

## Information Technology

### **Description**

This program is divided into basic core courses and a specialty networking area. In the core courses, students learn to operate a computer using current operating system software and use current application software for manipulating spreadsheets, databases and word processing documents. The specialty networking area courses prepare individuals to troubleshoot, repair and maintain computer systems, and troubleshoot basic local area network problems.

### **Program Learning Objectives**

1. Demonstrate ability to troubleshoot, repair, and maintain computer systems.
2. Demonstrate ability to troubleshoot, repair, and maintain basic local area network problems.
3. Demonstrate ability to operate a computer using current operating system software.
4. Demonstrate ability to use current application software for manipulating spreadsheets, databases, and word processing documents.

**Curriculum**

Course #	Course Title	Lecture/ Lab Hours	Credit Hours	Clock Hours
<b>Required Core Courses</b>				
LEAD 1003	Work Readiness	2/2	3	90
CPTR 1010	Digital Literacy	1/2	3	90
INTE 1100	Installation and Troubleshooting, Part I	1/2	3	90
INTE 1200	Operating Systems	1/2	3	90
INTE 1110	Installation and Troubleshooting, Part II	1/2	3	90
INTE 2030	Active Directory	1/2	3	90
INTE 2200	Security Plus	1/2	3	115
INTE 2110	Networking Technologies	1/2	3	180
<b>Required Courses Total</b>			<b>24</b>	<b>835</b>
INTE 2010	Introduction to Client/Server Networking	1/2	3	90
INTE 2120	Introduction to Basic Routers	1/2	3	180
<b>CTS – Network Administrator</b>			<b>30</b>	<b>1105</b>
INTE 2850	Emerging Technologies	1/2	3	90
INTE 2902	Internship	1/2	3	90
INTE 2130	Intermediate Routing and Switching	1/2	3	180
INTE 2140	Wide Area Network Protocols	1/2	3	180
INTE 2020	Server Network Infrastructure	1/2	3	90
<b>TD – ICT Computer Network Specialist</b>			<b>45</b>	<b>1735</b>
<b>Other Credentials Available</b>				
INTE 1100	Installation and Troubleshooting, Part I	1/2	3	90
INTE 1110	Installation and Troubleshooting, Part II	1/2	3	90
INTE1200	Operating Systems	1/2	3	90
INTE2010	Introduction to Client/Server Networking	1/2	3	90
INTE2020	Server Network Infrastructure	1/2	3	90
	INTE Computer Elective	1/2	3	90
<b>CTS – System Analyst</b>			<b>18</b>	<b>540</b>

**Course Descriptions**

***CPTR 1010 Digital Literacy***

Digital Literacy is defined as a demonstrated ability to use technology to access, manipulate, evaluate, use, and present information. This course teaches the fundamentals of using an electronic device for personal and academic needs, including online learning. A digitally literate student will be able to understand why technology and its uses are an important force in our society. Units include the following: How to Be an Online Learner, College & Career Readiness, Digital Citizenship, and Microsoft Office.

***CSRV 1000 Customer Service***

This course is intended to help participants' progress from learning about themselves, to learning how to relate to their internal customers as well as their external customers in the workplace.

***INTE 1100 Installation and Troubleshooting, Part I***

A hands-on advanced study involving PC hardware and software that prepares students for an industry-based certification such as the A+ examination. Many IT professionals begin their careers in IT support-related positions. The main purpose of the TestOut PC Pro certification is to verify the necessary skills to work as an IT support professional. In an IT support job, you'll be asked to install, repair, configure, secure, and manage computer hardware, operating systems, and software in-home or corporate environments. These are the most basic and foundational skills required of all IT professionals. Additionally, communication, listening, and analysis skills are essential for interacting with customers.

***INTE 1110 Installation and Troubleshooting, Part II***

A hands-on advanced study involving PC hardware and software that prepares students for an industry-based certification such as the A+ examination. Many IT professionals begin their careers in IT support-related positions. The main purpose of the TestOut PC Pro certification is to verify the necessary skills to work as an IT support professional. In an IT support job, you will be asked to install, repair, configure, secure, and manage computer hardware, operating systems, and software in-home or corporate environments. These are the most basic and foundational skills required of all IT professionals. Additionally, communication, listening, and analysis skills are essential for interacting with customers.

***INTE 1200 Operating Systems***

This course introduces operating system basics with the intent of giving students a deeper understanding of various operating systems. Operating systems covered include Windows 7 through Windows 10 desktop operating systems, Windows Server, UNIX/Linux, and macOS. Students will learn some networking basics and information for how to create mixed environments.

***INTE 1210 Introduction to Programming***

This course is designed to teach students the basic and advanced topics in personal computer operating systems. It is a hands-on study of computer operating systems through skills-based, project-oriented instructions using the most popular operating systems used in business and industry. Windows 10 and Windows 7 will be the main subject of study. However, other operating systems like Linux and Apple OSX for the Mac will be discussed. The course also prepares students for industry-based certifications. The course includes but is not limited to the following subject areas; Installation, Administration, Optimization, Management and Troubleshooting aspects associated with managing Windows desktop operating systems from standalone to network environments.

***INTE 2010 Introduction to Client/Server Networking***

The TestOut Server Pro 2016: Install and Storage certification exam measures an examinee's ability to perform real-world tasks using the Windows Server 2016 operating system. These tasks are performed by IT professionals in a variety of job roles, including network systems administrator, systems engineer, senior security specialist, and IT systems administrator. Examinees could exhibit competence through performing installation, configuration, and management tasks in Windows Server 2016. Technologies used include storage services, network services, file and print, virtualization, high availability, active directory, and group policy.

***INTE 2020 Server Network Infrastructure***

The TestOut Server Pro 2016: Networking certification exam measures an examinee's ability to perform real-world tasks using the Windows Server 2016 operating system. These tasks are performed by IT professionals in a variety of job roles, including network systems administrator, systems engineer, senior security specialist, and IT systems administrator. Examinees could exhibit competence through performing network configuration and functionality tasks in Windows Server 2016. Technologies covered include DNS, DHCP, IPAM implementation, VPN, Direct Access, DFS, BranchCache, Hyper-V Network Virtualization, and Network Controller.

***INTE 2030 Active Directory***

This course is designed to provide students with the knowledge and skills to successfully plan, implement, and troubleshoot Server Active Directory, directory service infrastructure. The course focuses on a directory service environment, including forest and domain structure, Domain Name System (DNS), site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user, group, and computer account strategies.

***INTE 2110 Networking Technologies***

Security+, measures an examinee's ability to perform tasks commonly performed by IT security professionals such as network and systems administrators and IT security specialists. These professionals are typically responsible for helping to implement and maintain security protocols and best practices. Passing the TestOut Security Pro Certification means you can implement layered security through group policy objects, access control lists, wireless and wired local area network security measures, and workstation and mobile device security measures.

***INTE 2120 Introduction to Basic Routers***

This course is a comprehensive guide for anyone wishing to obtain a solid background in basic Cisco networking concepts. Students are first introduced to theory-based concepts, which are followed-up with practical hands-on labs. This book is suitable for use in any Cisco networking course.

***INTE 2130 Intermediate Routing and Switching***

Knowing how to install, configure, and troubleshoot a computer network is a highly marketable and exciting skill. This course first introduces the fundamental building blocks that form a modern network, such as protocols, media, topologies, and hardware. It then provides in depth coverage of the most important concepts in contemporary networking, such as TCP/IP, Ethernet, wireless transmission, virtual networks, security, and troubleshooting. After completing this course and completing the exercises, you will be prepared to select the best network design, hardware, and software for your environment. You will also have the skills to build a network from scratch and maintain, upgrade, troubleshoot, and manage an existing network. Finally, you will be well-prepared to pass CompTIA's Network+ N10-007 certification exam.

***INTE 2140 Wide Area Network Protocols***

The purpose of this course is to provide a broad survey of wireless communications including in-depth coverage of protocols, transmission methods, and IEEE wireless standards. Many hands-on exercises are included, which allow students to practice skills as they are learned.

***INTE 2200 Security Plus***

Security+, measures an examinee's ability to perform tasks commonly performed by IT security professionals such as network and systems administrators and IT security specialists. These professionals are typically responsible for helping to implement and maintain security protocols and best practices. Passing the TestOut Security Pro Certification means you can implement layered security through group policy objects, access control lists, wireless and wired local area network security measures, and workstation and mobile device security measures.

***INTE 2850 Emerging Technologies***

A survey course on Industry 4.0 and its impact on Manufacturing. The goal of this course is to ensure students have a general understanding of the Industry 4.0 concepts, vocabulary and can relate the importance of each to the role of a technician in the Manufacturing field.

***INTE 2902 Internship***

The internship will be the final course taken by students in their last semester. Students will be assigned one or more projects at the school site or at an employer's site to gain practical hands-on workplace related skills

***LEAD 1003 Work Readiness***

This course is designed to prepare for job readiness by reviewing the skills necessary for employment, including time management, communication, teamwork, and professionalism. The student will engage in a variety of skill-building activities, create a resume, participate in a simulated interview process, and review basic math and English skills necessary for their chosen program of study.