

Information Technology Career Cluster

The Information Technology (IT) career cluster focuses on the design, development, support, and management of hardware, software, multimedia, and systems integration services. This career cluster includes occupations ranging from Software Developer and Programmer to Cybersecurity Specialists and Network Analysts.

Program of Study: *Programming and Software Development*

The Programming and Software Development program of study focuses on occupational and educational opportunities associated with researching, designing, developing, testing, and operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computer applications. This program of study includes creating, modifying, and testing the codes, forms, and script that allow computer applications to run.

Secondary Courses for High School Credit

9th Grade	Computer Science 1 Honors
10th Grade	AP Computer Science
11th Grade	- Computer Science 2: Python Programming - Video Game Design 1
12th Grade	- Practicum in IT: Internships - Video Game Design 2
Optional Electives	- Principles of Information Technology - Entrepreneurship - Career Prep 1

Internship and Practicum Opportunities

Students have the opportunity to gain hands-on experience in a variety of different businesses. There are numerous internships opportunities including the following: **Caterpillar (CAT), Textron, Bell Helicopter, iTrust, among others.**

Career and Technical Student Organization (CTSO)

SkillsUSA

Workforce Development
Organization

Career & Technical Student Organizations (CTSOs) are student-led organizations that build leadership, career skills, and real-world experience through competitions, networking, and hands-on learning.

Aligned Industry-Based Certifications

- Information Technology Specialist Java
- Certified Entry-Level Python Programmer (PCEP)



Example Postsecondary Opportunities

Apprenticeships

- Computer Programmer Apprenticeship

Associate Degrees

- Computer Programming
- Web Page, Digital/Multimedia and Information Resources Design

Bachelor's Degrees

- Data Science
- Computer Engineering

Master's, Doctoral, and Professional Degrees

- Management Science
- Computer Software Engineering

Additional Stackable IBCs/License

- AWS Certified Developer Associate



Example Aligned Occupations

Computer User Support Specialists

Median Wage: \$51,411
Annual Openings: 5,757
10-Year Growth: 21%

Software Developers

Median Wage: \$111,705
Annual Openings: 15,324
10-Year Growth: 36%

Computer Programmers

Median Wage: \$87,997
Annual Openings: 1,176
10-Year Growth: 4%

For more information, visit
the KISD Course Guide
<https://tinyurl.com/464uxm25>

