

# Information Technology - Cyber Security Track

## Degree Type

Associate of Applied Science

## Program Description

The Associate of Applied Science degree in Information Technology: Cyber Security focuses on the most critical and quickly changing area of the industry. This program provides students with the ability to not only administer networks but also to secure those networks and conduct penetration tests to ensure they are not vulnerable to attacks. Graduates will have an understanding of computer hardware, operating systems, networking, databases, programming, and defensive and offensive security. Students will cover aspects of the Microsoft Certified Solutions Associate (MCSA), CompTIA Linux+, Net+, Security+ and A+, Wireshark Certified Network Analyst, and the EC-Council Certified Ethical Hacker certifications.

## Career Opportunities

1. Cyber Security Analyst
2. Information Systems Security Officer
3. Network Security Specialist
4. Penetration Tester

## Program Objectives

**Upon completion of the program, the student will be able to:**

1. Demonstrate knowledge in Hardware, Programming, Operating Systems, Networking, Data Communication, and Database Technology.
2. Demonstrate various techniques for preventing unauthorized attacks to computer networks and apply measures for minimizing the damage caused by network intruders.
3. Evaluate and implement the needed information security controls for any information system and provide an assurance framework where the security processes or controls, or both, are embedded in information systems technologies.
4. Understand professional, ethical, legal, security and social issues and responsibilities.
5. Apply strong communication and critical thinking skills including reading, writing, organizing, evaluating, problem solving, and presentation skills in Cyber Security.

## Obtaining the Degree

**To earn the Associate of Applied Science degree, students must:**

- Matriculate into the program.
- Satisfactorily complete all degree requirements, including General Education and Major Requirements.

# General Education Requirements

Course Code	Title	Credits
ACP 100	Academic and Career Planning	1
CIT 100	Microcomputer Applications	3
COM 101	Public Speaking	3
ENG 110	English Composition I**	3
LIF 111	Health and Wellness	3
MAT 145	College Algebra	3
	Elective - Science 3 or 4 Credits	3-4
	Elective - Social Science	3

## Science Electives (Choose one)

Course Code	Title	Credits
AST 100	Introduction to Astronomy	3
BIO 102	Life Science	3
	BIO 104 and BIO 114	4
CHM 106	Introductory Chemistry	4
CHM 120	General Chemistry I	4
	GLG 102 and GLG 103	4
	PHY 102 and PHY 103	4
	PHY 110 and PHY 111	4

## Social Science Electives (Choose one)

*(See Social Science Track I and Social Science Track II under Liberal Arts and Sciences for course options)*

## Required Courses

Course Code	Title	Credits
CIT 132	Local Area Networks	4
CIT 165	Hardware Components	3
CIT 166	Visual Basic Programming	3
CIT 173	Windows Enterprise Desktop Operating Systems	3
CIT 196	Database Management	3
CIT 222	Linux Operating System	3
CIT 226	Windows Server Management	4
CIT 285	Information Technology Project	2
CIT 290	Information Technology Internship	3
CIT 292	Network Security	3
CIT 293	Wireshark Network Analysis	4
CIT 294	Ethical Hacking	3
CRJ 135	Introduction to Cybercrime	3
	<b>Total Credits</b>	<b>63-64</b>

## Course Sequencing

### Fall 1

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
ACP 100	Academic and Career Planning	1
CIT 100	Microcomputer Applications	3
CIT 132	Local Area Networks	4
CIT 173	Windows Enterprise Desktop Operating Systems	3
ENG 110	English Composition I**	3
	Elective - Social Science	3

### Spring 1

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CIT 165	Hardware Components	3
CIT 196	Database Management	3
CIT 226	Windows Server Management	4
CIT 293	Wireshark Network Analysis	4
LIF 111	Health and Wellness	3

### Fall 2

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CIT 166	Visual Basic Programming	3
CIT 292	Network Security	3
COM 101	Public Speaking	3
MAT 145	College Algebra	3
	Elective - Science 3 or 4 Credits	3-4

### Spring 2

<b>Course Code</b>	<b>Title</b>	<b>Credits</b>
CIT 222	Linux Operating System	3
CIT 285	Information Technology Project	2
CIT 290	Information Technology Internship	3
CIT 294	Ethical Hacking	3
CRJ 135	Introduction to Cybercrime	3