



**INFORMATION
TECHNOLOGY
SUPPORT AND
SERVICES**

**NETWORKING
SYSTEMS**

Information Technology Support and Services

Business and Industry Endorsement



The Information Technology Support and Services program of study explores the occupations and educational opportunities associated with administering, testing, and implementing databases and applying knowledge of database management systems. This program of study may also include analyzing user requirements and problems to automate or improve existing systems and review computer system capabilities. This program of study may also include exploration into the research, design, or testing of computer or computer-related equipment for commercial, industrial, military, or scientific use.

To complete the Program of Study, students must earn four credits in the Program of Study and one of the credits must be an Advanced Level course.

HIGH SCHOOL / INDUSTRY CERTIFICATION	CERTIFICATE / LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S / DOCTORAL PROFESSIONAL DEGREE
Microsoft Technology Associate Windows Operating System Fundamentals	IBM Certified Specialist - InfoSphere Optim for Distributed Systems Fundamentals	Computer and Information Sciences, General		
ERSI ArcGIS Desktop Entry	IBM Certified Database Associate - DB2 11 Fundamentals for z/OS	Computer and Information Systems Security/Information Assurance	Computer Systems Analysis/ Analyst	
CompTIA A+	HP ASE - ProLiant Server Solutions Integrator V2	Information Technology	Computer Engineering, General	
CompTIA IT Fundamentals +	Oracle Linux 6 Advanced System Administration	Computer Systems Networking and Telecommunications	Information Technology	
Additional industry based certification information is available from the TEA CTE website				
For more information on postsecondary options for this program of study, visit TXCTE.org.				

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Database Administrator	\$83,075	1,063	19%
Information Technology - Computer Occupations, All Other	\$85,197	1,616	20%
Computer Hardware Engineer	\$111,738	343	24%
Computer System Analyst and Support	\$87,568	5,937	29%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES	
Exploration Activities: Join TSA Job shadow a database administrator or computer hardware engineer	Worked Based Learning Activities: Obtain a Certification

Courses in this Program of Study

PRINCIPLES OF INFORMATION TECHNOLOGY

Course # 07084500

Recommended Grade Placement 9

1 CREDIT

In this course, students will develop computer literacy skills to adapt to emerging technologies used in the global market place. Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment.

COMPUTER MAINTENANCE

Course # 07224520

Recommended Grade Placement 9-10

1 CREDIT

Students acquire principles of computer maintenance, including electrical and electronic theory, computer hardware principles, and broad level components related to the installation, diagnosis, service, and repair of computer systems.

COMPUTER TECHNICIAN PRACTICUM

Course # 07224725

Prerequisite: Computer Maintenance

Recommended Grade Placement 10-11

2 CREDITS

In the Computer Technician Practicum, students will gain knowledge and skills in the area of computer technologies, including advanced knowledge of electrical and electronic theory, computer principles, and components related to the installation, diagnosis, service, and repair of computer-based technology systems. Students will reinforce, apply, and transfer their knowledge and skills to a variety of settings and problems. Proper use of analytical skills and application of IT concepts and standards are essential to prepare students for success in a technology-driven society. Critical thinking, IT experience, and product development may be conducted in a classroom setting with an instructor, with an industry mentor, or both.

PRACTICUM INFORMATION TECHNOLOGY

Course # 07222240

Prerequisite: At least two credits of Information Technology

Recommended Grade Placement 12

2 CREDITS

Research in IT is a project-based research course for students who have the ability to research a real-world technological problem. Students develop a project on a topic related to information technology career interests, use scientific methods of investigation to conduct in-depth research, are matched with a mentor from the business or professional community, apply information technology concepts, compile findings, and present their findings to an audience that includes experts in the field. To attain academic success, students must have opportunities to learn, reinforce, apply, and transfer their knowledge, skills, and technologies in a variety of settings.

CAREER PREPARATION I

Course # 07228902

Recommended Grade Placement 11-12

2 CREDITS

Career Preparation I provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

Recommended Sequence of Courses (Prerequisites noted in course descriptions)

To complete the Program of Study, students must earn four credits in the Program of Study and one of the credits must be an Advanced Level course.

Entry Level Courses	Advanced Courses
Principles of Information Technology	Practicum of Information Technology
Computer Maintenance	Computer Technician Practicum
	Career Preparation I

Networking Systems

Business and Industry Endorsement



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.

To complete the Program of Study, students must earn four credits in the Program of Study and one of the credits must be an Advanced Level course.