CLOUD COMPUTING AND NETWORKING TECHNOLOGY AAS
Total Credits: 60
Catalog Edition: 2024-2025

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. **This program can be completed either on campus or online.**

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.

Program Advisors

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For more information, please visit https://www.montgomerycollege.edu/academics/programs/cloud-computing-and-networking-technology/index.html
To view the Advising Worksheet, please visit https://www.montgomerycollege.edu/_documents/counseling-and-advising/advising-worksheets/current-catalog/355.pdf

2024-2025

Program Advising Guide
An Academic Reference Tool for Students

355

CLOUD COMPUTING AND NETWORKING TECHNOLOGY
ASSOCIATE OF APPLIED SCIENCE: 355

CLOUD COMPUTING AND NETWORKING TECHNOLOGY AAS

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* *

Mathematics Foundation*3 semester hours (MATF)*

NWIT 101 - Introduction to the Internet of Things (IoT) *3 semester hours*

OR

CMSC 110 - Computer Concepts *3 semester hours*

NWIT 105 - Introduction to Cloud Computing *3 semester hours*

NWIT 127 - Microcomputer Essentials *3 semester hours*

Third Semester

Arts or Humanities Distribution *3 semester hours (ARTD or HUMD)*

CMSC 253 - UNIX/LINUX System Administration *4 semester hours*

NWIT 173 - Network Security *3 semester hours*

NWIT 200 - Microsoft Modern Desktops *3 semester hours*

NWIT 208 - Cloud Architecting *3 semester hours*

OR

NWIT 209 - Cloud Administration *3 semester hours*

Second Semester

English Foundation *3 semester hours (ENGF)*

Natural Sciences Distribution with Lab*4 semester hours (NSLD)*

COMM 108 - Foundations of Human Communication *3 semester hours* (GEEL)

OR

COMM 112 - Business and Professional Speech Communication *3 semester hours* (GEEL)

CMSC 135 - Introduction to Scripting *3 semester hours*

OR

CMSC 140 - Introduction to Programming *3 semester hours*

NWIT 151 - Introduction to Networking *3 semester hours*

OR

NWIT 170 - Network and Cloud Infrastructure *3 semester hours*

Fourth Semester

Behavioral and Social Sciences Distribution*3 semester hours (BSSD)*

NWIT 204 - Network Virtualization and System Administrator *4 semester hours*

NWIT 264 - Network and Cloud Forensics *3 semester hours*

NWIT or CMSC or DATA or TECH 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.

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Transfer Opportunities

Montgomery College has partnerships with multiple four-year institutions and the tools to help you transfer. To learn more, please visit https://www.montgomerycollege.edu/transfer or http://artsys.usmd.edu .

Get Involved at MC!

Employers and Transfer Institutions are looking for experience outside the classroom.

MC Student Clubs and Organizations: https://www.montgomerycollege.edu/life-at-mc/student-life/

Related Careers

Some require a Bachelor's degree.
Information Security Analyst, Computer Systems Analyst, Computer Programmer, Software Developer, Network and Computer Systems Administrator, Computer Network Architect, Software Quality Assurance Engineer and Tester.

Career Services

Montgomery College offers a range of services to students and alumni to support the career planning process. To learn more, please visit https://www.montgomerycollege.edu/career.

Career Coach

A valuable online search tool that will give you the opportunity to explore hundreds of potential careers or job possibilities in Maryland and the Washington D.C. metropolitan area. Get started today on your road to a new future and give it a try. For more information, please visit https://montgomerycollege.emsicc.com .

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