

BACHELOR OF SCIENCE IN

# CYBERSECURITY ANALYTICS & OPERATIONS

The Cybersecurity Analytics and Operations (CYAOP) Bachelor of Science degree prepares students to protect digital information from attack through cyberdefense strategies. With a foundation in mathematics and computer programming, students will be prepared to recognize, analyze, defend against, and manage risks related to a wide range of threats to online information, data stores, and networks.

Whether it is the theft of personal information by cybercriminals, the hacking of critical datasets by a nation state, or cyberattacks by terrorist groups or other aggressors, students will be prepared to analyze security issues from the perspective of human and information systems. They will learn to anticipate and identify threats through the mastery of technology, articulate potential impacts to stakeholders, and ensure the safety of online information.

## Gain Marketable Experience in College

Students gain real-world experience by conducting research with faculty members, participating in capstone projects, and completing one or more internships. Past internship employers have included the federal government, Cisco, and Deloitte.

## Academic Minors

Enhance your degree with one of the college's academic minors; the following are recommended for Cybersecurity Analytics and Operations majors.

- Business
- Entrepreneurship & Innovation
- Global Studies
- Information Sciences & Technology
- Spanish



## Job Titles and Salaries

The following is a list of job titles and salaries, which was compiled from the Bureau of Labor and Statistics *Occupational Outlook Handbook* and the CIA's Career Opportunities website. This is only a partial list to provide examples of the kinds of jobs available to graduates with a B.S. in Cybersecurity Analytics & Operations. Some positions require additional experience.

CIA Career Opportunities	Mid-Salary Range
Cyber Threat Analyst	\$56-97K
Counterterrorism Analyst	\$56-97K
Cyber Security Officer	\$80-141K
Intelligence Collection Analyst	\$56-82K

Occupational Outlook	2018 Median Pay
Computer Security Admin	\$82,050
Database Security Admin	\$90,070
Information Security Analyst	\$98,350
IT Security Manager	\$142,530



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The Cybersecurity Analytics and Operations major is an interdisciplinary program that prepares students for careers as cybersecurity professionals. Students will gain knowledge of the essential concepts of cyber-defense and cybersecurity. The program focuses on the analytical and risk management underpinnings, as well as the associated cyber-defense techniques and strategies, for ensuring the safety of online information across the complex infrastructures of business, government and military organizations.

Students will acquire the knowledge and skills needed to critically assess and respond to modern information security threats, using approaches that are grounded in a holistic understanding of adversarial strategies and effective responses. More specifically, the degree will offer an in-depth and domain-independent approach to the development of skills in cyber defense technologies, tools and processes; cybersecurity analytics and visualization; and cybersecurity risk analysis and management.

The major draws from concepts and skills associated with a number of disciplines, including information sciences, management sciences, statistics and data sciences, human behavior, and law and policy. Graduates will be prepared to join the rapidly growing cybersecurity workforce deployed across organizations of diverse sizes and missions.

Cybersecurity Analytics and Operations students must complete 12 credits within an Application Focus Area. They can choose from one of the following areas:

- Geopolitics
- Law and Policy
- Economics
- Health Care
- Custom Focus

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Program Chair

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## Admission Process

Applying for degree admission to Penn State Berks is simple. Applications are available on the web at [berks.psu.edu](https://berks.psu.edu). Penn State reviews applications throughout the year. Students can expect a decision within four to six weeks after completing the process. Contact the Berks Admissions Office with your questions at 610-396-6060.

## Transfer Students

Penn State Berks welcomes students who began their education at other institutions. Contact the Berks Admissions Office with your transfer questions at 610-396-6060.

## Financial Aid

Eligibility for all financial aid is determined by completing the Free Application for Federal Student Aid (FAFSA) form available on the web at [fafsa.ed.gov](https://fafsa.ed.gov). Contact the financial aid coordinator at Berks or visit [psu.edu/studentaid](https://psu.edu/studentaid) for a complete description of the types of available student aid and the application process at 610-396-6070.

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