Doctor of Engineering
in the field of
Cybersecurity Analytics

Information Session
Tuesday, October 4th

Classes Begin
January 2023

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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)
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.
Program Overview

• Classroom Phase (1 year, 30 credit hours)
  • 10 graduate-level, 3-credit-hour courses
• Research Phase (1 year, 15 credit hours)
  • Minimum of 3 semesters of praxis research
  • Culminates in Praxis defense
• Total of 45 credit hours (minimum)
• Program Begins: January 2023
• Target Graduation Date: December 2024
Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CSCI 6015</td>
<td>Cyber Forensics</td>
</tr>
<tr>
<td>CSCI 6016</td>
<td>Applied Network Defense</td>
</tr>
<tr>
<td>ECE 6160</td>
<td>Secure Computer Architecture</td>
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<tr>
<td>SEAS 6800A</td>
<td>Special Topics: Challenges in Cybersecurity</td>
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<tr>
<td>SEAS 6800B</td>
<td>Special Topics: Cybersecurity Architectures</td>
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<tr>
<td>SEAS 6800C</td>
<td>Special Topics: Python Applications in Cyber Analytics</td>
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<tr>
<td>SEAS 8410</td>
<td>Security Data Analysis &amp; Visualization</td>
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<tr>
<td>SEAS 8414</td>
<td>Tools for Cyber Analytics</td>
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<tr>
<td>SEAS 8415</td>
<td>Applied Cryptography and Data Protection</td>
</tr>
<tr>
<td>SEAS 8499</td>
<td>Praxis Development for Cybersecurity</td>
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</tbody>
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Schedules, regulations and policies subject to change; course substitution in the curriculum is usual and should be expected.
No classes on Memorial Day, Thanksgiving, Christmas, and New Year Weekends

- 2 courses per session
- Each session has 10 class meetings
- Classes meet on Saturdays
  - Morning Class 9:00a-12:00p (Eastern)
  - Afternoon Class 1:00p-4:00p (Eastern)
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
  • Minimum half-hour individual research meetings initially every other week
  • During this stage, students will develop and write a praxis
  • Praxis defenses are scheduled for the end of the final semester of research

• Research course SEAS 8499 Praxis Research
  • Session I: Spring 2024, 6 credit hours
  • Session II: Summer 2024, 3 credit hours
  • Session III: Fall 2024, 6 credit hours

Grade | GPA Pts
--- | ---
A | 4
A- | 3.7
B+ | 3.3
B | 3
B- | 2.7
Praxis Research Areas

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
Admissions Requirements

• Bachelor’s and master’s degrees in information technology, computer science, applied science, engineering or related field from accredited institutions

• A minimum graduate level GPA of 3.2

• Relevant professional experience

• 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 required to take an additional course EMSE 4197
  • Offered November 14-December 19, 2022 on Monday & Wednesday (7-9:30pm) and Saturday (1-3:30pm)
Application Process

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

Official Academic Transcripts:

• Send Electronic Transcripts to seasdeng@gwu.edu

• Send Paper Transcripts 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*

All submitted materials remain property of SEAS Online Programs
Priority Application Deadline: **October 15, 2022**

- Applicants who meet the requirements and complete the application packet before the deadline will be guaranteed a spot in the upcoming cohort.

Final Application Deadline: **November 15, 2022**

- Applicants who meet the requirements and submit before November 15th will be subject to limited availability.
Admitted Students

• Admission decisions are communicated via email.
• Admitted applicants must return a reply card and a non-refundable tuition deposit of $995 (applied to the first session’s tuition) in order to secure their slot in the cohort.
• Tuition for 2022-2023 Academic Year is $1,625 per credit
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
- 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 Wednesday, October 5th 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.