

COMPUTER INFORMATION TECHNOLOGY & SECURITY ITC

Information Technology prepares students for a wide range of employment opportunities in the design, implementation and security of Internetworking solutions for small, medium and large enterprises. Positions involving technical support for small computer system hardware and software implementations embedded in local and wide area networks are supported through the use of the CompTIA, Microsoft, and network offerings. Major elements of this course of study include microcomputer theory, data communications, operating systems, security fundamentals including virus eradication, systems hardware and software analysis, troubleshooting techniques, use of computer analysis hardware, and application of all of these elements in the work setting. This program has physical requirements that may affect the student's ability to perform in this field.

Entrance requirements for students enrollment in the Information Technology program include:

- Writing Placement Exam score of 2 or higher and Aleks math score of 30 or higher; or qualify for MTHPT-137 and ENGL-101.
- Enrollment priority is on a first-come, first-serve basis as determined by the student's faculty advising date.

Upon completion of the Intermediate Technical Certificate, the student will possess the technical skills in:

- Knowledge of general security concepts, communication security, infrastructure security, cryptography, and operational/organizational security
- Applications, tools, and devices used to install, configure and troubleshoot intermediary devices
- Troubleshoot and repair networking devices with hardware/software faults and/or configuration problems
- Data communications over LANs and Virtual LANs; working proficiency of these communication schemes, topologies, and configurations
- Installation, maintenance, and operation of all hardware and software
- Implement and maintain a scalable, routed network
- Security technologies used to authenticate, authorize, and account for user actions
- In-depth understanding of how to effectively protect computer networks
- Knowledge of what and who an ethical hacker is and how important they are in protecting corporate and government data from cyber-attack
- Develop proficiency in performing maintenance tasks on the command line, installing and configuring a computer running Linux, and configuring basic networking, using virtual machines running Linux
- Computer networking concepts, theories, practices, and procedures
- Installation, implementation, and initial configuration of Cisco networking devices
- Knowledge and skills to implement, configure, and maintain network routing protocols
- Able to perform general installation and management tasks, including creating and managing images for deployment
- Knowledge of common computer hardware and software technologies used in home and enterprise environments
- Design, install, and test structured cabling systems
- Cyber security course will engage your understanding of online safety in the context of the wider world, introducing you to different types of malware, including viruses and trojans, as well as concepts such as network security, cryptography, identity theft and risk management

Intermediate Technical Certificate Requirements

| Code | Title | Credits |
|------------------------------|------------------------|--------------|
| Technical Core | | |
| Take the following courses: | | 24.00 |
| IT-231 | INFORMATION SYSTEMS I | |
| IT-232 | INFORMATION SYSTEMS II | |
| IT-251 | NETWORKING I | |
| IT-252 | NETWORKING II | |
| IT-271 | CYBERSECURITY I | |
| IT-272 | CYBERSECURITY II | |
| Program Requirements | | |
| ENGL-101 | WRITING AND RHETORIC I | 3.00 |
| Select one of the following: | | 3.00 |
| MTHPT-130 | FINITE MATHEMATICS | |
| MTHPT-137 | MATH FOR TECHNOLOGY | |
| MATH-123 | MATH IN MODERN SOCIETY | |
| MATH-130 | FINITE MATHEMATICS | |
| Total Credits | | 30.00 |