Master of Science in Civil Engineering (MSCE)

Program

Service both full-time and part-time graduate students

Strengthen knowledge of principles and practices

Focus on the application of the principles and practices

Enrollment (Spring 2022): 102
MS Degree Awarded (2021-2022): 25
Full-time Faculty: 23
Faculty to Student Ratio: 1:4.4

Mission Statement

1. Serve both full-time and part-time graduate students
2. Strengthen knowledge of principles and practices
3. Focus on the application of the principles and practices

Admission Requirements

1. BSCE degree (or equivalent) from an ABET accredited program
2. Overall GPA at least 3.0 (out of 4.0) in all upper division courses
3. Statement of Purpose
4. Additional requirements may be imposed by individual options

Language Proficiency

All applicants with undergraduate education from a foreign country must provide proof of English language proficiency
1. TOEFL: a minimum of 80 (Internet-based test)
2. IELTS: a minimum of 6.5
3. GRE requirements waved for Fall 2023 applications. However, GRE scores will be considered if submitted (Verbal and Quantitative Reasoning, 155 and 160 minimum, respectively).

How to Apply

- New students are accepted every semester
- Applications are accepted at the CSU Apply web site (https://www.calstate.edu/apply)
- Use major code 09081 and indicate the desired emphasis area (program)
- Applicants with an undergraduate GPA of less than 3.0 (higher than 2.75) must also submit GRE scores and two letter of recommendations
- The application deadline for Fall 2023 semester admission is April 1st, 2023

Contact:
- Yasser Salem, Ph.D., S.E. / Department Chair
- Department of Civil Engineering
  California State Polytechnic University, Pomona
  3801 West Temple Ave., Pomona, CA 91769
- Webpage: https://www.cpp.edu/engineering/ce/
- Phone: (909) 869 – 4312 Email: ysalem@cpp.edu

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# Course Classes for All and the Program

Information may be subject to change at any time without prior notice. Technical electives are typical and other courses may also be available.

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## Graduation Options (30 units)
- Master's Project (3 units)
- Master's Thesis (6 units)
- Comprehensive Exam (0 units)

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## Program Options

### All

- Applied Probability Concepts in Civil Engineering
  (**Replaced for the Structural Option**)
- Special topics for Graduate Students

### Contact: Jeyoung Woo, Ph.D., P.E. (jwoo@cpp.edu)

- Construction Productivity
- Construction Financial Management
- Construction Risk Analysis
- Advanced Construction Project Management
- Construction Project Delivery Methods
- Underground Const. & Trenchless Technology
- Temporary Construction Structure
- Total Quality Management
- GIS Applications in Civil Engineering
- Advanced Foundation Engineering
- Pavement Design and Construction
- Street Maintenance, Rehabilitation and Management

### Construction Engineering and Management

- Environment Water Resources Seminar
- Environmental and Water Resources Research Methods
- Municipal Hydraulic Systems
- Applied Hydrology
- Bioresources and Bioenergy Recovery
- Advanced Water Treatment
- Advanced Wastewater Treatment
- Environmental Chemistry
- Solid and Hazardous Waste Engineering
- Environmental Remediation
- Air Quality Engineering
- Unit Operations and Processes in Environmental Eng.
- River Mechanics
- Global Climate and Water Supply
- GIS Applications in Civil Engineering

### Contact: Monica Palomo, Ph.D., P.E., BCEE (mpalomo@cpp.edu)

- Advanced Soil Mechanics
- Numerical Methods in Geomechanics
- Advanced Foundation Engineering
- Subsurface Investigation and Characterization and Lab
- Geotechnical Earthquake Engineering
- Earth Retaining Structures
- Rock Mechanics
- Slope Stability and Earth Dams
- Pavement Design and Construction
- Street Maintenance, Rehabilitation and Management
- Engineering Geology II/Lab*
- Foundation and Retaining Wall Design*

### Geotechnical Engineering

- Probability Analysis, Structures, and Infrastructure System Reliability**
- Structural Dynamics
- Finite Element Analysis
- Advanced Structural Analysis
- Seismic Design of Structures
- Advanced Steel Design
- Advanced Reinforced Concrete Design
- Advanced Engineering Mathematics
- Stability of Structures
- Prestressed Concrete Design
- Advanced Timber Design
- Light Gage Steel Design
- Geotechnical Earthquake Engineering
- Bridge Design*
- Introduction to Earthquake Engineering and Structural Dynamics*

### Contact: Rosa Vasconez, Ph.D., P.E. (vasconez@cpp.edu) or Giuseppe Lomiento, Ph.D. (glomiento@cpp.edu)

- Design of Transportation Facilities
- Traffic Flow Analysis
- Transportation Systems Design & Operation
- Transportation Planning & Management
- Intelligent Transportation Systems
- Multimodal Traffic Analysis
- GIS Applications in Civil Engineering
- Pavement Design and Construction
- Public Transportation
- Transportation Administration and Policy
- Airport Engineering
- Traffic Safety Analysis
- Advanced Computer Programming in Civil Eng.
- Traffic Engineering

### Contact: Wen Cheng, Ph.D., P.E., PTOE (wcheng@cpp.edu)

* Up to 3 units of approved undergraduate courses (4000-level courses)