
THE GEORGE
WASHINGTON
UNIVERSITY

WASHINGTON, DC

Information Session
Thursday, July 8, 2021

Doctor of Engineering

in the fields of:

Cybersecurity Analytics

or

Engineering Management

Classes Begin
August 2021

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Director, SEAS Online Programs

Information Session Agenda

- ✓ Overview of The George Washington University
- ✓ Doctor of Engineering (D.Eng.) Degrees
 - Overview
 - Academic Requirements
 - Application Information
- ✓ Q & A Session

The George Washington University



- Chartered in 1821 by an Act of Congress
- 10 colleges and schools, including the School of Engineering & Applied Science
- More than 15,000 graduate students
- Alumni network of over 300,000 living alumni in 134 countries
- Accredited by the Middle States Commission on Higher Education
- GW's Online Graduate Engineering Programs ranked #14 by US News
- GW's Online Graduate Engineering Programs Ranked #13 for Veterans by the US News



Our Online Program

- Online classes meet synchronously via Zoom and are recorded for viewing during the semester
- Supported by Blackboard, GW's web-based course management software
- Exams are taken through a secure testing platform, Remote Proctor Now (RPNow)

Doctor of Engineering Program Overview

- 45 credit hours (minimum)
- Classroom Phase
 - 10 graduate-level, 3-credit-hour courses
- Research Phase
 - Minimum 15 credit hours of praxis development
 - Praxis defense
- Program Begins: August 2021
- Planned Program Completion: August 2023

D.Eng. Research Phase

- After completion of the classroom phase with a GPA of 3.2 or higher, and no grade below B-, students begin praxis research
- Praxis Research
 - During this stage, students will develop and defend praxis
 - Minimum half-hour individual research meetings initially every other week
 - Praxis defenses are scheduled for the end of the final semester of research
- Research course EMSE 8199 or SEAS 8199 Praxis Research
 - Session I: Fall 2022, 6 credit hours
 - Session II: Spring 2023, 6 credit hours
 - Session III: Summer 2023, 3 credit hours
 - *One to two semesters extension through Spring 2024 (6 credit hours each) may be granted.*

Program Overview

Doctor of Engineering (D.Eng.) Engineering Management

D.Eng. Field of Study

Engineering Management

Bridges the gap between engineering and management. EM enables engineers to work most effectively in the business environment. A degree in EM provides a technical-based alternative to traditional business programs. Candidates specialize in such areas as management of technology, product and process, quality, organizational management, operations management, program management, marketing and finance.

D.Eng. in Engineering Management Curriculum

EMSE 6045	International Technology Commercialization
EMSE 6115	Uncertainty Analysis for Engineers
EMSE 6420	Uncertainty Analysis in Cost Engineering
EMSE 6547	Cyber Resilience
EMSE 6710	Applied Optimization Modeling
EMSE 6765	Data Analysis for Engineers and Scientists
EMSE 6769	Machine Learning for Engineers
EMSE 6790	Logistics Planning
EMSE 8099	Survey of Research Formulation for Engineering Management
EMSE 8100	The Praxis Proposal

Schedules, regulations and policies subject to change; course substitution in the curriculum is usual and should be expected.

D.Eng. in Engineering Management Course Schedule

Session	#Courses	#Credit Hours	Tentative Dates
Fall-1 2021	2	6	August 14 – October 16, 2021
Fall- 2 2021	2	6	October 23 - January 15, 2022
Spring-1 2022	2	6	January 22 – March 26, 2022
Spring-2 2022	2	6	April 2 – June 4, 2022
Summer 2022	2	6	June 11 – August 13, 2022

No classes on Thanksgiving, Christmas, and New Year Weekends

- 2 courses per session
- Each session is 10 weeks long
- Classes meet on Saturdays
 - Morning Class 9:00a-12:00p (Eastern)
 - Afternoon Class 1:00p-4:00p (Eastern)

Praxis Research Areas: Engineering Management

Sample Praxis Titles from Previously Published D.Eng. In Engineering Management Praxis Papers

- A Technology Maturity Assessment of Sustainment-Dominated Systems under the Influence of Obsolescence
- A Generalized Approach to Measure and Predict Innovation Maturity Progression Aligned to Business Objectives
- Reducing Time and Cost Overruns for Aerospace Development Programs Using Precedence Networks Patterns
- Identifying and Overcoming the Barriers to Cloud Adoption within the Government Space
- A Decision Support Tool for Designing Energy-efficient Residential Buildings at the Early Planning and Design Stage

Program Overview

Doctor of Engineering (D.Eng.) Cybersecurity Analytics

D.Eng. Field of Study

Cybersecurity Analytics

The D.Eng. in Cybersecurity Analytics empowers the student to plan and implement security measures to protect an organization's network and systems, implement strategies to track threats and monitor networks for security breaches, build secure and resilient computer systems with subject matter expertise in cybersecurity analytics, advanced tools and techniques for ensuring confidentiality, integrity, and availability of an organization's data and systems.

D.Eng. in Cybersecurity Analytics Curriculum

CSCI 6015	Cyber Forensics
CSCI 6016	Applied Network Defense
CSCI 6532	Information Policy
ECE 6160	Secure Computer Architecture
SEAS 8410	Security Data Analysis & Visualization
SEAS 8414	Analytical Tools for Cyber Analytics
SEAS 8415	Applied Cryptography and Data Protection
SEAS 8499	Praxis Development for Cybersecurity
SEAS 8998	Advanced Reading and Research, Part 1
SEAS 8998	Advanced Reading and Research, Part 2

Schedules, regulations and policies subject to change; course substitution in the curriculum is usual and should be expected.

D.Eng. in Cybersecurity Analytics

Course Schedule

Session	#Courses	#Credit Hours	Tentative Dates
Fall-1 2021	2	6	August 28 – October 30, 2021
Fall- 2 2021	2	6	November 6 - January 29, 2022
Spring-1 2022	2	6	February 5 – April 9, 2022
Spring-2 2022	2	6	April 16 – June 18, 2022
Summer 2022	2	6	June 25 – August 27, 2022

No classes on Thanksgiving, Christmas, and New Year Weekends

- 2 courses per session
- Each session is 10 weeks long
- Classes meet on Saturdays
 - Morning Class 9:00a-12:00p (Eastern)
 - Afternoon Class 1:00p-4:00p (Eastern)

Praxis Research Areas

Cybersecurity Analytics

Sample Praxis Research Areas

- Addressing the Cybersecurity Malicious Insider threat
- Exploring Cybersecurity Requirements in the Defense Acquisition Process
- Internet of Things Device Cybersecurity
- Cybersecurity of Networked Home Medical Devices
- Cybersecurity Challenges in Healthcare Industries

Doctor of Engineering Tuition & Fees

2021-2022 Academic Year:

\$1,570 per credit

- Digital textbooks and software are provided at no additional charge

Application Process

Application Packet requires:

- Online Application Form, Available at:

Cybersecurity Analytics:

<https://seasonline.gwu.edu/apply-today/doctor-of-engineering-cybersecurity-analytics/>

Engineering Management:

<https://seasonline.gwu.edu/apply-today/doctor-of-engineering-program/>

- Current Resume
- Statement of Purpose
- Official Academic Transcripts

Applications are reviewed until the cohort is full

All submitted materials remain property of SEAS Online Programs

Application Process: Transcripts

Electronic Transcripts:

Send to: applyonline@gwu.edu

Paper Transcripts:

Send via United States Postal Service mail to:

SEAS Online Programs Office

The George Washington University

170 Newport Center Drive

Suite 260

Newport Beach, CA 92660

All Transcripts must be sent directly from the institution

Application Process

- Admission decisions are made on a rolling basis and communicated via email.
- Admitted applicants must complete and return a reply card and a non-refundable tuition deposit of \$495 by the deadline provided in admission letter. Tuition deposit is applied to the first session's tuition.

Contact Information

SEAS Online Programs Office

Shahram Sarkani, Ph.D., P.E., Director

Thomas A. Mazzuchi, D.Sc., Co-Director

- **Admissions Team**
 - applyonline@gwu.edu
 - Tel: 833-330-1454, option #1
- **Doctoral Administrative Team**
 - seasdoc@gwu.edu
- **Online Technical Support Team**
 - seasonline@gwu.edu
 - Tel: 202-422-2806

Answers to Frequently Asked Questions

- Application to only one D.Eng. field of study is permitted.
- Transfer credit is not allowed toward doctoral programs.
- Students should expect to spend approximately 20 hours a week on coursework/research, including class attendance.
- Your research advisors will be assigned by the SEAS Online Programs Office after the successful completion of your coursework.



Any Questions?

To protect your privacy, questions regarding individuals' specific application, degrees, background, or experience will not be answered during this Q&A session.