Performance Based Earthquake Engineering (Certificate)

The Department of Civil, Construction, and Environmental Engineering now offers a Graduate Certificate Program (GCP) in Performance-Based Earthquake Engineering. The program is intended for both working professionals and graduate students enrolled at NC State. Individuals who enroll in the program must have backgrounds in structural engineering and/or geotechnical engineering, and would select the program to provide distinction in their academic records that may improve career prospects. We expect both on-campus (primarily existing NC State graduate students), as well as distance education students through DELTA and EOL (primarily practicing professional, but also some existing EOL NC State graduate students). Each student will: (1) learn about the fundamentals of earthquake engineering through the core courses, and (2) specialize in either analysis, structural design, or geotechnical (or some combination of the three).

More Information

Performance Based Earthquake Engineering Program Website (https://www.ccee.ncsu.edu/graduate-certificate-in-performance-based-earthquake-engineering/)

Distance Website (https://online-distance.ncsu.edu/program/performance-based-earthquake-engineering/)

Requirements for admission

Students must meet these requirements for admission into the Performance-Based Earthquake Engineering Graduate Certificate Program:

- Have a BS degree in Civil Engineering (or equivalent) from a regionally accredited four-year college or university, and have an overall and major GPA of at least 3.0 on a 4.0 scale.
- Have taken at least one undergraduate course in structural analysis, reinforced concrete, and soil mechanics.

An application for acceptance into the Performance-Based Earthquake Engineering GCP is required for all students currently not enrolled at NC State University. Students must complete the Graduate School application.

Applicant Information

- **Delivery Method:** On-Campus, Online, Hybrid
- **Entrance Exam:** None
- **Interview Required:** None

Application Deadlines

This certificate has rolling admissions

Plan Requirements

Code	Title	Hours
Core Courses		**6**
CE 527	Structural Dynamics	
CE 725	Earthquake Structural Engineering	
Elective Courses		**6**
Select at least two of the following courses:		
CE 723	Advanced Structural Dynamics	
CE 727	Seismic Analysis, Assessment, and Design of Concrete Buildings	
CE 728	Performance Based Seismic Design of Bridges	
CE 593	Special Topics in Geotechnical Engineering (Dynamics of Soils and Foundations)	
CE 746	Soil Dynamics and Earthquake Engineering	
Total Hours		**12**