for up to one year. Conditionally classified or classified graduate students qualify for leave if they are in good academic standing and have completed at least six credit hours’ work toward the degree in residence at Cal State Fullerton. [Forms](#) to request a leave of absence are available at the Admissions and Records Service Center, in the Graduate Studies Office, and on the Graduate Studies website. Students are encouraged to submit requests for leave of absence prior to the start of the semester for which they are requesting a leave.

Time Limit for Completion

All requirements for the master’s degree, including all course work on the student’s study plan, normally should be completed within five years. This time limit begins with the semester of the earliest course used on the student’s study plan and consists of a total of ten (10) consecutive semesters. A student may request an extension of the five-year time limit by filing a Time Limit Extension petition with the Graduate Studies Office. When individual circumstances warrant, this time limit may be extended for up to two years (four additional consecutive semesters).

Probation

A graduate student enrolled in a graduate degree program will be placed on academic probation if either the cumulative grade-point or the Study Plan grade-point average falls below 3.0.

A graduate student may also be placed on probation for reasons other than cumulative graduate and/or Study Plan grade-point average. This is known as administrative-academic probation. The reasons for this may include repeated withdrawal, failure to progress toward an educational objective, non-compliance with an academic requirement, failure to demonstrate a level of professional competence or fitness commensurate with the standards of the student’s discipline, or inappropriate behavior.

MSCE degree students will be allowed two semesters on academic probation before being subject to disqualification.

Disqualification

The associate vice president, Academic Programs (or designee), in consultation with the student’s graduate program adviser, will disqualify a graduate student who is on probation if the student does not, or cannot, raise the Study Plan and cumulative graduate grade-point average to 3.0 by the completion of the second regular semester following the semester in which the grade-point average fell below the minimum 3.0 standard. If a student’s grade-point average becomes so low that it cannot be raised to 3.0 within the prescribed limits of course work, the student will be disqualified from the master’s degree program.

Disqualification removes a student from graduate standing and prevents further enrollment in university courses (except through University Extended Education). A student who has been disqualified from a master’s degree program may not apply for readmission to that program. However, a student who has been disqualified from one degree program may apply for readmission to a different degree program. A readmitted student must file a new Study Plan that meets current requirements and policies.

Maintaining International Student Status

It is the responsibility of an international student to understand and comply with the terms of your immigration status during your stay in the United States. Any violation of the immigration regulations could jeopardize your status and legal stay in the U.S.

For questions related to your visa or immigration status, please contact International Student Services: <https://international.fullerton.edu/students/status/current-students/>



Office of Graduate Studies
CP 950
Phone : (657) 278-2618
Email: gradstudiesrecept@fullerton.edu
<http://www.fullerton.edu/graduate>

LIST OF CIVIL ENGINEERING COURSES FOR EACH FOCUS AREA

Construction Engineering and Management

Core Courses (15 units)

- EGCE 470 - Project Management and Construction Engineering Practices (3) *
- EGCE 534 - Advanced Construction Methods and Techniques (3)
- EGCE 538 - Construction Methods and Equipment for Heavy Construction Engineering (3)
- EGCE 539 - Preconstruction Design Evaluation (3)
- EGCE 557 - Cost Estimating and Bidding Strategy (3)

Elective Courses (15 units)

- EGCE 472 - Construction Project Scheduling, Estimating and Bidding - Special Course (3)
- EGCE 474 - Artificial Intelligence in Construction Engineering - Special Course (3)
- EGCE 551 - Procurement and Contract Management - Special Course (3)
- EGCE 560 - Optimal Decision Making for Project Management - Special Course (3)
- EGCE 5XX - Any other 500 level course(s) identified as core courses in other focus areas
- EGCE 4XX - Graduate Study plan approved 400 level course(s)
- EGCE 597 - Graduate Projects - (upon department approval)
- EGCE 598 - Thesis - (upon department approval)

Geotechnical Engineering

Core Courses (15 units)

- EGCE 443 - Soil and Site Improvement - Special Course (3)
- EGCE 544 - Advanced Foundation Engineering (3)
- EGCE 545 - Slope Stability and Retaining Structures (3)
- EGCE 547 - Advanced Soil Mechanics (3)
- EGCE 548 - Geotechnical Earthquake Engineering (3)

Elective Courses (15 units)

- EGCE 515 - Solid Waste Management, System Design and Sustainability (3)
- EGCE 597 - Graduate Projects (3 or 6) - (upon department approval)
- EGCE 598 - Thesis (6) - (upon department approval)
- EGCE 5XX - Any other 500 level course(s) identified as core courses in other focus areas
- EGCE 4XX - Graduate Study plan approved 400 level course(s)

* meets the graduate writing requirement

Structural Engineering

Core Courses (15 units)

- EGCE 411 - Structural Dynamics (3)
- EGCE 530 - Advanced Topics in Structural Steel Design (3)
- EGCE 531 - Advanced Topics in Reinforced Concrete Design (3)
- EGCE 532 - Earthquake Engineering (3)
- EGCE 533 - Matrix Methods of Structural Analysis (3)

Elective Courses (15 units)

- EGCE 421 - Bridge Engineering - Special Course (3)
- EGCE 461 - Advanced Construction Materials-Concrete Emphasis (3) *
- EGCE 463 - Precast and Prestressed Concrete Design (3)
- EGCE 464 - Pavement Analysis and Design - Special Course (3)
- EGCE 493 - Design of Highrise Structural Systems (3)
- EGCE 597 - Graduate Projects (3 or 6) - (upon department approval)
- EGCE 598 - Thesis - (upon department approval)
- EGCE 5XX - Any other 500 level course(s) identified as core courses in other focus areas
- EGCE 4XX - Graduate Study plan approved 400 level course(s)

Water Resources Engineering

Core Courses (15 units)

- EGCE 435 - Design of Hydraulic Structures (3)
- EGCE 436 - Engineering Hydrology (3)
- EGCE 437 - River and Channel Hydraulics - Special Course (3)
- EGCE 501 - Analytical Methods for the Design of Civil Engineering Systems (3)
- EGCE 537 - Groundwater and Seepage (3)

Elective Courses (15 units)

- EGCE 438 - Watershed Engineering and Management - Special Course (3)
- EGCE 546 - Surface Water Pollution and Control (3)
- EGCE 571 - Hydraulics and Hydrology for Environmental Engineers (3)
- EGCE 573 - Environmental Engineering Practices and Project Management (3) *
- EGCE 597 - Graduate Projects (3 or 6) - (upon department approval)
- EGCE 598 - Thesis (6) - (upon department approval)
- EGCE 5XX - Any other 500 level course(s) identified as core courses in other focus areas
- EGCE 4XX - Graduate Study plan approved 400 level course(s)

* meets the graduate writing requirement

PATH TO GRADUATION

ORIENTATION

Students are expected to complete all of the [deficiency courses](#) before taking graduate courses. However, based on the student's academic background and interest, the graduate advisor may approve up to 9 units of graduate courses that can be taken while a student is completing deficiency courses.

DEFICIENCY COURSES

Students are expected to meet the [writing requirements](#) within the first 9 units of graduation work through the one of following ways:

WRITING REQUIREMENT

- a. Undergraduate degree from any CSU campuses
- b. EWP (Examination in Writing Proficiency)
- c. ENGL 301 or 360 class (can not be included in a study plan)
- d. EGCE 470, 461, 573, 597 or 598 (can be included in a study plan)

Students must decide their [focus area](#) within the first 9 units of graduate coursework.

FOCUS AREA

STUDY PLAN Students must submit their [study plan](#) before completing 13 units of graduate coursework.

Students must file and apply for graduation check by the deadline listed at office of graduate studies [website](#).

GRAD CHECK

COMPREHENSIVE EXAM/ ORAL DEFENSE

Students must take a written comprehensive exam (coursework option) or oral defense (6-unit Thesis or Graduate Project option) during their last semester.

Graduate advisor in consultation with the office of graduate studies verifies that all degree requirements are met and submits the completion memo.

COMPLETION MEMO

GRADUATION



Department of Civil and Environmental Engineering

Preparing

TITANS TO REACH HIGHER



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