



UW GEOTECHNICAL ENGINEERING PROGRAM

The University of Washington Geotechnical Engineering Program is the premier geotechnical research and teaching institute in the Pacific Northwest. Beginning in 1935, our program has produced outstanding students who have had successful careers in both professional practice and academia. Our program provides a wide variety of geotechnical courses covering both traditional and emerging topics. Our graduate students have the opportunity to study important focus areas including geotechnical earthquake engineering, numerical modeling and analysis, landslides, and bio-geotechnics, among others.

Our student group is vibrant and diverse, with students coming from both the U.S. and around the world. Our program provides unique opportunities for students to work closely with faculty, and interact with leaders in the professional community (many of whom are UW graduates and are looking to recruit graduating students) through courses led by practitioners, field trips, seminars, and professional meetings.

UW students and faculty conduct research in a broad range of geotechnical areas including seismic site response, seismic- and rainfall-induced landslide analysis, machine- and deep-learning, remote sensing, numerical modeling of flow slides and large-deformation problems, soil-structure interaction, liquefaction, bio-geotechnics and more.

Scholarships and research fellowships are awarded annually to top M.S. and Ph.D. applicants. We are unique in that we offer a fast-paced 9-month M.S. degree in geotechnical engineering, in addition to conventional degree paths.

SEATTLE

Seattle and the surrounding Puget Sound area offers the unique combination of nearby recreational activities with the culture and amenities of a large U.S. city. On the shores of Lake Washington and Portage Bay, the UW campus is minutes away from the music and nightlife of downtown Seattle, yet only an hour away from hiking, climbing, and skiing areas in the Cascades. Seattle's unique geology, coupled with its rapid growth, has made it a center of high-quality geotechnical engineering practice in the Pacific Northwest. UW graduates have been in high demand by consulting firms and agencies in Seattle as well as across the country.

GI GRADUATE STUDENT SOCIETY (GIGGS)

The Geo-Institute Graduate Student Society (GIGSS) at the UW is a student-run organization associated with the ASCE Geo-Institute and is among the most active geotechnical student groups in the U.S. GIGSS members interact with geotechnical consultants and professionals, attend national conferences and meetings, and plan frequent social gatherings, including "geobeers."

[Link to Full Program Summary](#)

[Link to MS/PhD Application](#)



DEGREES

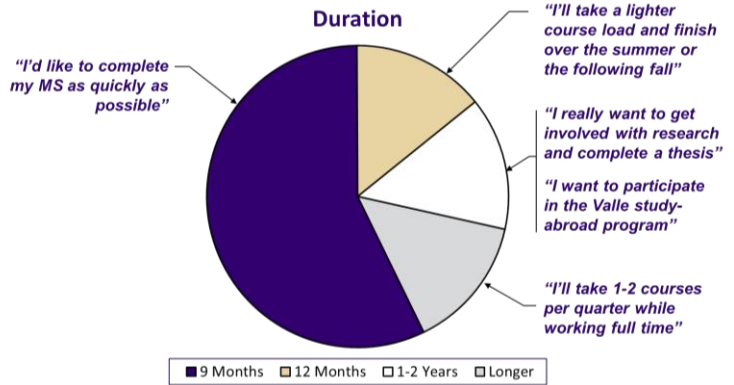
M.S. DEGREE (9 months to 2 years)

Two M.S. tracks are offered, resulting in the same degree. One track is more research intensive (for those interested in completing thesis research and/or possibly continuing on towards a Ph.D.) and the other is more coursework intensive (for those who would like to complete their M.S. degree at a faster pace).

Ph.D. DEGREE (approximately 4 years)

The geotechnical group also includes a highly selective doctoral research program leading to the Doctor of Philosophy degree.

How Long Does it Take to Complete an M.S. Degree at UW?



2021-2022 GRADUATE GEOTECHNICAL ENG COURSES

CESG 561 – Advanced Soil Mechanics (4)	Fall
CESG 562 – Physiochemical Aspects of Soil Behavior (3)	
CESG 566 – Slope Stability and Landslides (3)	
CESG 563 – Advanced Geotechnical Laboratory (5)	Winter
CESG 564 – Computational Geomechanics (4)	
CESG 565 – Soil Dynamics (3)	
CESG 571 – Case Histories in Geotechnical Eng (3)	Spring
CESG 567 – Advanced Foundation Engineering (3)	
CESG 568 – Geotechnical Earthquake Engineering (3)	
CESG 569 – Geological Engineering (3)	
CESG 570 – Geosystems Engineering (3)	

FACULTY

Pedro Arduino (Professor)
 Michael Gomez (Asst. Professor)
 Bob Holtz (Emeritus Professor)
 Brett Maurer (Asst. Professor)
 Steve Kramer (Emeritus Professor)
 Joseph Wartman (Professor)



RESEARCH

Researchers in our geotechnical engineering group draw upon their collective expertise in analytical and numerical modeling, AI learning, experimental simulations, lab testing, and field methods to study a wide range of problems in geotechnical engineering. The group is highly interdisciplinary and current research projects include collaborations with experts in structural engineering, economics, microbiology, mechanics, material science, earth sciences, geochemistry, remote sensing, and statistics.

