



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: *Networking Systems*

The Networking Systems program of study focuses on occupations and educational opportunities associated with designing and implementing computer and information networks, such as local area networks (LAN), wide area networks (WAN), intranets, extranets, and other data communications networks. This program of study includes analysis of data processing challenges to implementing and improving computer systems.



Secondary Courses for High School Credit

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|----------------|--|
| Level 1 | <ul style="list-style-type: none"> Principles of Information Technology |
| Level 2 | <ul style="list-style-type: none"> Computer Science 1 Computer Maintenance AP Computer Science Principles Entrepreneurship 1 |
| Level 4 | <ul style="list-style-type: none"> Practicum in Information Technology Practicum in Entrepreneurship |

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Intern at a local education, public service, or technology organization to develop skills in installing hardware and software
- Interview a network administrator to learn about their career path and what credentials they earned to be successful in their role

Expanded Learning Opportunities

- Participate in a Hackathon
- Participate in SkillsUSA or TSA

Aligned Industry-Based Certifications

- TBA



Successful completion of the Networking Systems program of study will fulfill requirements of the Business and Industry endorsement.



Example Postsecondary Opportunities

Apprenticeships

- Network Engineer Apprenticeship

Associate Degrees

- Computer Systems Networking and Telecommunications
- Network and System Administration

Bachelor's Degrees

- Computer and Information Sciences
- Information Technology

Master's, Doctoral, and Professional Degrees

- Computer Science
- Information Technology

Additional Stackable IBCs/License

- Aruba Certified Mobility Associate (ACMA)



Example Aligned Occupations

Computer Network Support Specialists

Median Wage: \$65,646
Annual Openings: 1,634
10-Year Growth: 19%

Computer Systems Analysts

Median Wage: \$101,716
Annual Openings: 4,985
10-Year Growth: 19%

Network and Computer Systems Administrators

Median Wage: \$85,375
Annual Openings: 2,900
10-Year Growth: 20%

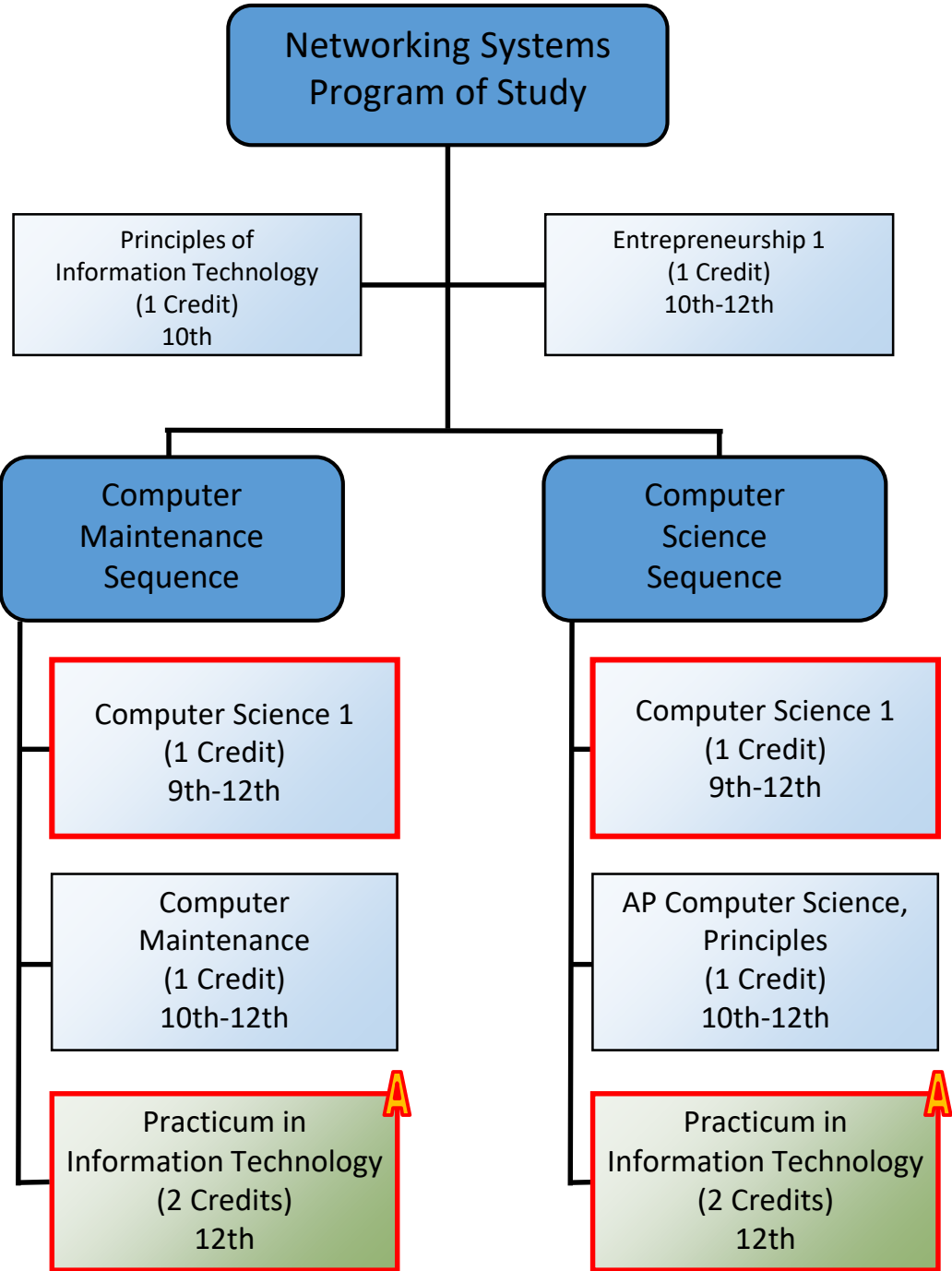
Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:

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

**Information Technology
Cluster**
Business & Industry Endorsement





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: Programming and Software Development

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 | <ul style="list-style-type: none"> Principles of Information Technology |
| Level 2 | <ul style="list-style-type: none"> Computer Science 1 AP Computer Science Principles Entrepreneurship 1 |
| Level 3 | <ul style="list-style-type: none"> AP Computer Science A |
| Level 4 | <ul style="list-style-type: none"> Practicum in Audio/Video Production Practicum in Information Technology Practicum in Science, Technology, Engineering, & Mathematics Practicum in Entrepreneurship |

Aligned Advanced Academic Courses

AP or IB	AP Calculus AB AP Statistics
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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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Program and create a game Participate in SkillsUSA or TSA

Aligned Industry-Based Certifications

- TBA



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>

Information Technology Cluster
Business & Industry Endorsement
Also Satisfies STEM Endorsement

**Programming & Software
Development
Program of Study**

Principles of
Information Technology
(1 Credit)
9th-10th

Entrepreneurship 1
(1 Credit)
10th-12th

Computer Science 1
(1 Credit)
9th-12th

AP Computer Science,
Principles
(1 Credit)
10th-12th

AP Computer Science A
(1 Credit)
11th-12th

Practicum in
Information Technology
(2 Credits)
12th

A