



Information Technology Program Guide

Information Technology programs provide the foundation for entry level, technical, and professional careers related to the design, development, support and management of computer hardware, software, multimedia, and systems integration services. Careers in this area include web designers, network administrators, computer science teachers, computer forensic professionals, and information security analysts.



Start In High School. Follow *Your* Perfect Path.

High Schools

By participating in high school CTAE programs, students can create opportunities to continue their studies in college, pursue an entry-level job, or serve in a related field in the military. (See back for a full list of programs.)

FBLA

Future Business Leaders of America (FBLA) is the Career & Technical Student Organization (CTSO) that gives students an opportunity to compete in career-related events and gain leadership experience.

Certifications

After completing a CTAE pathway, students prepare for certification exams, such as CompTIA Security+, HTML 5, and Microsoft Software Development, at CTAE expense, that may qualify them for entry-level jobs and/or college credit.

Work-Based Learning

Students have the opportunity to be released early from school to work in positions related to their CTAE pathways.

Direct-to-Work

Rigorous high school programs prepare students for information technology careers upon graduation.



Sample Entry-Level Positions

Computer User Support Specialists	\$50,627
Computer Programmers	\$88,130
Computer Network Support Specialists	\$67,558
Web Developers	\$76,378

Data source for the above information: Georgia Department of Labor

Desired Aptitudes & Skills

- Communication
- Organizational skills
- Problem-solving
- Customer Service
- Computer skills/typing

MCS D Information Technology Programs

Cybersecurity: This series of courses explores the fundamentals of Cybersecurity, focusing on computer security, practices, devices, and best practices management. It explores internal and external threats to network security and design, how to enforce network level security policies, and how to protect an organization's information. It expands into malware threats, cryptography, organizational security, and wireless technologies. *(Carver)*

Computer Science: This career pathway focuses on the study of computers and computing as well as their theoretical and practical applications. It applies the principles of mathematics, engineering, and logic to a plethora of functions, including algorithm formulation, software and hardware development and artificial intelligence. *(Hardaway and Spencer)*

Programming: These courses are designed for high school students to strategize, design, and develop games and mobile and desktop applications that can be produced in the real world. Students will learn about life-cycles of project development and use models to develop applications. Attention will be placed on how user interfaces affect the usability and effectiveness of a game or an application. Programming constructs will be employed which will allow students' applications to interact with "real world," stimuli. The course exposes students to privacy, legality, and security considerations with regards to the software industry. *(Jordan and Spencer)*

Web and Digital Design: This career pathway will train students to create and learn digital media applications using elements of text, graphics, animation, sound, video and digital imaging for various format. Emphasis will be placed on storyboarding, visual development, project management, digital citizenship, and web processes. Students will create and design web sites that incorporate digital media elements to enhance the content of the website. They will move past learning how to write code and progress to designing a professional looking web site using graphical authoring tools. *(Carver, Northside, and Spencer)*



For more information, contact your school counselor, CTAE Supervisor, or visit the Muscogee County CTAE website by scanning the QR code on this document.



Non-discrimination statement

The MCS D CTAE Department does not discriminate on the basis of race, color, sex (including pregnancy and related conditions), religion, national origin, age, military status, disability, or any other legally protected status in its educational programs and activities, and provides equal access to the Boy Scouts and other designated youth groups as appropriate. Lack of English language skills will not be a barrier to admission and participation. Equity coordinators are available to address allegations of discrimination. For additional information or referral to the appropriate system coordinator, contact Victoria Thomas, CTAE Director, at 2960 Macon Road, Columbus, Georgia 31906; 706-748-2094.