

# INFORMATION TECHNOLOGY, B.S. (ALTOONA)

**Begin Campus:** Any Penn State Campus

**End Campus:** Altoona

## Program Description

This degree is a new broad based technical and theoretical degree that will prepare students to implement and use information technology to realize a variety of goals within and between all types of organizations and businesses (e.g., reliability, accessibility, efficiency, cost reduction, and revenue enhancement). The emphasis is on providing the student with the theoretical frameworks needed to use information technology to solve problems while also providing a set of applied, real-world experiences. Students will acquire a broad set of skills across many areas of information technology, including programming and systems development, networking, databases, project management, and information security. Students will consider how the implementation of information technology in organizations affects social change and the delivery of information to the consumer. Upper-level course selections allow for specific advanced options including but not limited to application development, networking, cybersecurity, and business. Project-oriented, team-based projects that include significant writing and presentation components will be integrated throughout the curriculum.

### Application Development Option

*Available at the following campuses: Abington, Altoona, Beaver, Berks, Brandywine, Lehigh Valley, Schuylkill, Scranton, York*

This option prepares students for the design and development of complex object-oriented programming and technical skills to succeed in a fast-paced development and operations environment.

### Business Applications Option

*Available at the following campuses: Abington, Altoona, Beaver, Berks, Brandywine, DuBois, Greater Allegheny, Hazleton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Scranton, York*

This option prepares students to pursue careers in Information technology solving business organizational problems with an emphasis on the systems processes and business operations integration.

### Custom Information Technology Option

*Available at the following campuses: Altoona, Berks, Brandywine, Greater Allegheny, Hazleton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Scranton, Wilkes-Barre, York*

This option provides the opportunity for students to pursue an approved information technology interdisciplinary or exploratory program of study.

### Cybersecurity Option

*Available at the following campuses: Altoona, Beaver, Berks, Brandywine, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Scranton, York*

This option will provide students with the knowledge and cyber defense skills needed to critically assess and respond to modern information security threats. They will be prepared to protect information infrastructure and data from attacks and unauthorized access.

### Networking Option

*Available at the following campuses: Abington, DuBois, Mont Alto*

This option prepares students to pursue careers in the design, development, and support of complex networks and networking infrastructure.

### Security and Risk Analysis Option

*Available at the following campuses: Altoona, Berks, Brandywine, Lehigh Valley, Schuylkill*

This option prepares students to address the current and emerging security and risk challenges that face individuals, organizations and our nation, over a variety of domains including national/homeland security, emergency and disaster management, law and crime, and enterprise risk management.

## What is Information Technology?

Information Technology offers both broad organizational problem-solving skills and in-depth knowledge in current in-demand technical skills. Using technology to leverage organizational resources and address organizational challenges are at the forefront of the B.S. degree in Information Technology. The program includes required and optional courses in cybersecurity, databases, computer programming, project management, security and risk analysis, networking, web design and development, application development, and systems analysis. This broad base of skills is ideally suited for entry-level positions in all the above content areas.

### You Might Like This Program If...

- You enjoy technology and working with others to build solutions.
- You want to create high-tech solutions to organizational and societal challenges.
- You are interested in application development and programming.
- You are interested in improving computer systems and enhancing their safety for individuals and corporations.
- You want to leverage current and emerging technologies to improve business processes.