Academy Overview:
Information Technology

Information technology/networking companies in the region are seeking qualified employees who are fluid with technology, adaptable to change, and able to think on their feet. It is our mission to develop IT technicians to help companies grow and innovate while at the same time engage young people in exciting courses geared toward lucrative careers.

Programming and Software Development—prepares students for further study and careers in the field of computer science through programming, hardware design, networks, graphics, databased and information retrieval, cyber security, software design, programming languages, logic, programming paradigms, translation between levels of abstraction, artificial intelligence, the limits of computations, applications in information technology and information systems, and social issues (internet security, privacy and intellectual property).

Network Systems---prepares students with the fundamentals and advanced computer, interpersonal, and problem-solving skills necessary for success in computer fields. Students gain a background in hardware, software, and /or telecommunications. Computer-aided trouble shooting and instructions is integrated into the learning process.

Interactive Media Students are introduced to the role of a digital media specialist by learning about the essential components of how to create a Web site, produce a training video or design a computer game. Students will create interactive computer applications using the elements of text, 2-D and 3-D graphics, animation, sound, video, and digital imaging. These skills prepare students for entry-level positions and other occupational/ educational goals.
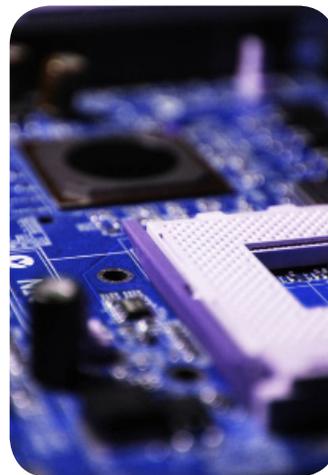
Course Sequences

Grade	Programming & Software Dev.	Network Systems	Interactive Media
9th	Career Preparedness	Career Preparedness	Career Preparedness
10th	Information Technology Fundamentals	Information Technology Fundamentals	Business Technology Applications (BTA)
11th	HTML/Java Script; Software Dev.; Database I	Networking I and II	Advanced BTA or Multimedia Design
12th	Database II; Computer Science AP	Networking III and IV	Multimedia Publications

Course Descriptions

Business Technology

This course is designed to assist students in developing technological proficiencies in word processing, spreadsheets, databases, presentations, communications, Internet use, ethics, and careers using technology applications. Simulations and projects promoting teamwork, leadership, and workplace skills offer further opportunities for applications of knowledge and skills.

Advanced Business Technology

This course is designed to provide students with the project-based applications of concepts learned in Business Technology Applications or Business Essentials. Personal computing and business skills are integrated throughout the course as students use a variety of software applications to produce and prepare documents for publication and learn how to select appropriate software for generating information.

Information and Technology Support Services

This course is designed to provide students with knowledge of computer hardware, operating systems, and computer software applications. This course provides students with additional skills necessary to effectively plan, develop, and administer both a local area network (LAN) and a wide area network (WAN).

Multimedia Design

Multimedia Design is designed to provide students with hands-on skills involving graphic design, digital photography, Web publishing, and digital video production. Students use various hardware peripherals and software for completing documents.

Multimedia Publications

This course is designed to provide students with the ability to utilize digital equipment and multimedia digital imaging software, produce interactive media projects, and develop publication layouts. Students use various hardware peripherals as well as the Internet for integrating skills to create a variety of publications.

Computer Management and Support

This course is designed to provide students with skills necessary to manage a stand-alonecomputer on a home network. Topics in this course include computer hardware, computer operating systems, network architecture, network protocols, career opportunities, and network design and security.

Information Technology Fundamentals

Information Technology introduces students to the knowledge base and technical skills for information technology careers. Students study the nature of business and demonstrate knowledge of the functions of information systems in business. Emphasis is placed on maintaining a safe working environment and on building interpersonalskills needed for working in the information technology environment. Students demonstrate appropriate knowledge and behaviors of legal responsibilities by information technology professionals. Students explore a variety of information technology career opportunities and develop a personal career plan to meet their career goals and objectives.

Networking 1

This course is designed to provide students with skills involving a hands-on, career-oriented approach to learning networking that includes practical experiences. This course includes activities that emphasize the application of networking in terms of implementation and career opportunities.

Networking 2

This course is a one-credit course designed to provide students with skills involving hands-on learning by installing a router, configuring a server, and performing disaster recovery. This course includes a strong emphasis on proper safety practices and industry ethics.

Networking 3

This course is a one-credit course designed to provide students with skills needed to perform routing and switching in an enterprise network. Students configure a switch with virtual local area networks (VLANs) and inter- switch communication. Students perform troubleshooting using a structured methodology.

Networking 4

This course is a one-credit course designed to provide students with the skills needed to design and support computer networks. Students learn the technical skills and soft skills needed to succeed in entry-level networking professions.

Software Development

This course is designed to provide students with an introduction to the C++ programming language, structured elements of C++, classes, data, abstractions, inheritance, polymorphism, storage management, and a C++ programming environment. Simple programming exercises will reinforce the theory and stimulate understanding. It is recommended that Information Technology Fundamentals be taken prior to this course.

Database Design 1

This course is a one-credit course designed to provide students with technical, analytical, and business skills that support the pursuit of professional careers and advanced study. Students learn the fundamentals of Structured Query Language (SQL) database technology, including creating, sorting, querying, and preparing reports.

Java Programming

This course is a one-credit course designed to provide students with a conceptual understanding of object oriented programming. Students learn to use Java language's object-oriented technologies to solve business problems. Topics also include language fundamentals and the Java language application programming interface (API). Students create classes, objects, and applications using Java language.

Career Preparedness

This course focuses on three integrated areas of instruction-academic planning and career development, financial literacy and technology. Career Preparedness is a one-credit course required for graduation that can be taught in grades 9-12. Preferably in grade 9.