



# 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**
- Principles of Information Technology
  - Foundations of Cybersecurity

- Level 2**
- None

- Level 3**
- Networking + Networking Lab

- Level 4**
- Practicum in Information Technology

### Aligned Advanced Academic Courses

- AP or IB**
- AP Computer Science Principles
  - AP Computer Science A

- Dual Credit**
- Dual credit offerings will vary by local education agency.

*Students should be advised to consider these course opportunities to enrich their preparation. AP or IB 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

#### Work-Based Learning Activities

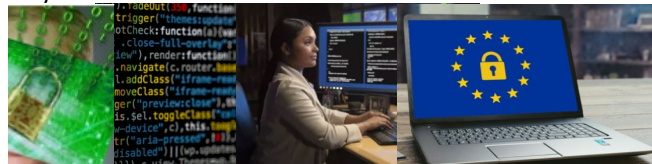
- Intern at a local bank, hospital, or government office to develop skills in implementing security measures
- Interview with an information security analyst to learn how they plan for, monitor, and upgrade security measures at their organization

#### Expanded Learning Opportunities

- Participate in a Hackathon
- Participate in TSA or SkillsUSA

### Aligned Industry-Based Certifications

- CodeHS Cybersecurity Level 1 Certification
- Computer Networking Fundamentals - Job Ready



### 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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## Statewide Program of Study: Cybersecurity

### Course Information

Level 1

Course	Prerequisites   Corequisites	Career Clusters
<b>Principles of Information Technology</b> 13027200 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
<b>Foundations of Cybersecurity</b> 03580850 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None	

Level 2

Course	Prerequisites   Corequisites	Career Clusters
None		

Level 3

Course	Prerequisites   Corequisites	Career Clusters
<b>Networking + Networking Lab*</b> 13027410 (2 credits)	<b>Prerequisites:</b> None <b>Corequisites:</b> None	

Level 4

Course	Prerequisites   Corequisites	Career Clusters
<b>Practicum in Information Technology</b> First Time Taken: 13028000 (2 credits)	<b>Prerequisites:</b> A minimum of two high school information technology (IT) courses <b>Corequisites:</b> None	

For additional information on the **Information Technology** career cluster, contact [cte@tea.texas.gov](mailto:cte@tea.texas.gov) or visit <https://tea.texas.gov/cte>

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