

# MINOR IN SYSTEMS ENGINEERING

The Systems Engineering program at GW is designed to provide a broad and solid education in the basics of mathematical modeling, software and information systems, and the treatment of uncertainty. In this program, you learn to apply engineering techniques and mathematical methods to assist decision makers in designing and operating systems optimally. You learn to do this by observing, understanding, modeling, and predicting the behavior of the systems that naturally arise in fields as diverse as medicine, defense, manufacturing, and management. Students take part in professional societies—such as GW’s student chapter of INFORMS (Institute for Operations Research and the Management Sciences)—and have multiple opportunities to connect with alumni network, leading to internships. With a broad array of options open to systems engineers, students have gone on to intern as well as start their careers in many fields, including communications, energy, environment, finance, health care, information technology, marketing, national defense, project management, software development, or transportation.

Visit the program website (<http://www.emse.seas.gwu.edu/bachelor-arts-applied-science-technology/>) for additional informational.

## ADMISSIONS

For more information on the admission process, please visit the Office of Undergraduate Admissions website. Applications may be submitted via the Common Application.

Supporting documents not submitted online should be mailed to:  
Office of Undergraduate Admissions  
The George Washington University  
800 21st Street NW, Suite 100  
Washington DC 20052

Contact for questions:  
[gwadm@gwu.edu](mailto:gwadm@gwu.edu) or 202-994-6040

## REQUIREMENTS

The following requirements must be fulfilled: 18 credits in courses for the minor, including 15 credits in required courses and one 3-credit elective course, and satisfactory completion of all prerequisite courses.

| Code | Title | Credits |
|------|-------|---------|
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### Prerequisites

The following courses must be completed before beginning the minor program:

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| APSC 3115 | Engineering Analysis III |
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| MATH 2233 | Multivariable Calculus |
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### Minor courses

### Required

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| EMSE 2801 | Fundamentals of Systems Engineering |
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| EMSE 3815 | Requirements Analysis and Elicitation |
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| EMSE 3820 | Project Management for Engineering Systems |
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| EMSE 4410 | Engineering Economic Analysis |
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### Elective

Two additional EMSE courses (6 credits) selected in consultation with the minor advisor. \*

\*Common elective courses include EMSE 3760 Discrete Systems Simulation, EMSE 3850 Quantitative Models in Systems Engineering, EMSE 4765 Data Analysis for Engineers and Scientists, and EMSE 4770 Techniques of Risk Analysis and Management