

Information Systems Security (A25270)

Official Program Description registered with the NC Community College System:

Information Systems Security covers a broad expanse of technology concepts. This curriculum provides individuals with the skills required to implement effective and comprehensive information security controls.

Course work includes networking technologies, operating systems administration, information policy, intrusion detection, security administration, and industry best practices to protect data communications.

Graduates should be prepared for employment as security administrators. Additionally, they will acquire the skills that allow them to pursue security certifications.

Program Learning Outcomes

The Associate of Applied Science Degree in Information Systems Security is designed to prepared students for employment and careers in operating system and security administration. Students will develop strong analytical skills, extensive computer and network knowledge and data protection techniques. Graduates of this program will develop skills in decision making, communication, and technical applications. Graduates of this program will be able to:

- Understand security administration and the fundamentals of designing security architectures.
- Identify normal network traffic using network analysis tools, distinguish between normal and anomalous network traffic, identify common network attack patterns, and implement security solutions.
- Identify current technologies used to provide secure transport of information across networks students and be able to implement secure data transmission technologies.
- Identify information security risks, create an information security policy, and identify processes to implement and enforce policy.
- Plan and implement intrusion detection solutions for networks and host based systems.
- Plan effective information security defenses, backup systems, and disaster recovery procedures.
- Demonstrate skills and best practices in designing and implementing a comprehensive information security architecture through security policies, procedure definition, business continuity, and systems security architecture.
- Apply mathematical concepts and methods to understand, analyze, and solve mathematical problems necessary to perform job-related tasks.
- Communication information effectively using a variety of written, spoken, and/or visual methods.
- Demonstrate knowledge of accepted ethical behavior and interpersonal skills that reflect an understanding of diversity and the need for teamwork.
- Understand the importance of keeping abreast of technological changes that effect the office professional.

Degree Awarded

The Associate in Applied Science Degree - Information System Security is awarded by the College upon completion of this program.

Note

Individuals desiring a career in Information Systems Security should, if possible, take algebra, keyboarding, and computer applications courses prior to entering the program. Courses that require critical reading and written oral communication skills will also be valuable.

Though students are not required to own their own computer, it is strongly recommended. In addition to textbooks, students will be required to provide their own portable storage media, such as USB drives, for most classes.

For More Information

The Information Systems program is in the Business and Computer Technologies Division. For more information, call (919) 735-5151, ext. 272. Send an email to bull@waynecc.edu.

Admissions

- A high school diploma or equivalent is required.
- Placement tests in English, mathematics, reading and computer skills are required to determine entry-level courses that match individual needs.

First Step to Enroll:

Call the Admissions and Records Office at (919) 735-5151, ext. 238.

	Contact Hours	Semester Credit Hours
FIRST SEMESTER		
ACA 111 College Student Success.....	1	1
CIS 110 Introduction to Computers	4	3
COE 110 World of Work	1	1
ENG 111 Expository Writing.....	3	3
NET 125 Networking Basics	5	3
NOS 110 Operating System Concepts....	5	3
SEC 110 Security Concepts.....	3	3
		17
SECOND SEMESTER		
NET 126 Routing Basics	5	3
NOS 120 Linux/UNIX Single User	4	3
NOS 130 Windows Single User.....	4	3
SEC 150 Secure Communications.....	4	3
SEC 160 Secure Admin I	4	3
SEC 220 Defense-in-Depth.....	4	3
		18
THIRD SEMESTER		
ENG 114 Prof Research & Reporting.....	3	3
MAT 140 Survey of Mathematics	3	3
NET 225 Routing & Switching I.....	5	3
SEC 210 Intrusion Detection.....	4	3
NOS 230 Windows Admin I	4	3
Humanities/Fine Arts Elective ..	3	3
Major Elective		0-2
		18-20
FOURTH SEMESTER		
BUS 110 Introdicion to Business	3	3
CIS 115 Intro to Prog & Logic	5	3
DBA 110 Database Concepts	5	3
NET 226 Routing & Switching II.....	5	3
SEC 289 Security Capstone Project	5	3
Social/Behav Science Elec	3	3
Major Elective		1-3
		19-21
	Total Credit Hours	74
The Department Head for Information Systems must approve Cooperative Education courses in advance as Major Elective.		
COE 111 Co-op Work Experience I.....	10	1
COE 112 Co-op Work Experience II.....	20	2
COE 121 Co-op Work Experience II.....	10	1
COE 122 Co-op Work Experience II.....	20	2
COE 131 Co-op Work Experience III.....	10	1
CTS 120 Hardware/Software Support	5	3
NOS 231 Windows Admin II	4	3