Doctor of Engineering in the field of Cybersecurity Analytics

Information Session
Wednesday, March 9

Classes Begin August 2022

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Professor of Engineering Management and Systems Engineering
Director, SEAS Online Programs
Information Session Agenda

✓ Overview of The George Washington University

✓ Doctor of Engineering (D.Eng.) in Cybersecurity Analytics
  • 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 #16 by US News
- GW’s Online Graduate Engineering Programs Ranked #14 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 2022

• Planned Program Completion: August 2024
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 SEAS 8199 Praxis Research
  • Session I: Fall 2023, 6 credit hours
  • Session II: Spring 2024, 6 credit hours
  • Session III: Summer 2024, 3 credit hours
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
ECE 6160  Secure Computer Architecture
SEAS 6800-A  ST: Current Issues and Challenges in Cybersecurity Analytics
SEAS 6800-B  ST: Python Applications in Cyber Analytics
SEAS 8410  Security Data Analysis & Visualization
SEAS 8414  Tools for Cyber Analytics
SEAS 8415  Applied Cryptography and Data Protection
SEAS 8499  Praxis Development for Cybersecurity
SEAS 8998  Advanced Reading and Research

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

<table>
<thead>
<tr>
<th>Session</th>
<th>#Courses</th>
<th>#Credit Hours</th>
<th>Tentative Dates</th>
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</thead>
<tbody>
<tr>
<td>Fall-1 2022</td>
<td>2</td>
<td>6</td>
<td>August 13 – October 15, 2022</td>
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<tr>
<td>Fall-2 2022</td>
<td>2</td>
<td>6</td>
<td>October 22, 2022 – January 14, 2023</td>
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<tr>
<td>Spring-1 2023</td>
<td>2</td>
<td>6</td>
<td>January 21 – March 25, 2023</td>
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<tr>
<td>Spring-2 2023</td>
<td>2</td>
<td>6</td>
<td>April 1 – June 10, 2023</td>
</tr>
<tr>
<td>Summer 2023</td>
<td>2</td>
<td>6</td>
<td>June 17 – August 19, 2023</td>
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No classes on Thanksgiving, Christmas, New Year, and Memorial 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 Medical Devices
• Cybersecurity Challenges in Aerospace Industries
Doctor of Engineering
Tuition

2022-2023 Academic Year:
$1,625 per credit
Admissions Requirements

• 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 3.2

• A minimum of two college-level calculus courses.
  • Applicants who do not have a grade of C or better in two calculus courses but are otherwise qualified for admission will be required to take an additional course EMSE 4197, scheduled for July 11 through August 11, Mondays and Thursdays (7-9:30 pm ET), and Saturdays (1-3:30 pm ET)

• Relevant professional experience
Application Process

Application Packet requires:

- Online Application Form, available at: https://seasonline.gwu.edu/apply-today/doctor-of-engineering-cybersecurity-analytics/

- Current Resume

- Statement of Purpose

- Official Academic Transcripts

All submitted materials remain property of SEAS Online Programs
Application Process: Transcripts

Electronic Transcripts:
Send to: seasdeng@gwu.edu

Paper Transcripts:
Send 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 $995 in order to secure their slot in the cohort. 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**
  - seasdeng@gwu.edu
  - Tel: 833-330-1454, option #2

- **Doctoral Administrative Team**
  - seasdoc@gwu.edu

- **Online Technical Support Team**
  - seasonline@gwu.edu
  - Tel: 202-422-2806
Answers to Frequently Asked Questions

• 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 advisor will be assigned by the SEAS Online Programs Office after the successful completion of your coursework.
• D.Eng. in Engineering Management info session on Thursday, March 10 at 7:00pm (Eastern)
Any Questions?

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