



# 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

- |         |  |
|---------|--|
| Level 1 | <ul style="list-style-type: none"> <li>Principles of Information Technology</li> </ul>   |
| Level 2 | <ul style="list-style-type: none"> <li>Foundations of Business Communications &amp; Tech* (BCIS1305*/POFI2301)</li> <li>Computer Maintenance + Lab (ITSC1325/ITSC1305)*<br/>*PC Support OSA</li> </ul> |
| Level 3 | <ul style="list-style-type: none"> <li>Networking (ITNW1325)*</li> </ul>   |
| Level 4 | <ul style="list-style-type: none"> <li>Practicum in Information Technology (ITSY1300/ITSY1342)*<br/>*TVCC's Network &amp; Security OSA</li> </ul>  |

## Aligned Advanced Academic Courses

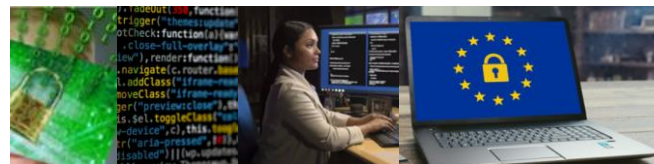
AP	<ul style="list-style-type: none"> <li>AP Computer Science Principles</li> <li>AP Computer Science A</li> </ul>
Dual Credit	<ul style="list-style-type: none"> <li>BCIS1305 Business Computer Applications*</li> <li>POFI2301 Microsoft Word</li> <li>ITSC1325 Personal Computer Hardware</li> <li>ITSC1305 Introduction to PC Operating Systems</li> <li>ITNW1325 Fundamentals of Networking Technologies</li> <li>ITSY1300 Fundamentals of Information Security</li> <li>ITSY1342 Information Technology Security</li> </ul>

## Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	<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>
Expanded Learning Opportunities	<ul style="list-style-type: none"> <li>Participate in a Hackathon</li> <li>Participate in TSA</li> </ul>

## Aligned Industry-Based Certifications

- CompTIA A+ Certification
- CompTIA Tech+



## 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: \$51,823  
Annual Openings: 6,387  
10-Year Growth: 21%

### Software Developers

Median Wage: \$127,000  
Annual Openings: 12,350  
10-Year Growth: 36%

### Information Security Analysts

Median Wage: \$115,042  
Annual Openings: 1,760  
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/it-cybersecurity-extendedpptx.pdf>

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