

BACHELOR OF  
**CYBER  
SECURITY**



## MAJOR CURRICULUM

Our curriculum for the Bachelor in Cybersecurity program blends contemporary knowledge with advanced research concepts to deliver a cutting-edge program, and it is mapped with the NSA/DHS guideline and knowledge units.

### Cyber Security Course Topics Include

- Computer Science I
- Concepts of Operating Systems
- Programming for All in Python
- Database Design & Security
- Software Engineering I & Security
- Introduction to Algorithms
- Unix/ Linux & Shell Programming
- Telecom and Networking
- Computer Networks-Architectures, Protocols and Standards
- Introduction to Cryptography
- Understanding Economic and Business Data
- Introduction to Data Science
- Principles of Marketing
- E-commerce
- Special Topics in Info Security
- Introduction to Intelligence
- Contemporary International Security Topics
- Computer Science I
- Computer Security I
- Computer Security II
- Ethics in National Security
- Risk Management
- Ethical Hacking
- Computer Forensics I
- Computer Security (Threat, Vulnerability & Countermeasures)
- Security & Privacy of Information & Information Systems I
- Cyber Incident Handling
- Cyber Incident Handling
- Introduction to Linux Administration
- Hacking and Forensic Investigation
- Network Security
- Cybersecurity & Event Management

## CENTER FOR CYBER SECURITY

The New Jersey City University Cybersecurity program is an interdisciplinary center for cybersecurity education, training and research. The center aims to provide current and future professionals with the knowledge and skills necessary to thrive and compete within the cyber security community outreach. Our students' foundation is built through their degree program, certificates and research opportunities.

NJCU's Cyber defense program have been named as a National Center of Academic Excellence in Cyber Defense Education (CAE-CDE).



## CAREER OPPORTUNITIES

The field of Cybersecurity is one of the fastest-growing career paths. There are many opportunities for workers to start and advance their careers within Cybersecurity. With a Bachelor in Cyber Security from NJCU, you will be able to pursue positions including:

### Entry-Level

- Cybersecurity Specialist
- Cyber Crime Analyst
- Incident Analyst/Responder
- IT Auditor

### Mid-Level

- Cybersecurity Analyst
- Cybersecurity Consultant
- Penetration & Vulnerability Tester

### Advanced-Level

- Cybersecurity Manager
- Cybersecurity Engineer
- Cybersecurity Architect



## OUR PROGRAM

The Bachelor of Cybersecurity program provides students with the necessary knowledge, skills, and professional training to pursue careers in the rapidly growing field of Cybersecurity. The program offers a balance between the theoretical and deep technical skills of Cybersecurity. The program is suitable for students who have received an associate's degree in business, Computer Science or related major and have a desire to join the Cybersecurity workforce or conduct Cybersecurity research. The program will prepare our graduates to face the futuristic security-related challenges emerging from our internet-connected world, the rapid adoption of mobile devices, and the ever-increasing role of software applications in our daily life.

### Students in our program will learn to:

- Understand the interaction between security and system usability and the importance of minimizing the effects of security mechanisms.
- Evaluate the architecture of a typical, complex system and identify significant vulnerabilities, risks, and points at which specific security technologies/methods should be employed.
- Identify which cryptographic protocols, tools and techniques are appropriate for a given situation.
- Apply security principles to the design and development of database systems and database structures.
- Demonstrate proficiency in the use of scripting languages to write simple scripts.

### Academic requirements

#### Bachelor of Cyber Security Degree Credit Requirements:

*To bring the total to 120 credits*

**General Education courses:** 45 Credits

**Pre-Requisites:** 15 Credits

**Major Core Courses:** 27 Credits

**Track courses:** 21 Credits

**Open Electives:** 12 Credits

**The mission of the College of Professional Studies is to educate individuals from diverse communities, to succeed in their professional goals and personal aspirations and to effectively contribute to society.**

Our engaging learning environment encourages students to become self-motivated learners who can think analytically, locate resources, solve problems creatively, and master essential technical skills.

The College attracts career-minded students who are eager to learn skills that are most critical to launching or advancing their professional lives, and our learning community welcomes both traditional and non-traditional students. NJCU's urban location is an integral part of the student experience, and is the perfect setting for educating students who will thrive in today's fast-paced world.

### Mission Statement

New Jersey City University (NJCU) provides a diverse population of learners with an excellent education. The University is committed to the improvement of the educational, intellectual, cultural, socioeconomic, and physical environment of the surrounding urban region and beyond.

### Contact Us

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