Information Technology Career Cluster

The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

Networking Systems
Statewide Program of Study

The Networking Systems program of study explores the 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 may also include exploration into analyzing science, engineering, and other data processing problems to implement and improve computer systems.

Secondary Courses for High School Credit

Level 1
- Principles of Information Technology

Level 2
- Computer Science I
- Internetworking Technologies I
- Computer Maintenance/Lab
- AP Computer Science Principles

Level 3
- Internetworking Technologies II
- Networking/Lab
- Advanced Cloud Computing

Level 4
- Practicum in Information Technology
- Practicum in Entrepreneurship
- Independent Study in Technology Applications
- Independent Study in Evolving/Emerging Technologies
- Project Based Research
- Career Preparation I

Postsecondary Opportunities

Associates Degrees
- Computer and Information Sciences, General
- Computer Systems Networking And Telecommunications
- Information Technology
- Network and System Administration/ Administrator

Bachelor's Degrees
- Computer and Information Sciences, General
- Computer Systems Networking And Telecommunications
- Computer and Information Systems Security/ Information Assurance
- Computer Engineering, General

Master's, Doctoral, and Professional Degrees
- Computer and Information Sciences, General
- Information Technology
- Computer and Information Systems Security/ Information Assurance
- Computer Engineering, General

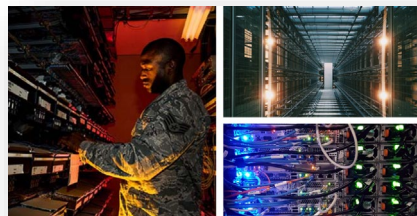## Work-Based Learning and Expanded Learning Opportunities

Exploration Activities	Work-Based Learning Activities
• Join TSA • Job shadow a computer network architect or support specialist	• Earn an IT certification

Industry-Based Certifications

- Cisco 100-490 RSTECH Supporting Cisco Routing and Switching Network Devices
- Cisco CCNA (200-301) Implementing and Administering Cisco Solutions
- CompTIA A+ Certification
- CompTIA Network+
- CompTIA Server+
- Computer Networking Fundamentals - Job Ready
- Google Cloud Certified Professional - Cloud Architect
- Information Technology Specialist: Networking
- Microsoft Azure Data Fundamentals
- Microsoft 365 Fundamentals
- Microsoft Security, Compliance, and Identity Fundamentals

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- Associate of (ISC)*

*IBC sunsetting 8/31/24

Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Computer Network Architects	$111,633	1,082	23%
Computer Systems Analysts	$87,568	5,937	29%
Computer Network Support Specialists	$68,037	1,824	19%

Successful completion of the Networking Systems program of study will fulfill requirements of the Business and Industry endorsement or STEM endorsement if the math and science requirements are met. Revised – August 2022

Networking Systems
Course Information

Level 1

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Principles of Information Technology	13027200 (1 credit)	None	None

Level 2

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Computer Science I	03580200 (1 credit)	None	Algebra I
Internetworking Technologies I	N1302803 (1 credit)	None	None
Computer Maintenance/Lab	13027300 (1 credit) 13027310 (2 credits)	Principles of Information Technology	None
AP Computer Science Principles	A3580300 (1 credit)	Algebra I	None

Level 3

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Internetworking Technologies II	N1302804 (1 credit)	Internetworking Technologies I	None
Advanced Cloud Computing	N1302813 (1 credit)	None	None

Level 4

COURSE NAME	SERVICE ID	PREREQUISITES	COREQUISITES
Practicum in Information Technology	13028000 (2 credits) 13028005 (3 credits) 13028010 (2 credits) 13028015 (3 credits)	Minimum of two high school Information Technology (IT) courses	None
Practicum in Entrepreneurship	N1303425 (2 credits)	None	None
Independent Study in Technology Applications	03580900 (1 credit)	None	None
Independent Study in Evolving/Emerging Technologies	03581500 (1 credit)	None	None
Project Based Research	12701500 (1 credit)	None	None
Career Preparation I	12701300 (2 credits) 12701305 (3 credits)	None	None

FOR ADDITIONAL INFORMATION ON THE INFORMATION TECHNOLOGY CAREER CLUSTER,
PLEASE CONTACT: CTE@tea.texas.gov
https://tea.texas.gov/cte