

GRADUATE CERTIFICATE IN GEOENVIRONMENTAL ENGINEERING

The certificate program in geoenvironmental engineering is designed to provide the necessary background for civil engineers to practice in the field of geoenvironmental engineering. The program will offer an in-depth understanding of the issues that a geoenvironmental engineer may encounter in practice.

Upon completion of the certificate program in geoenvironmental engineering, students will be able to design, analyze, and evaluate systems in geoenvironmental engineering. Students will learn to understand soil mineralogy, clay—water—electrolyte systems, soil composition, fabric, structure, volume change behavior, permeability, coupled phenomena, and in-situ evaluation of soil behavior. Students will also learn about hazardous waste regulations, including RCRA and Superfund. Students will be able to analyze sites for transport and fate of hazardous substances, including elements of environmental toxicology, risk assessment, and hazard ranking, as well as monitoring, data collection, and evaluation. Finally, students will learn to design engineered processes for waste minimization, and containment systems for waste disposal and remediation.

To obtain the certificate in geoenvironmental engineering, students must complete a total of four courses, including three required courses and one elective course.

Visit the program website (<https://www.cee.seas.gwu.edu/certificate-geotechnical-engineering/>) for additional information.

ADMISSIONS

Admission deadlines: Fall – January 15

Spring – September 1

Summer – March 1

Standardized test scores: The Test of English as a Foreign Language (TOEFL), the Academic International English Language Testing System (IELTS), or the PTE Academic is required of all applicants except those who hold a bachelor's, master's, or doctoral degree from a college or university in the United States or from an institution located in a country in which English is the official language, provided English was the language of instruction. Minimum scores:

- Academic IELTS: an overall band score of 6.0 with no individual score below 5.0; or

- TOEFL: 550 on paper-based or 80 on Internet-based; or

- PTE Academic: 53.

Applicants with lower test scores may qualify for our full-time Applied English Studies program.

Prior academic records:

Transcripts are required from all colleges and universities attended, whether or not credit was earned, the program was completed, or the credit appears as transfer credit on another transcript. Unofficial transcripts from all colleges and universities attended must be uploaded to your online application. Official transcripts are required only of applicants who are offered admission.

If academic records are in a language other than English, a copy in the original language and an English language translation must be uploaded. Transcript evaluations should not be uploaded. Applicants with degrees from Indian universities should upload transcripts and/or detailed marksheets.

Statement of purpose: In an essay of 250 to 500 words, state your purpose in undertaking graduate study at The George Washington University; describe your academic objectives, research interests, and career plans; and discuss your related qualifications, including collegiate, professional, and community activities, and any other substantial accomplishments not already mentioned.

Additional requirements: Applicants should possess an undergraduate degree in engineering, the physical sciences, or applied mathematics.

International applicants only: International applicants requiring a visa from GW are not eligible to apply for admission to this program, but may apply for the MS, PhD, or professional degree (AppSc or Engr) in civil and environmental engineering with an area of focus in environmental engineering.

For additional information about the admissions process visit the SEAS Admissions Frequently Asked Questions (<https://graduate.engineering.gwu.edu/admissions-frequently-asked-questions/>) page.

Contact for questions:

engineering@gwu.edu

202-994-1802 (phone)

202-994-1651 (fax)

Hours: 9:00 am to 5:00 pm, Monday through Friday

REQUIREMENTS

The following requirements must be fulfilled: 12 credits, including 9 credits in required courses and one 3-credit course.

Code	Title	Credits
Required		
CE 6401	Fundamentals of Soil Behavior	
CE 6509	Introduction to Hazardous Wastes	

CE 6800	Special Topics (Containment Systems for Waste Disposal and Remediation Systems for Subsurface Contamination)
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Elective

One course selected from following:

CE 6501	Aquatic Chemistry
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CE 6504	Wastewater Treatment Design and Reuse
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CE 6507	Advanced Technologies in Environmental Engineering
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CE 6605	Ground Water and Seepage
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CE 6610	Pollution Transport Systems
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