

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.



Programming and Software Development (VMHS Only) Statewide Program of Study



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

Level 1	T351	Principles of Information Technology (1/YL)
Level 2	T347R	Computer Science I (1/YL)
Level 3	T348A	AP Computer Science Math w/LOTE (2/YL)
Level 4	T349R Or T362	Computer Science III (1/YL) Or Practicum in Information Technology

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Intern at a local IT company to develop skills in programming and coding
- Shadow a software developer to learn how they create and improve software to support efficient processes at their company

Expanded Learning Opportunities

- Program and create a game
- Participate in SkillsUSA or TSA

Aligned Industry-Based Certifications

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



Successful completion of the Programming and Software Development program of study will fulfill requirements of the Business and Industry endorsement or the STEM endorsement if the math and science requirements are met.



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%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.

For more information visit: <https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>