

# 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.

## CFISD Program of Study: Cybersecurity

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.

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.



### Recommended Course Sequence (credits)(A=advanced)

Students wanting an endorsement in this area must select three (3) or more courses totaling four (4) or more credits with at least one being advanced.

- |                 |                                                                                                                                                                                    |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Grade 9</b>  | <ul style="list-style-type: none"> <li>Principles of Computers &amp; Coding (formerly Prin of Info Tech) (1-middle school only)</li> <li>Networking (1)</li> </ul>                 |
| <b>Grade 10</b> | <ul style="list-style-type: none"> <li>AP Computer Science Principles (1-LOTE) OR Computer Science I K (1-LOTE)</li> <li>AND Internetworking Technologies I (Cisco) (1)</li> </ul> |
| <b>Grade 11</b> | <ul style="list-style-type: none"> <li>Internetworking Technologies II (Cisco) (1) (A)</li> </ul>                                                                                  |
| <b>Grade 12</b> | <ul style="list-style-type: none"> <li>Capstone – Cybersecurity (1) (A)</li> <li>AND/OR Practicum in Information Technology (2) (A)</li> </ul>                                     |

### Aligned Industry-Based Certifications Offered in CFISD

(course) (CCMR=impacts “career ready” status as outlined by the TEA Accountability System for College, Career or Military Readiness)

- CCST-Networking (Internetworking I) (only CCMR in this program of study)
- Cisco CCNA (200-301) Implementing and Administering Cisco Solutions (Internetworking Technologies I) (CCMR)
- CompTIA A+ Certification (Networking) (CCMR)
- CompTIA Network+ (Internetworking Technologies II) (CCMR)
- CompTIA Security+ (Capstone – Cybersecurity) (CCMR)
- Information Technology Specialist: Networking (Internetworking Technologies I) (CCMR)
- Potential college credit via earning CompTIA A+ certification (Networking)
- Potential college credit via AP exams (AP Computer Science Principles)

### Aligned Advanced Academic Courses

**Workforce Dual Credit** See your counselor or dual credit materials for information on courses leading to a Networking/Cybersecurity Certificate/Degree.

### Work-Based Learning and Expanded Learning Opportunities

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|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Work-Based Learning Activities</b>  | <ul style="list-style-type: none"> <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 TSA or SkillsUSA</li> </ul>                                                                                                         |

### AVAILABLE TO STUDENTS AT ALL 12 HIGH SCHOOLS!

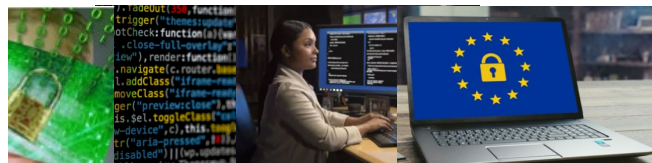
- Receive training on industry-standard material, software & equipment.
- Enhance your resume by earning recognized industry-based certifications.
- Get a jump-start by taking advantage of core curriculum dual credit, transferable to 2-yr and 4-yr degrees.

### ALL AT A FRACTION OF THE COST!



For more information on this and other CTE programs of study offered in CFISD, visit <https://www.cfisd.net/academics/career-technical-education/programs-of-study>

What's next? For more information on related programs available to continue your studies at Lone Star College, visit <https://www.lonestar.edu/programs-of-study>



### 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

Data Source: Texas Wages, Texas Workforce Commission. rev 3/8/2024

#### 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%