



# 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.

## Statewide Program of Study: Cybersecurity

The Cybersecurity program of study focuses on occupational and educational opportunities associated with planning, implementing, upgrading, or monitoring security measures for the protection of computer networks and information. This program of study includes responding to computer security breaches and viruses and administering network security measures.

### Secondary Courses for High School Credit

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|----------------|---|
| <b>Level 1</b> | <ul style="list-style-type: none"> <li>Principles of Information Technology</li> </ul>  |
| <b>Level 2</b> | <ul style="list-style-type: none"> <li>Business Information Management I (BCIS1305*/POFI2301)</li> <li>Computer Maintenance + Lab (ITSC1325/ITSC1305)*</li> </ul> |
| <b>Level 3</b> | <ul style="list-style-type: none"> <li>Networking + Lab (ITNW1358/ITNW1325)*</li> </ul>   |
| <b>Level 4</b> | <ul style="list-style-type: none"> <li>Practicum in Information Technology (ITSY1300/ITSY1342)*</li> </ul>  |

### Aligned Advanced Academic Courses

AP	AP Computer Science A
Dual Credit	BCIS1305 Business Computer Applications
	POFI2301 Microsoft Word
	ITSC1325 Personal Computer Hardware
	ITSC1305 Introduction to PC Operating Systems
	ITSY1300 Fundamentals of Information Security
	ITSY1342 Information Technology Security
	*TVCC's Computer Science Network & Security OSA

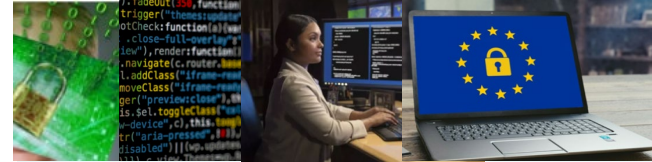
Students should be advised to consider these course opportunities to enrich their preparation. AP courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>Intern at a local bank, hospital, or government office to develop skills in implementing security measures</li> <li>Interview with an information security analyst to learn how they plan for, monitor, and upgrade security measures at their organization</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>Participate in a Hackathon</li> <li>Participate in TSA or SkillsUSA</li> </ul>

### Aligned Industry-Based Certifications

- CompTIA A+ Certification
- CompTIA IT Fundamentals+



### Examples Postsecondary Opportunities

#### Associate Degrees

- Computer and Information Systems Security
- Computer Programming

#### Bachelor's Degrees

- Computer Science
- Computer Software Engineering

#### Master's, Doctoral, and Professional Degrees

- Computer and Information Systems Security/Auditing/Information Assurance
- Computer Software Engineering

#### Additional Stackable IBCs/License

- Certified Ethical Hacker (CEH)



### 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%

#### Information Security Analysts

Median Wage: \$110,268  
Annual Openings: 1,719  
10-Year Growth: 49%

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>

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