CYBERSECURITY CONCENTRATION

Program Description

The **Cybersecurity Concentration** within the Associate in Science in Computer Science is designed for students who plan to transfer to a four-year institution to pursue a bachelor's degree in cybersecurity, computer science, information security, or a related field.

This concentration focuses on the principles and technologies used to protect computer systems, networks, and digital information. Students explore topics such as network security, system vulnerabilities, threat detection, and ethical practices in information security. Coursework emphasizes analytical thinking, programming fundamentals, and the application of cybersecurity strategies to safeguard digital environments.

The program combines a strong foundation in computer science with introductory cybersecurity concepts, preparing students for upper-level study in cybersecurity and related computing disciplines.

Transfer Information

The Cybersecurity concentration is structured to align with bachelor's degree programs in cybersecurity, information assurance, computer science, and related disciplines.

Students are encouraged to work closely with faculty and Advising & Transfer Services to ensure coursework aligns with the requirements of their intended transfer institution. Because cybersecurity programs often require strong preparation in programming, networking, and mathematics, students should carefully follow the recommended course sequence.

Students planning to transfer within New Jersey should explore the "Transfer Programs" feature on NJ Transfer (www.njtransfer.org (http://www.njtransfer.org)) to review articulation agreements and institutional requirements.

Career Information

The A.S. in Computer Science – Cybersecurity Concentration is designed primarily for transfer. A bachelor's degree is typically required for professional roles in cybersecurity and information security.

With further education, graduates may pursue careers such as:

- Cybersecurity Analyst
- Information Security Specialist
- Network Security Engineer
- Security Operations Center (SOC) Analyst
- Digital Forensics Specialist

Students are encouraged to consult with faculty and Career Services early in their academic journey to explore transfer pathways, internships, and career opportunities in cybersecurity and information security fields.

Fall One		Credit Hours
ENGL 151	English I	3
STSC 150	Student Success Seminar	2
MATH 166	Topics in Algebra	4
CSIT 165	Programming I	4
	Credit Hours	**13**
Spring One		
ENGL 152	English II	3
MATH 196	Precalculus	4
CSIT 144	Introduction to Operating System Using Linux	3
CSIT 176	Computer Organization & Architecture	3
Social Science Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**16**
Fall Two		
MATH 265	Calculus I	4
CSIT 212	Systems Analysis	3
CSIT 241	Cybersecurity Legal and Regulatory Overview	3
CSIT 251	Introduction to Networking	3
Humanities Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**16**
Spring Two		
CSIT 168 or CSIT 277	Introduction to Python Programming or Introduction to Cloud Computing	2-3
CSIT 200	Information Security Fundamentals	3
CSIT 261 or CSIT 244	Advanced Networking Concepts or Digital Forensics Fundamentals	3
PHYS 281 & 281L	General Physics I Lecture and General Physics I Lab	4
Humanities or Social Science Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**15-16**
	Total Credit Hours	**60-61**

Fall One		Credit Hours
ENGL 151	English I	3
STSC 150	Student Success Seminar	2
MATH 196	Precalculus	4
CSIT 165	Programming I	4
Humanities Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**16**
Spring One		
ENGL 152	English II	3
MATH 265	Calculus I	4
CSIT 166	Programming II	4
CSIT 176	Computer Organization & Architecture	3
	Credit Hours	**14**
Fall Two		
MATH 266	Calculus II	4
PHYS 281 & 281L	General Physics I Lecture and General Physics I Lab	4
CSIT 168	Introduction to Python Programming	2
CSIT 213	Database Management	3
Social Science Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**16**
Spring Two		
MATH 270	Discrete Mathematics	3
CSIT 265	Data Structures and Analysis	4
PHYS 282 & 282L	General Physics II Lecture and General Physics II Lab	4

Humanities or Social Science Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**14**
	Total Credit Hours	**60**

Fall One		**Credit Hours**
ENGL 151	English I	3
STSC 150	Student Success Seminar	2
CSIT 165	Programming I	4
MATH 265	Calculus I	4
	Credit Hours	**13**
Spring One		
ENGL 152	English II	3
CSIT 144	Introduction to Operating System Using Linux	3
CSIT 176	Computer Organization & Architecture	3
MATH 266	Calculus II	4
	Credit Hours	**13**
Fall Two		
CSIT 212	Systems Analysis	3
CSIT 241	Cybersecurity Legal and Regulatory Overview	3
CSIT 251	Introduction to Networking	3
MATH 270	Discrete Mathematics	3
Social Science Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**15**
Spring Two		
CSIT 200	Information Security Fundamentals	3
CSIT 261 or CSIT 244	Advanced Networking Concepts or Digital Forensics Fundamentals	3
CSIT 277	Introduction to Cloud Computing	4
PHYS 281 & 281L	General Physics I Lecture and General Physics I Lab	4
Humanities or Social Science Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
Humanities Gen. Ed. Requirement (https://catalog.ocean.edu/academic-information/general-education/)		3
	Credit Hours	**20**
	Total Credit Hours	**61**