

CLOUD COMPUTING AND SYSTEM ADMINISTRATOR CERTIFICATE

Total Credits: 19

Catalog Edition: 2025-2026

Program Description

This certificate program provides fundamental knowledge for cloud computing and system administrator positions and also develops skills to install, configure, manage, maintain, and troubleshoot a virtual network infrastructure/cloud platform using popular tools. This certificate program is designed for students pursuing a career in cloud computing and system administrator areas. **This program can be completed either on campus or online.**

[and-wireless-technologies/cloud-computing-and-system-administrator-certificate.html](https://www.montgomerycollege.edu/and-wireless-technologies/cloud-computing-and-system-administrator-certificate.html)

Program Outcomes

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

- Define the Internet of Things (IoT) and list various applications associated with the IoT.
- Evaluate various cloud delivery models.
- Describe the basics of networking fundamentals, including technologies, devices and protocols.
- Identify standard operating and maintenance resources.
- Explain files types, as well as their location, storage, use and attributes.
- Maintain high availability and fault tolerance in virtual environment.
- Configure and deploy Cloud products using virtualization technologies.
- Design and implement cloud applications that can scale up on a VM (Virtual Machine) and out across multiple VMs.
- Develop a plan with strategies to pass a minimum of two industry certification exams associated with cloud computing technology.

Program Advisors

- **Email:** networkingprogram@montgomerycollege.edu
- **Phone:** 240-567-1956

For more information, please visit <https://www.montgomerycollege.edu/academics/programs/network->

2025-2026

Program Advising Guide

An Academic Reference Tool for Students

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Program Requirements

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

Program Requirements

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

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

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

OR

NWIT 151 - Introduction to Networking *3 semester hours*

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

NWIT 208 - Cloud Architecting *3 semester hours*

OR

NWIT 209 - Cloud Administration *3 semester hours*

200-Level NWIT Elective *3 semester hours* *

Total Credit Hours: 19

* Any three or four-credit NWIT course can be used to satisfy this requirement.

This program can be completed either on campus or online.

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.

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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