



# Network Systems

**Career Goal (O\*NET Code):** Network and Computer Systems Administrator (15-1071), Computer Operator (43-9011), Communications Analyst (15-1081), Computer Support Specialist (15-1041).

**Cluster Overview:** Information Technology careers encompass entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services.

## SUGGESTED COURSEWORK

## EXTENDED LEARNING EXPERIENCES

High School	9th	Core Courses	English I Algebra I Biology	World Geography Languages other than English I Health/PE or Equivalent	<b>Curricular Experiences:</b> Business Professionals of America Future Business Leaders of America SkillsUSA Texas Technology Student Association  <b>Career Learning Experiences:</b> Career Preparation (Paid/Unpaid) Job Shadowing Internship Apprenticeship	<b>Extracurricular Experiences:</b> Academic Decathlon UIL Computer Tutor School Class Officer  <b>Service Learning Experiences:</b> Boy Scouts of America Community Service Volunteer Girl Scouts of the USA
		Career-Related Electives	Introduction to Information Technology or Network Essentials			
	10th	Core Courses	English II Geometry Chemistry	World History Languages other than English II Technology Applications		
		Career-Related Electives	Telecommunications and Networking** or Introduction to Computer Maintenance or Computer Cabling and Design			
	11th	Core Courses	English III Algebra II Physics	United States History Communication Applications PE or Equivalent		
		Career-Related Electives	Internetworking Technologies I or Computer Maintenance I			
	12th	Core Courses	English IV Statistics Environmental Systems	Government/Economics Fine Arts		
		Career-Related Electives	Internetworking Technologies II or Computer Maintenance II or related Career Preparation program* or Independent Study or Precalculus			
Postsecondary	On-the-Job Training	Information Systems Assistant Computer Service Technician  NOTE: These experiences may be started and/or completed as part of the high school experience.		<b>Career Options:</b> Technical Support Specialist	<b>Professional Associations:</b> Accreditation Board for Engineering and Technology, Inc. American Society for Engineering Education IEEE Computer Society Institute of Configuration Management National Council of Examiners for Engineers and Surveying National Society of Professional Engineers Texas Board of Professional Engineers	
	Certificates	Internet and Computing Core Certification (IC3) A+	Cisco OSHA CareerSafe			
	NOTE: Students may earn all or part of these certificates as part of the high school experience.					
Postsecondary	Associate's Degrees	<b>15 hours Core Curriculum</b> Home Technology Integration (CPMT 2X02)      CISCO Voice and Data Cabling (ITCC 1X09) Network Security (CPMT 2X34)      Computer System Troubleshooting (CPMT 2X45) Discovery: Networking for Home and Small Businesses (ITCC 1310) CCNP 1: Advanced Routing (ITCC 2X32)      CCNP 3: Multilayer Switching (ITCC 2X40) CCNP 2: Remote Access (ITCC 2X36)      CCNP 4: Internet work Troubleshooting (ITCC 2X44) CISCO Exploration 3-LAN Switching and Wireless (ITCC 2X08) CISCO Exploration 4- Accessing the WAN (ITCC 2X10)      Digital Forensics Analysis (ITDF 2X30) Introduction to Digital Forensics (ITDF 1X00)      Digital Forensics Collection (ITDF 2X20) Fundamentals of Digital Data Storage (ITDF 1X05)      Digital Forensics Tools (ITDF 2X25) Comprehensive Digital Forensics Project (ITDF 2X35) Implementing and Supporting Microsoft Windows XP Professional (ITMT 1X00) Managing and Maintaining a Microsoft Windows Server 2003 Environment (ITMT 1X40) Planning, Implementing, and Maintaining a Microsoft Server 2003 Network Infrastructure (ITMT 1X55) Planning, Implementing, and Maintaining a Microsoft Server 2003 Active Directory Infrastructure (ITMT 2X00) Fundamentals of Solaris Operating Environment (ITSC 1X29) Solaris Shell Programming (ITSC 1X56) Linux Installation and Configuration (ITSC 1X16) Introduction to PC Operating Systems (ITSC 1X05) UNIX Operating System I (ITSC 1X07)		<b>Career Options:</b> Industrial Electronics Repairer Network Technician Documentation Writer Equipment Installer Data Systems Technician Code Programmer Teleprocessing Specialist	<b>Licenses, Credentials, &amp; Certifications:</b> Network + Cisco Certified Networking Professional (CCNP) Cisco Certified Networking Associate (CCNA) Microsoft Certified Systems Engineer (MCSE) Microsoft Certified Systems Administrator (MCSA) Microsoft Certified Technology Specialist (MCTS) Microsoft Certified Professional (MCP) I-Net +	
		Bachelor's Degrees	Computer Science	Management Information Systems		<b>Career Options:</b> Security Policy Developer
			Computer Science - Systems	Computer Information Systems		Computer Analyst
			Computer Engineering Technology	Microelectronics		Firmware Developer
Graduate Degrees	Infrastructure Assurance	Biomedical Engineering	Network Administrator			
	Computer Science	Technology Project Management	Integration Engineer			
	Network Communications	Telecommunications	Wireless Device Specifier			
	Manufacturing Systems Engineering - Robotics and Control	Software Engineering	Embedded Electronics Engineer Communications Network Designer			

\*May substitute for the required credit for Physical Education  
 \*\*Satisfies the required credit for Technology Applications  
 \*\*\*May substitute for the required Health Education

Students should take Advanced Placement (AP), International Baccalaureate (IB), dual credit, Advanced Technical Credit (ATC), or locally articulated courses, if possible.

This plan of study serves as a guide, along with other career planning materials, for pursuing a career path and is based on the most recent information as of 2007. All plans should meet high school graduation requirements as well as college entrance requirements. Students may select other elective courses for personal enrichment purposes.