

DOCTOR OF PHILOSOPHY IN THE FIELD OF ENGINEERING MANAGEMENT (STEM, ONLINE)

The online doctor of philosophy in engineering management degree program is designed for individuals who aim to conduct groundbreaking research in the field of engineering management. The program culminates in a dissertation that adds original knowledge or understanding to the field of engineering management. This research is typically characterized by a strong analytical and problem-solving focus, addressing issues in areas such as innovation management, decision analytics, project and risk management, sustainability, or technology policy. The program is offered in a synchronous, online format with classes held on Saturdays. This format enables professionals who are employed full time to pursue advanced study in a focused environment alongside like-minded students.

ADMISSIONS

Application: Completed GW application for graduate admission.

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| Prior academic records: | Bachelor's and master's degrees in engineering, applied science, mathematics, computer science, information technology or related field from accredited institutions. |
| | A minimum graduate-level GPA of 3.5 |
| | A grade of C or better in the first two undergraduate calculus courses |

Standardized TOEFL, IELTS, or PTE scores are required of all test scores: applicants who are not citizens of countries where English is the official language. Check our International Students Page: <https://graduate.engineering.gwu.edu/international-admissions> (<https://graduate.engineering.gwu.edu/international-admissions/>) to learn about the English language requirements and exemption policy. Test scores may not be more than two years old.

REQUIREMENTS

The following requirements must be fulfilled: 60 credits, including 24 credits in required courses and 36 credits in dissertation research.

Note: Throughout the program, students must take required courses in lockstep with the cohort of students with which they matriculated.

| Code | Title | Credits |
|-----------------|------------------------------|---------|
| Required | | |
| SEAS 8205 | Cybersecurity for Engineers | |
| SEAS 8210 | AI and Technology Management | |
| SEAS 8215 | Uncertainty Modeling | |

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| SEAS 8220 | Data Science |
| SEAS 8225 | Computational Modeling |
| SEAS 8398 | Dissertation Development for Systems Engineering |
| Research phase | |
| EMSE 8999 | Dissertation Research |

Additional requirements

1. To advance to the research phase, students must achieve a minimum GPA of 3.4 with no grade below B- at the completion of their coursework.
2. Students must be accepted to present their proposed research at an appropriate engineering professional society conference no later than the first semester of research.
3. Students must submit an article based on the results of the dissertation research to an approved, conference or refereed scholarly journal. Credit must be given in the publication to the fact that the material is abstracted, summarized, or developed from a dissertation submitted to the George Washington University in partial fulfillment of the requirements for the doctor of philosophy degree. Before the candidate is permitted to defend the dissertation, this original article must be accepted for publication.
4. Students must successfully defend their dissertation before a committee of five faculty members within five year from the start of the program. Students have a maximum of two attempts to pass their dissertation defense. When the committee is convinced of the quality and originality of the candidate's contribution to knowledge as well as his or her mastery of the scholarship and research techniques of the field, the committee recommends the candidate for the degree of doctor of philosophy.