CYBERSECURITY CERTIFICATE

Program Description

Security breaches are growing in frequency, sophistication, and consequence. This growth is likely driven by our increasing dependence on computing systems — both as individuals and as nations — which makes these systems attractive targets for malfeasants who design and launch attacks.

With the courses in this certificate program, you will develop a practical literacy in cybersecurity. You will learn the abstractions and principles needed to understand the design and analysis of secure systems. You will also become comfortable navigating technical literature, authenticating users, and choosing between discretionary and mandatory access control schemes. By the end of this program, you will be able to identify the appropriate enforcement strategy for a given security policy.

Students will be most successful in this program if they have familiarity with programming and computer operating systems.

The courses in this certificate program are required to be completed in the order that they appear.

Key Takeaways

- Analyze the security of computer and networked information systems
- Identify cybersecurity goals and create a threat model for a system
- Identify protocol errors and recognize when a protocol may be vulnerable to security attacks
- Develop schemes for authenticating users
- Design discretionary access control schemes
- Design mandatory access control schemes

What You'll Earn

- Cybersecurity Certificate from Cornell Ann S. Bowers College of Computing and Information Science
- 144 Professional Development Hours (14.4 CEUs)

Who Should Enroll

- IT professionals
- Developers
- Programmers
- Analysts
- Software engineers
- Cybersecurity professionals

Total Investment

4.5 months to complete the courses.

How to Enroll

For more information and to enroll, please visit Cybersecurity Certificate (https://ecornell.cornell.edu/certificates/technology/cybersecurity/).

Courses

Code	Title	Hours
eCornell CS431	Systems Security	0
eCornell CS432	Authenticating Machines	0
eCornell CS433	Authenticating Humans	0
eCornell CS434	Discretionary Access Control	0
eCornell CS435	Mandatory Access Control	0
eCornell CS436	Enforcement Mechanisms and Strategies	0