The Master of Science in the field of civil and environmental engineering program is designed to provide students with the fundamentals and knowledge about the various specializations within environmental engineering. These include water, wastewater, hazardous wastes, industrial wastes, and pertinent regulatory requirements. As one of the fastest growing fields in the U.S. and developing countries, new methods and technologies are emerging in civil and environmental engineering. Environmental engineering students use one of the world’s largest wastewater treatment plants as a real-world laboratory to improve the water quality of the Potomac River and the Chesapeake Bay watershed. Structural engineering students study earthquake engineering, extreme event design of structures, and bridge design on a state-of-the-art, six-degrees-of-freedom earthquake simulator. And transportation engineering students learn from faculty and experts at GW’s National Crash Analysis Center and the Federal Outdoor Impact Laboratory.

Specific admission requirements are shown on the Graduate Program Finder (http://www.gwu.edu/all-graduate-programs).

More information can be found on the departmental website (http://www.cee.seas.gwu.edu/master-science-program).

REQUIREMENTS

The following requirements must be fulfilled:

Minimum requirements for the degree are 33 credits of coursework, or 24 credits of coursework and 6 credits of thesis.

**Required courses**

**Engineering Mechanics:**
- APSC 6213 Analytical Methods in Engineering III
- CE 6206 Continuum Mechanics
- CE 6210 Introduction to Finite Element Analysis

**Environmental engineering:**
- CE 6503 Principles of Environmental Engineering
- CE 6601 Open Channel Flow
- CE 6609 Numerical Methods in Environmental and Water Resources

**Geotechnical engineering:**
- CE 6210 Introduction to Finite Element Analysis

**Structural engineering:**
- CE 6201 Advanced Strength of Materials
- CE 6202 Methods of Structural Analysis
- CE 6210 Introduction to Finite Element Analysis

**Transportation safety engineering:**
- CE 6210 Introduction to Finite Element Analysis
- CE 6701 Analytical Mechanics
- CE 6702 Application of Probability Methods in Civil Engineering
  or CE 6722 Intelligent Transportation Systems

**Water resources engineering:**
- CE 6503 Principles of Environmental Engineering
- CE 6601 Open Channel Flow
- CE 6609 Numerical Methods in Environmental and Water Resources

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Master of Science in the Field of Civil and Environmental Engineering