



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: Information Technology Support and Services

The Information Technology Support and Services program of study focuses on occupational and educational opportunities associated with administering, testing, and implementing computer databases and applying knowledge of database management systems. This program of study includes analyzing user requirements, automating or improving existing systems, and reviewing computer system capabilities. It also includes research, design, and testing of computer or computer-related equipment for commercial, industrial, military, or scientific use.



Secondary Courses for High School Credit

- | | |
|----------------|---|
| Level 1 | <ul style="list-style-type: none"> Principles of Information Technology Fundamentals of Computer Science |
| Level 2 | <ul style="list-style-type: none"> Internetworking Technologies I (Cisco) Geographic Information Systems (GIS) Raster-Based Geographic Information Systems Computer Maintenance Computer Maintenance + Computer Maintenance Lab Entrepreneurship I |
| Level 3 | <ul style="list-style-type: none"> Internetworking Technologies II (Cisco) Spatial Technology and Remote Sensing Advanced Cloud Computing Information Technology Troubleshooting |
| Level 4 | <ul style="list-style-type: none"> Independent Study in Technology Applications Independent Study in Evolving/Emerging Technologies Career and Technical Education Project-Based Capstone Computer Technician Practicum Computer Technician Practicum + Extended Computer Technician Practicum 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 IT company to develop skills in computer system maintenance and setting up computer equipment
- Shadow a database administrator or computer software or hardware engineer to learn about their day-to-day responsibilities

Expanded Learning Opportunities

- Participate in SkillsUSA or TSA
- Subscribe to industry journals

Aligned Industry-Based Certifications

- | | |
|---|--|
| <ul style="list-style-type: none"> AWS Certified Cloud Practitioner AWS Certified Solutions Architect – Associate AWS Certified SysOps Administrator - Associate Business Information Processing Cisco Certified Support Technician IT Support CompTIA A+ Certification CompTIA Network+ CompTIA Server+ CompTIA Tech+ Computer Repair Technology - Job Ready Google IT Support Professional Certificate | <ul style="list-style-type: none"> Information Technology Specialist Cloud Computing Information Technology Specialist Device Configuration and Management Microsoft 365 Certified: Fundamentals Microsoft Certified: Azure Administrator Associate Microsoft Certified: Azure Fundamentals Microsoft Certified: Azure Solutions Architect Expert Microsoft Security, Compliance, and Identity Fundamentals Tosa CyberCitizen (Advanced or Expert) |
|---|--|

Successful completion of the Information Technology Support and Services program of study will fulfill requirements of the Business and Industry endorsement.



Example Postsecondary Opportunities

Apprenticeships

- Coding Apprenticeship

Associate Degrees

- Computer Science
- Network and System Administration

Bachelor's Degrees

- Computer and Information Systems Security/Auditing/Information Assurance
- Computer Engineering

Master's, Doctoral, and Professional Degrees

- Information Science/Studies
- Electrical and Electronics Engineering



Example Aligned Occupations

Computer User Support Specialists

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

Computer Network Support Specialists

Median Wage: \$63,738
Annual Openings: 1,018
10-Year Growth: 19%

Computer Hardware Engineers

Median Wage: \$124,632
Annual Openings: 287
10-Year Growth: 14%

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-information-technology-support-and-services-extendedpptx.pdf>



Information Technology Career Cluster

Statewide Program of Study: Information Technology Support and Services

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
Internetworking Technologies I (Cisco)* N1302803 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Geographic Information Systems (GIS) 13027545 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Principles of Arts, Audio/Video Technology, and Communications, Principles of Information Technology, Physics for Engineers, or Principles of Applied Engineering Recommended Corequisites: None	
Raster-Based Geographic Information Systems 13027550 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Geographic Information Systems 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 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.

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



Information Technology Career Cluster

Statewide Program of Study: Information Technology Support and Services

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	
Spatial Technology and Remote Sensing 13027555 (1 credit)	Prerequisites: At least one credit in a course from the Information Technology career cluster Corequisites: None Recommended Prerequisites: Geographic Information Systems and Raster-Based Geographic Information Systems 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	
Information Technology Troubleshooting 13027535 (1 credit)	Prerequisites: At least one credit in a course from the Information Technology career cluster Corequisites: None Recommended Prerequisites: Principles of Information Technology 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.

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



Information Technology Career Cluster

Statewide Program of Study: Information Technology Support and Services

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	         
Computer Technician Practicum First Time Taken: 13027500 (2 credits) Second Time Taken: 13027510 (2 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: Principles of Information Technology, Computer Maintenance, Computer Maintenance Lab, Networking, and Networking Lab Recommended Corequisites: None	
Computer Technician Practicum + Extended Computer Technician Practicum First Time Taken: 13027505 (3 credits) Second Time Taken: 13027515 (3 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: Principles of Information Technology, Computer Maintenance, Computer Maintenance Lab, Networking, and Networking Lab 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: 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	         

Continued on next page

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

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



Information Technology Career Cluster

Statewide Program of Study: Information Technology Support and Services

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
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	
Career Preparation for Programs of Study* 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.

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