

## **CLOUD COMPUTING AND NETWORKING TECHNOLOGY AAS: 355**

**Total Credits: 60**

**Catalog Edition: 2020-2021**

### **Program Description**

This curriculum provides students a broad coverage and technical understanding of computer technology, networking and security as well as the communication skills and professionalism required of all entry-level IT professionals. Skills include software and hardware installation, network configuration and diagnostics, security and forensics fundamentals, and virtualization and cloud computing implementation, with a "hands-on" focus on scenarios in which troubleshooting tools must be applied to resolve problems.

### **Program Outcomes**

Upon completion of this program a student will be able to:

- Install, maintain and evaluate computer networks.
- Describe network architecture concepts, including topology, protocols, components, and principles.
- Demonstrate best practices in the use of lab equipment and network hardware.
- Create a detailed plan showing the steps necessary to implement a network security system.
- Test and configure network services, devices, and peripherals.
- Review data and identify relevant evidence using current forensic tools.
- Describe the evolution of cloud computing and major methods of deployment.
- Design and implement cloud applications that can scale up on a VM (Virtual Machine and out across multiple VMs.

**2020-2021**

# **Program Advising Guide**

**An Academic Reference Tool for Students**

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## Suggested Course Sequence

A suggested course sequence for full-time students follows. All students should review this advising guide and consult an advisor.

### First Semester

- ENGL 101 - Introduction to College Writing *3 semester hours* \*
- NWIT 101 - Introduction to the Internet of Things (IoT) *3 semester hours*
- OR
- CMSC 110 *3 semester hours*
- NWIT 105 - Introduction to Cloud Computing *3 semester hours*
- NWIT 127 - Microcomputer Essentials *3 semester hours*
- Mathematics foundation *3 semester hours (MATF)*

### Third Semester

- COMM 108 - Foundations of Human Communication *3 semester hours (GEEL)*
- OR
- COMM 112 *3 semester hours (GEEL)*
- CMSC 253 - UNIX/LINUX System Administration *4 semester hours*
- NWIT 203 - Microsoft Windows Server *3 semester hours*
- Arts or humanities distribution *3 semester hours (ARTD or HUMD)*

### Second Semester

- CMSC 135 - Introduction to Scripting *3 semester hours*
- OR
- CMSC 140 *3 semester hours*
- NWIT 151 - Introduction to Networking *3 semester hours*
- NWIT 170 - Network Operating Systems *3 semester hours*
- NWIT 173 - Network Security *3 semester hours*
- English foundation *3 semester hours (ENGF)*

### Fourth Semester

- NWIT 204 - Network Virtualization and System Administrator *4 semester hours*
- NWIT or CMSC or DATA or TECH elective *3 semester hours*
- Behavioral and social sciences distribution *3 semester hours (BSSD)*
- Natural sciences distribution with lab *4 semester hours (NSLD)*
- NWIT or CMSC elective *3 semester hours*

## Total Credit Hours: 60

\*ENGL 101/ENGL 101A, if needed for ENGL 102/ENGL 103, or NWIT or CMSC or DATA or TECH elective.