Revised–July 2026

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

Level 1
- Principles of Information Technology
- Fundamentals of Computer Science

Level 2
- Computer Science I
- Internetworking Technologies I (Cisco)
- Computer Maintenance
- Computer Maintenance + Computer Maintenance Lab
- Advanced Placement (AP) Computer Science Principles
- Entrepreneurship I

Level 3
- Internetworking Technologies II (Cisco)
- Advanced Cloud Computing
- Networking
- Networking + Networking Lab

Level 4
- Independent Study in Technology Applications
- Independent Study in Evolving/Emerging Technologies
- Career and Technical Education Project-Based Capstone
- Practicum in Information Technology
- Practicum in Information Technology + Extended Practicum in Information Technology
- Practicum in Entrepreneurship
- Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship
- Career Preparation for Programs of Study
- Career Preparation for Programs of Study + Extended Career Preparation

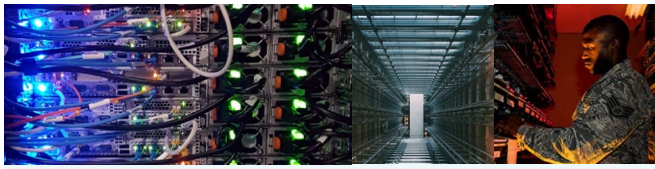
Work-Based Learning and Expanded Learning Opportunities

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

- AWS Certified Cloud Practitioner
- AWS Certified Solutions Architect – Associate
- AWS Certified SysOps Administrator – Associate
- Cabling Specialist Fiber Optic Systems
- Certified in Cybersecurity (CC)
- Cisco Certified Network Administrator (CCNA)
- Cisco Certified Network Associate (200-301 CCNA)
- Cisco Certified Support Technician Cybersecurity
- Cisco Certified Support Technician Networking
- CompTIA A+ Certification
- CompTIA Cybersecurity Analyst (CySA+)
- CompTIA Linux+
- CompTIA Network+
- CompTIA Server+
- CompTIA Tech+
- Computer Networking Fundamentals - Job Ready
- Cybersecurity Fundamentals
- Cybersecurity Fundamentals: An ISACA Certificate
- Google Cloud Certified Professional - Cloud Architect
- Information Technology Specialist Cloud Computing
- Information Technology Specialist Cybersecurity
- Information Technology Specialist: Networking
- Microsoft 365 Certified: Fundamentals
- Microsoft Certified: Azure Administrator Associate
- Microsoft Certified: Azure Data Fundamentals
- Microsoft Certified: Azure Fundamentals
- Microsoft Certified: Azure Solutions Architect Expert
- Microsoft Security, Compliance, and Identity Fundamentals
- Network Cabling Specialist Copper-based Systems
- Network Defense Essentials (NDE)
- Telecommunications Technologies

Successful completion of the Networking Systems program of study will fulfill requirements of the STEM endorsement if the math and science requirements or met or 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: $63,738
Annual Openings: 1,018
10-Year Growth: 19%

Computer Systems Analysts
Median Wage: $107,198
Annual Openings: 4,559
10-Year Growth: 19%

Network and Computer Systems Administrators
Median Wage: $92,363
Annual Openings: 2,292
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/it-networking-systems-extendedpptx.pdf

Networking Systems

Information Technology Career Cluster

Statewide Program of Study: Networking Systems

Course Information

Level 1

Course	Prerequisites | Corequisites	Career Clusters
Principles of Information Technology* 13027200 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Fundamentals of Computer Science* 03580140 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	

Level 2

Course	Prerequisites | Corequisites	Career Clusters
Computer Science I* 03580200 (1 credit)	**Prerequisites:** Algebra I **Corequisites:** Algebra I **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Internetworking Technologies I (Cisco)* N1302803 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Computer Maintenance* 13027300 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** Principles of Information Technology **Recommended Corequisites:** Computer Maintenance Lab	
Computer Maintenance + Computer Maintenance Lab* 13027310 (2 credits)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** Principles of Information Technology **Recommended Corequisites:** None	
Advanced Placement (AP) Computer Science Principles* A3580300 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** Algebra I **Recommended Corequisites:** None	
Entrepreneurship I* 13011101 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** Principles of Business, Marketing, and Finance **Recommended Corequisites:** None	

** Indicates course is included in more than one program of study in this career cluster.*

Networking Systems

For additional information on the **Information Technology** career cluster, contact cte@tea.texas.gov or visit https://tea.texas.gov/cte

Texas Education Agency

[LEA name] does not discriminate on the basis of race, color, national origin, sex, or disability in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: [title], [address], [telephone number], [email]. Further nondiscrimination information can be found at Notification of Nondiscrimination in Career and Technical Education Programs.

Information Technology Career Cluster

Statewide Program of Study: Networking Systems

Course Information

Level 3

Course	Prerequisites | Corequisites	Career Clusters
Internetworking Technologies II (Cisco)* N1302804 (1 credit)	**Prerequisites:** Internetworking Technologies I **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Advanced Cloud Computing* 13027520 (1 credit)	**Prerequisites:** At least one credit from a course in computer science, programming, software development, or networking systems **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Networking* 13027400 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** Principles of Information Technology, Computer Maintenance, and Computer Maintenance Lab **Recommended Corequisites:** Networking Lab	
Networking + Networking Lab* 13027410 (2 credits)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** Principles of Information Technology, Computer Maintenance, and Computer Maintenance Lab **Recommended Corequisites:** None	

Level 4

Course	Prerequisites | Corequisites	Career Clusters
Independent Study in Technology Applications* First Time Taken: 03580900 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** A minimum of one credit from the courses in the Information Technology career cluster **Recommended Corequisites:** None	
Independent Study in Evolving/Emerging Technologies* First Time Taken: 03581500 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** A minimum of one credit from the courses in the Information Technology career cluster **Recommended Corequisites:** None	

Continued on next page

** Indicates course is included in more than one program of study in this career cluster.*

[LEA name] does not discriminate on the basis of race, color, national origin, sex, or disability in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: [title], [address], [telephone number], [email]. Further nondiscrimination information can be found at Notification of Nondiscrimination in Career and Technical Education Programs.

Information Technology Career Cluster

Statewide Program of Study: Networking Systems

Course Information

Level 4

Course	Prerequisites | Corequisites	Career Clusters
Career and Technical Education Project-Based Capstone* First Time Taken: 12701101 (1 credit)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Practicum in Information Technology* First Time Taken: 13028000 (2 credits) Second Time Taken: 13028010 (2 credits)	**Prerequisites:** A minimum of two high school information technology (IT) courses **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Practicum in Information Technology + Extended Practicum in Information Technology* First Time Taken: 13028005 (3 credits) Second Time Taken: 13028015 (3 credits)	**Prerequisites:** A minimum of two high school information technology (IT) courses **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Practicum in Entrepreneurship* First Time Taken: 13011111 (2 credits)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** Entrepreneurship I and Entrepreneurship II, or successful completion of at least two courses in a CTE program of study **Recommended Corequisites:** None	
Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship* First Time Taken: 13011121 (3 credits)	**Prerequisites:** None **Corequisites:** None **Recommended Prerequisites:** Entrepreneurship I and Entrepreneurship II, or successful completion of at least two courses in a CTE program of study **Recommended Corequisites:** None	

Continued on next page

** Indicates course is included in more than one program of study in this career cluster.*

Networking Systems

For additional information on the **Information Technology** career cluster, contact cte@tea.texas.gov or visit https://tea.texas.gov/cte

Texas Education Agency

[LEA name] does not discriminate on the basis of race, color, national origin, sex, or disability in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: [title], [address], [telephone number], [email]. Further nondiscrimination information can be found at Notification of Nondiscrimination in Career and Technical Education Programs.

Information Technology Career Cluster

Statewide Program of Study: Networking Systems

Course Information

Level 4

Course	Prerequisites | Corequisites	Career Clusters
Career Preparation for Programs of Study* First Time Taken: 12701121 (2 credits)	**Prerequisites:** At least one Level 2 or higher CTE course **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	
Career Preparation for Programs of Study + Extended Career Preparation* First Time Taken: 12701141 (3 credits)	**Prerequisites:** At least one Level 2 or higher CTE course **Corequisites:** None **Recommended Prerequisites:** None **Recommended Corequisites:** None	

** Indicates course is included in more than one program of study in this career cluster.*

Networking Systems

For additional information on the **Information Technology** career cluster, contact cte@tea.texas.gov or visit https://tea.texas.gov/cte

[LEA name] does not discriminate on the basis of race, color, national origin, sex, or disability in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: [title], [address], [telephone number], [email]. Further nondiscrimination information can be found at Notification of Nondiscrimination in Career and Technical Education Programs.