INFORMATION TECHNOLOGY

Frederick Community College

Program Contact
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Information Technology

The information technology program offers innovative ways for students to prepare for employment in the field including degree and certificate programs.

Information Technology Specialist Area of Concentration within the A.A.S. in STEM Technology

The Information Technology Specialist Area of Concentration within the A.A.S. in STEM Technology is designed to prepare students for immediate entry into computer-related occupations and provide opportunities for individuals who are already in the industry to upgrade their skills.

The program consists of core requirements leading to an A.A.S. degree with intrinsic flexibility in a variety of topics.

Learning Outcomes

- Prepare a plan that addresses organizational needs.
- Identify problem requirements that demonstrate understanding of user and technical needs.
- Explain solutions that satisfy problem requirements.
- Analyze alternative solutions to determine the optimal result.
- Design problem solution that solves the requirements.
- Product documentation that describes solution implementation.
- Integrate hardware, software and security models that facilitate project outcomes.

Network Engineering Area of Concentration within the A.A.S. in STEM Technology

The Network Engineering Area of Concentration within the A.A.S. in STEM Technology prepares students for entry-level positions in the network engineering field. Students gain the knowledge and skills required to implement and maintain a defined network and will be able to configure, maintain, and troubleshoot network devices using network tools as well as analyze network traffic to make solution recommendations.

Learning Outcomes

- Prepare a networking plan and identify problem requirements that demonstrate understanding of administrative and technical needs.
- Analyze alternative networking solutions to determine the optimal result.
- Design and document networking solution that solves the requirements.
- Integrate hardware, software, networking technologies and security models that facilitate project outcomes.
- Maintain the hardware, software, networking technologies and security implementation of an existing network.

Software Engineering Area of Concentration within the A.A.S in STEM Technology

The Software Engineering Area of Concentration within the A.A.S. in STEM Technology trains graduates with the necessary software development skills to plan, analyze, design, validate, implement, deploy, and manage software systems.

This program covers system development life cycle, object oriented programming, mobile app development, C++, C#, Java, Python, R, SAS, and database management systems. The program is designed to prepare graduates for a career as a programmer, software architect, software developer, software engineer, or systems analyst.

Cloud Computing Certificate

Prepares students with the knowledge and skills required to implement, adopt, and govern cloud computing systems.

This certificate covers the objectives of five (5) professional certification exams: Amazon Web Services (AWS) Certified Cloud Practitioner, AWS Certified SysOps Administrator Associate, CompTIA Cloud Essentials, CompTIA A+, and CompTIA Network+.

Computer Studies Certificate

The Computer Studies Certificate program is designed for students seeking to build skills in the field of computer studies. The program gives students the opportunity to utilize the latest computer hardware and software with curriculum that emphasizes problem solving, teamwork, and creativity. Students develop the skills necessary for employment in the computer industry as they learn to define and analyze problems and develop, test, and maintain programs.

Learning Outcomes

- Prepare a plan that addresses organizational needs.
- Identify problem requirements that demonstrate understanding of user and technical needs.
- Design problem solutions that solve the requirements.
- Integrate hardware, software, and security models that facilitate project outcomes.

For more information:

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Computer Support Specialist Certificate

The Computer Support Specialist Certificate teaches students the skills to provide technical assistance and support to computer users by learning to troubleshoot software and hardware problems. The program includes instruction in computer concepts, information systems, networking, operating systems, computer hardware, the Internet, software applications, problem solving, and principles of customer service. This program covers the objectives required by CompTIA A+.

Learning Outcomes

- Identify problem requirements that demonstrate understanding of user and technical needs.
- Analyze alternative solutions.
- Design problem solutions that solve the requirements.
- Integrate hardware, software, and communications models.

Growth Potential & Estimated Salaries

The median annual wage for computer and information technology occupations was $88,240 in 2019. Overall employment of computer and information technology occupations is projected to grow 12% from 2018 to 2028, much faster than the average for all occupations.

The median annual wage for network and computer systems administrators was $83,510 in 2019. Overall employment of network and computer systems administrators is projected to grow 5% from 2018 to 2028.

The median annual wage for software developers was $103,620 in 2018. Overall employment of software developers is projected to grow 21% from 2018 to 2028, much faster than the average for all occupations.

Source: Bureau of Labor Statistics Occupational Outlook Handbook (bls.gov/ooh)

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Internship Program

Internships help students integrate what is taught in the classroom with what is required in the workplace. Students take internships to develop knowledge and skills valued by employers. Students in the Information Technology Specialist Area of Concentration, Network Engineering Area of Concentration, and Computer Studies Certificate programs at Frederick Community College (FCC) are eligible to receive credit for internships.

Financial Assistance

FCC provides a tuition payment plan for students who wish to spread payment over several months. Scholarship and loan assistance is available for eligible students. For complete scholarship information, contact Financial Aid at 301.846.2620.

Transfer Note

To find more information about how credits will transfer from FCC to a state four-year institution, visit artsys.usmd.edu or consult a College advisor. Students who plan to transfer should speak with an advisor or program manager from their chosen transfer institution before selecting elective courses.

View required course listings: frederick.edu/computer-studies frederick.edu/it