

GRADUATE CERTIFICATE IN ENVIRONMENTAL ENGINEERING

The certificate program in environmental engineering is particularly appropriate for individuals interested in the areas of hazardous waste remediation and water/wastewater treatment. Upon completion of the program, students should be able to:

- Design, analyze, and evaluate systems for hazardous waste remediation and water/wastewater treatment.
- Understand basic concepts of water, air, and terrestrial environments and interrelationships among them, as well as the basic concepts of environment and health, water and wastewater systems, and legal and regulatory controls.
- Apply principles of environmental chemistry and microbiology and to perform assessments of environmental quality and impacts.
- Apply their understanding of commonly used processes for water and wastewater treatment, such as sedimentation, coagulation, filtration, disinfection, gas transfer, activated sludge, trickling filters, oxidation ponds, sorption, and sludge stabilization and disposal.
- Perform engineering design in at least one of the following areas: hazardous waste remediation, advanced technologies in environmental engineering, and environmental impact assessment.

Visit the program website (<https://graduate.seas.gwu.edu/environmental-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: 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 a 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 taken in one selected track, with each track including 9 credits in required courses and a 3-credit elective course.

| Code | Title | Credits |
|------------------------------------|---|---------|
| Hazardous Waste Remediation | | |
| Required | | |
| CE 6503 | Principles of Environmental Engineering | |

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| CE 6504 | Wastewater Treatment Design and Reuse |
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| CE 6509 | Introduction to Hazardous Wastes |
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Elective

One course selected from the following:

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|---------|-------------------|
| CE 6501 | Aquatic Chemistry |
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|---------|---|
| CE 6502 | Environmental Engineering Design: Drinking Water Treatment |
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| Code | Title | Credits |
|------|-------|---------|
|------|-------|---------|

Advanced technologies in environmental engineering

Required

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| CE 6503 | Principles of Environmental Engineering |
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| CE 6504 | Wastewater Treatment Design and Reuse |
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| CE 6800 | Special Topics (Environmental Application and Implications of Nanotechnology) |
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Elective

One course selected from the following:

| | |
|---------|-------------------|
| CE 6501 | Aquatic Chemistry |
|---------|-------------------|

| | |
|---------|---|
| CE 6502 | Environmental Engineering Design: Drinking Water Treatment |
|---------|---|

| Code | Title | Credits |
|------|-------|---------|
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Engineering design and impact assessment

Required

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| CE 6503 | Principles of Environmental Engineering |
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| CE 6504 | Wastewater Treatment Design and Reuse |
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| CE 6505 | Environmental Impact Assessment |
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Elective

One course selected from the following:

| | |
|---------|-------------------|
| CE 6501 | Aquatic Chemistry |
|---------|-------------------|

| | |
|---------|---|
| CE 6502 | Environmental Engineering Design: Drinking Water Treatment |
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