

Information Technology - Center for Applied Sciences, Interactive, and Information Technology (CASIIT) Program

Degree Type

Specialty Programs

Information Technology Career Cluster

The Information Technology Career Cluster is focused on building linkages in information technology occupations for entry level, technical and professional careers related to the design, development, support and management of hardware, software, multimedia and systems integration services.

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With the speed and breadth of innovative change, students entering the next-generation technological workplace will need to be able to adapt to rapid change while thinking critically and creatively. The ever-changing and interactive nature of the technology workplace will also require students to demonstrate highly developed social and technical intelligence. The Information Technology Programs will provide interested students the opportunity to become engaged in an intensive technological program of studies developed through a collaborative relationship with the business and academic community.

Some courses in these programs are offered for Dual Enrollment through a partnership with Northern Virginia Community College.

A series of professional certificate programs are designed for the Standard or Advanced Diploma Student. These areas of study will immerse the student in a one- or two-year program of study, which after successful completion of the exam, could lead to professional industry certification.

Program Type

Transfer

Schools

Battlefield High School

Battlefield CASIIT Program

Students who complete four of the classes below, with an overall and CASIIT GPA* of 2.5, will receive a silver CASIIT medal

Students who complete six of the classes below, with an overall and CASIIT GPA* of 3.0, will receive a gold CASIIT medal

Grade 9

Students will take at least one of the following courses:

Title	Credits
Advanced Computer Mathematics	1
AP Computer Science Principles	1
Information Technology Fundamentals	1
IT Fundamentals DE	1
IT Graphic Design	1
IT Web Technologies	1
IT Web Technologies (DE)	1
Sustainability and Renewable Technologies	1

Grade 10

Students will take at least one of the following courses:

Title	Credits
AP Computer Science A	1
Engineering Explorations 1 - Robotics	1
IT Advanced Web Technologies	1
IT Computer Graphics 1	1
IT Programming	1
IT Photography	1

Interactive Technology Concentration

Grades 11 and 12

Students will take at least two of the following courses:

Title	Credits
IT Computer Graphics 2	1
IT Multimedia Software Design and Development 1	1
AP Studio Art Drawing	1
Art Portfolio Preparation	1
Photography 2	1

Applied Sciences Concentration

Grades 11 and 12

Students will take at least two of the following courses:

Title	Credits
Engineering Explorations 1 - Robotics	1
Data Structures and Algorithms	1
Advanced Computer Studies	1
Advanced Programming	1

Computer Networking (Cisco) Concentration

Grades 11 and 12

Careers in Network Systems involve network analysis, planning and implementation, including design, installation, maintenance and management of network systems. Successful establishment and maintenance of information technology infrastructure is critical to the success of almost every 21st century organization. People with expertise in Network Systems are in high demand for a variety of positions in organizations of all sizes and types, doing work such as creating and maintaining the infrastructure in medical facilities that enables multiple doctors to view the same patient's X-rays in real-time to determine the diagnosis and the best treatment.

Title	Credits
Cybersecurity Systems Technology	1
Computer Networking Hardware Operations 1	0.5
Computer Networking Hardware Operations 2	0.5
Computer Networking Hardware Operations 3	0.5
Computer Networking Hardware Operations 4	0.5

Database Design and Management (Oracle) Concentration

Grades 9 through 12

Careers in Information Support and Services involve IT deployment, including implementing computer systems and software, providing technical assistance and managing information systems. Successful IT deployment implementation of computer systems and software, provision of technical assistance, creation of technical documentation and management of information systems is critical to the success of most 21st century organizations. People with expertise in Information Support and Services are in high demand for a variety of positions in organizations of all sizes and types, doing work such as integrating multiple databases at a global investment company, enabling employees to share information between the New York, Paris and Hong Kong offices and improving service to customers.

Title	Credits
Information Technology Fundamentals	1
Database Design and Management (Oracle)	1
Database Design and Management with PL/SQL (Oracle)	1
Career Strategies	1

Network Systems Concentration

Grades 9 through 12

Careers in Network Systems involve network analysis, planning and implementation, including design, installation, maintenance and management of network systems. Successful establishment and maintenance of information technology infrastructure is critical to the success of almost every 21st century organization. People with expertise in Network Systems are in high demand for a variety of positions in organizations of all sizes and types, doing work such as creating and maintaining the infrastructure in medical facilities that enables multiple doctors to view the same patient's X-rays in real-time to determine the diagnosis and the best treatment.

Title	Credits
Cybersecurity Systems Technology	1
Advanced Cybersecurity Systems Technology	2
Cybersecurity Systems Technology (DE)	1

Programming and Software Development Concentration

Grades 9 through 12

Careers in Programming and Software Development involve the design development implementation and maintenance of computer systems and software, requiring knowledge of computer operating systems, programming languages and software development. People with expertise in programming and software development work with cutting-edge technologies to develop tomorrow's products for use by businesses and consumers. While many of the career opportunities in this area are in software companies, large organizations of other types, such as Financial Services and Business, also offer many opportunities. People with expertise in programming and software development are in high demand, doing work such as creating the software that launches and runs NASA space shuttles.

Title	Credits
Game Design and Development	1
Advanced Game Design and Development	1
IT Programming DE or Programming I	1
Advanced Programming or IT Advanced Programming DE	1
Total Credits	4-6