

PROGRAM: Information Technologies

**PROGRAM
CIP CODE:** 15.1200

DESCRIPTION: The **Information Technologies** program is designed to prepare students for employment/postsecondary education related to the design, development, installation, implementation, use and management of computers and networks. As well as prepare students for employment in various positions such as Applications Specialist, Desktop Technician, Game Developer, Hardware Technican/Engineer, Help Desk Technican/Manager, Information Architect, IT Designer, Multimedia Developer, Network Administrator/Analyst/Technician, PC Technician, Programmer, Program Analyst, Software Developer/Engineer, Systems Analyst, Systems Operations Specialist, Technical Sales Representative, Technical Support Technican/Manager, Technical Writer, Training Manager, Web Designer/Developer, Webmaster and Wireless Network Specialist.

An integrated approach of teaching and learning is provided as students enhance their technical knowledge and skills that are associated with functions within Information Technologies occupations. In addition to the occupation related skills, students completing this program will also develop advanced critical thinking, applied academic, interpersonal relations, life management, business, economic, and leadership skills required for the 21st century workplace.

The Information Technologies program consists of a core curriculum and four areas of specialization for a student to choose from: Option A) Computer Maintenance, Option B) Network Technologies, Option C) Software Development or Option D) Web Page Development. The program uses a delivery system made up of four integral parts: formal/technical instruction, experiential learning, supervised occupational experiences, and the Career and Technical Student Organization, FBLA and/or SkillUSA.

RECOMMENDED PROGRAM SEQUENCE OF COURSES:

**Career
Preparation** The following describes the recommended sequence of courses developed from industry-validated skills necessary for initial employment or continued related education. All the Career Preparation state-designated Information Technologies standards are addressed in this instructional sequence.

15.1200.10 **Information Technologies Fundamentals:** This course introduces principles of computers with an emphasis on basic concepts of computer maintenance, network technologies, software development and web page development. While also providing an understanding of the IT industry, computer mathematics and the evolution of the computer.

-and-

One of the four Career Preparation options (.20, .30, .40 or .50) will be included as part of the instructional sequence for this program:

Option A

15.1200.20 **Computer Maintenance:** This option prepares students to apply technical knowledge and skill in PC hardware and software systems with an emphasis on PC repair and maintenance. This option will offer skills necessary to competently perform in the industrial environment, as well as pass the necessary exams to obtain certification.

-or-

Option B

15.1200.30 **Network Technologies:** This option prepares students to apply technical knowledge and skills to install, configure and troubleshoot basic networking hardware, protocols, and services. This option will offer the skills necessary to competently perform in the industrial environment, as well as pass the necessary exams to obtain certification.

-or-

Option C

15.1200.40 **Software Development:** This option prepares students to apply software theory and programming methods to the solution of business data problems. This option will offer the skills necessary to competently perform in the industrial environment, as well as pass the necessary exams to obtain certification.

-or-

Option D

15.1200.50 **Web Page Development:** This option prepares students to design, build and implement webpages and sites for organizations and integrating sites with backend applications while also learning a variety of web development languages. This option will offer the skills necessary to competently perform in the industrial environment, as well as pass the necessary exams to obtain certification.

And program may elect to add:

15.1200.75 **Information Technologies - Internship:** This course provides CTE students an opportunity to engage in learning through participation in a structured work experience that can be either paid or unpaid and does not necessarily require classroom instruction that involves the application of previously developed Information Technologies knowledge and skills.

-or-

15.1200.80 **Information Technologies - Cooperative Education:** This course utilizes cooperative education methodology to combine school-based and supervised work-based learning experiences directly related to the standards identified for the Information Technologies program.

TEACHER CERTIFICATION REQUIREMENTS FOR THE INFORMATION TECHNOLOGIES PROGRAM

CAREER PREPARATION: The instructor must be CTE certified according to the following table

Information Technologies	CERTIFICATES
	Types: PCTBM, PCTI, PCTIEP, SCTBM, SCTI, SCTIEP
<p>Note:</p> <ul style="list-style-type: none"> ▪ Information Technologies, 15.1200.70 may be a part of the sequence and the teacher must hold a Cooperative Education Endorsement (CEN). ▪ Teacher/Coordinator 15.1200.75 is not required to have a Cooperative Education Endorsement (CEN). ▪ Teacher/Coordinator 15.1200.80 is required to have a Cooperative Education Endorsement (CEN). 	

CERTIFICATE ABBREVIATIONS FOR THE INFORMATION TECHNOLOGIES PROGRAM

Certificate Types	
PCTBM	Provisional Career and Technical Education Business and Marketing
PCTI	Provisional Career and Technical Education Industrial Technology
PCTIEP	Provisional Career and Technical Education Industrial and Emerging Technologies
SCTBM	Standard Career and Technical Education Business and Marketing
SCTI	Standard Career and Technical Education Industrial Technology
SCTIEP	Standard Career and Technical Education Industrial and Emerging Technologies