

# Grayson College Course Catalog

## Overview

Grayson College's Computer Maintenance program prepares students to support computers in a networked environment. Students become familiar with computer hardware, software and networking functionality, and will be prepared to take the COMPTIA, A+, Network+ Security+ and exams.

GC offers an **Associate of Applied Science degree in Computer Maintenance and Networking**, which is the culmination of the certificates along with the core curriculum to produce a well-rounded employee. The Certificates of Completion include the following options:

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**Computer Network Administration** prepares the student to pass the Microsoft Certified System Administrator exams. This program covers basic networking fundamentals, LINUX, Microsoft Operating Systems, and server administration. Students will also be qualified to take the A+ and Network+ exams.

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**Computer Network Technician** prepares students to pass the Network+ exam. This certificate covers basic networking fundamentals, LINUX, Windows 7, hardware devices and protocols. Students will also be qualified to take the A+ exam at the end of the second semester.

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**A+ Certificate Training for Computer Support Technician** is a one-year program that prepares students for a career in the computer industry. It provides a comprehensive preparation for the A+ exam, an internationally recognized credential for computer maintenance technicians.

Students may also enroll in many of these courses through the College's Continuing Education division for non-credit experience and knowledge.

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## Course Requirements

The Computer Maintenance & Networking Technology program requires a High School Diploma or an equivalent for entrance into the program, the Associate of Applied Science Degree requires that TSI requirements have been met.

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## Capstone Experience

Graduation with an Associate of Applied Science Degree in the Computer Maintenance & Networking Technology program requires successful completion of a comprehensive capstone course. Graduation with the Computer Network Technician Certificate requires the successful completion of COMPTIA's Network+ exam or a comprehensive capstone course. And graduation with the Computer Support Technician Certificate requires the successful completion of COMPTIA's A+ exam or a comprehensive capstone course.

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## Local Employers

Gunter, McKinney, Sherman, Whitesboro School Districts; Texas Workforce Commission; Internet Texoma; Grayson College; Smartech; Ruiz Foods; Angels of Care; Alorica; GCEC

## AAS Degree Requirements

### Associate of Applied Science - Computer Maintenance & Network Technology

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Subject	Semester Hours
<a href="#">ENGL 1301</a> (Composition I)	3
<a href="#">CPMT 1303</a> (Intro to Computer Technology)	3
Elective*	3
<a href="#">ITNW 1325</a> (Fundamentals of Networking Technologies)	3
<a href="#">CPMT 1311</a> (Intro to Computer Maintenance)	3
<a href="#">ITNW 1354</a> (Implementing and Supporting Servers)	3
<a href="#">CPMT 2350</a> (Industry Certification Preparation)	3
<a href="#">CPMT 1345</a> (Computer Systems Maintenance)	3
Elective*	3

*Mathematics/Life & Physical Science Core	3
<a href="#">SPCH 1311</a> (Introduction to Speech Communication)	3
<a href="#">ITSY 1300</a> (Fundamentals of Information Security)	3
<a href="#">ITNW 1351</a> (Fundamentals of Wireless LANs)	3
Elective*	3
*Language, Philosophy, Culture/Creative Arts	3
<a href="#">CPMT 2345</a> (Computer Systems Troubleshooting)	3
<a href="#">CPMT 1349</a> (Computer Networking Technology)	3
Elective*	3
<a href="#">ITSC 1316</a> (Linux Installation and Configuration)	3
*Social & Behavioral Science Core	3
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	<b>60</b>

Degree: Associate of Applied Science Degree in Computer Maintenance and Networking Technology.

Capstone Experience: Graduation with the Associate of Applied Science Degree requires the successful completion of the prescribed capstone course CPMT 2345.

\*Approved Electives: EECT 1407, ITNW 1308, ITNW 1354, ITNW 2305, ITSC 1305, ITSW 1307, CPMT 2388, CPMT 2389, CPMT 2688, COSC 1336, COSC 1337, COSC 2336, COSC 2330, IMED 1316, IMED 2315, CPMT 1391, ITSC 2339, ITSC 1305, ITSC 1309. ITSY 2317, ITNW 2355, ITSC 1342, ITSC 2325, ITSE 2317

\*Please review your Student Planner or contact your Student Success Coach/Faculty Mentor to review which courses may be used to fill this degree requirement.

## Certificate Degree Requirements

### Computer Network Administrator - Certificate

Subject	Semester Hours
<a href="#">ITSY 1300</a> (Fundamentals of Information Security)	3
<a href="#">CPMT 1311</a> (Intro to Computer Maintenance)	3
<a href="#">ITNW 1325</a> (Fundamentals of Networking Technologies)	3
<a href="#">CPMT 1303</a> (Intro to Computer Technology)	3
<a href="#">ITSC 2339</a> (Personal Computer Help Desk)	3
<a href="#">CPMT 2350</a> (Industry Certification Preparation)	3
<a href="#">CPMT 1345</a> (Computer Systems Maintenance)	3
<a href="#">ITSC 1316</a> (Linux Installation and Configuration)	4
<a href="#">ITNW 1354</a> (Implementing and Supporting Servers)	3
<a href="#">ITNW 1308</a> (Implementing and Supporting Client Operating Systems)	3
<a href="#">CPMT 1349</a> (Computer Networking Technology)	3
<a href="#">CPMT 2345</a> (Computer Systems Troubleshooting)	3
<a href="#">ITNW 2305</a> (Network Administration)	3
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	<b>40</b>

Capstone Experience: All students must complete the capstone course CPMT 1349

### Computer Network Technician - Certificate

Subject	Semester Hours
<a href="#">EECT 1407</a> (Convergent Technologies)	4
<a href="#">CPMT 1311</a> (Intro to Computer Maintenance)	3
<a href="#">ITNW 1325</a> (Fundamentals of Networking Technologies)	3
<a href="#">CPMT 1303</a> (Intro to Computer Technology)	3
<a href="#">CPMT 2350</a> (Industry Certification Preparation)	3
<a href="#">CPMT 1345</a> (Computer Systems Maintenance)	3
<a href="#">ITSC 2339</a> (Personal Computer Help Desk)	3

<a href="#">ITSC 1316</a> (Linux Installation and Configuration)	4
<a href="#">ITNW 1354</a> (Implementing and Supporting Servers)	3
<a href="#">ITSY 1300</a> (Fundamentals of Information Security)	3
<a href="#">CPMT 1349</a> (Computer Networking Technology)	3
<a href="#">ITNW 2305</a> (Network Administration)	3
<a href="#">CPMT 2345</a> (Computer Systems Troubleshooting)	3
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Capstone Experience: All students must complete the capstone course CPMT 1349.

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### Computer Support Technician - Certificate

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Subject	Semester Hours
<a href="#">CPMT 1303</a> (Intro to Computer Technology)	3
<a href="#">CPMT 1311</a> (Intro to Computer Maintenance)	3
<a href="#">ITNW 1325</a> (Fundamentals of Networking Technologies)	3
<a href="#">CPMT 2350</a> (Industry Certification Preparation)	3
<a href="#">CPMT 1345</a> (Computer Systems Maintenance)	3
<a href="#">ITSC 2339</a> (Personal Computer Help Desk)	3
	<b>18</b>

Capstone Experience: All students must complete the capstone course CPMT 2350

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### ITSC 2325 - Advanced Linux

Provides instruction in advance open-source Linux operating system. Develops directory services for clients, support users remotely, and install and configure network services.

**Grade Basis:** L

**Credit hours:** 3.0

**Lecture hours:** 2.0

**Lab hours:** 4.0

**Prerequisites:**

- [ITSC 1316](#) - Linux Installation and Configuration

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### CPMT 1303 - Intro to Computer Technology

A fundamental computer course that provides explanation of the utilization of computer hardware and software with an emphasis on terminology, acronyms, and hands on activity.

**Grade Basis:** L

**Credit hours:** 3.0

**Lecture hours:** 3.0

**Lab hours:** 1.0

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### CPMT 1311 - Intro to Computer Maintenance

Introduction to the installation, configuration, and maintenance of a microcomputer system.

**Grade Basis:** L

**Credit hours:** 3.0

**Lecture hours:** 3.0

**Lab hours:** 1.0

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### CPMT 1345 - Computer Systems Maintenance

A study of the components within a computer system. Development of testing and troubleshooting skills.

**Grade Basis:** L

**Credit hours:** 3.0

**Lecture hours:** 3.0

**Lab hours:** 1.0

**Restrictions:**

- Course text is the CompTIA Network+ exam prep guide
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### **CPMT 1349 - Computer Networking Technology**

Networking fundamentals, terminology, hardware, software, and network architecture. Includes local and wide area networking concepts and networking installations and operations.

**Grade Basis:** L

**Credit hours:** 3.0

**Lecture hours:** 3.0

**Lab hours:** 1.0

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### **CPMT 1391 - Special Topics in Computer Installation and Repair Technology/Technician**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

**Grade Basis:** L

**Credit hours:** 3.0

**Lecture hours:** 3.0

**Lab hours:** 1.0

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### **CPMT 2345 - Computer Systems Troubleshooting**

Principles and practices involved in computer system troubleshooting techniques and repair procedures involving advanced diagnostic test programs and the use of specialized equipment.

**Grade Basis:** L

**Credit hours:** 3.0

**Lecture hours:** 3.0

**Lab hours:** 1.0

**Prerequisites:**

- [CPMT 1345](#) - Computer Systems Maintenance
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### **CPMT 2350 - Industry Certification Preparation**

Overview of the objectives for industry specific certification exam(s).

**Grade Basis:** L

**Credit hours:** 3.0

**Lecture hours:** 3.0

**Lab hours:** 1.0

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### **CPMT 2388 - Internship - Computer Installation and Repair Technology/Technician.**

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

**Grade Basis:** L

**Credit hours:** 3.0

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### **CPMT 2389 - Internship**

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

**Grade Basis:** L

**Credit hours:** 3.0

**Prerequisites:**

- [CPMT 2388](#) - Internship - Computer Installation and Repair Technology/Technician.

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## **CPMT 2688 - Internship - Computer Installation and Repair Technology/Technician**

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

**Grade Basis:** L  
**Credit hours:** 6.0

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## **EECT 1407 - Convergent Technologies**

A study of telecommunications convergence technologies including telephone, LAN, WAN, wireless, voice, video, and internet protocol.

**Grade Basis:** L  
**Credit hours:** 4.0  
**Lecture hours:** 3.0  
**Lab hours:** 2.0

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## **ITNW 1308 - Implementing and Supporting Client Operating Systems**

The fundamentals of managing and configuring network clients.

**Grade Basis:** L  
**Credit hours:** 3.0  
**Lecture hours:** 3.0  
**Lab hours:** 1.0

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## **ITNW 1325 - Fundamentals of Networking Technologies**

Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software.

**Grade Basis:** L  
**Credit hours:** 3.0  
**Lecture hours:** 2.0  
**Lab hours:** 3.0

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## **ITNW 1351 - Fundamentals of Wireless LANs**

Design, plan, implement, operate, and troubleshoot Wireless Local Area Networks (WLANs). Includes WLAN design, installation, and configuration; and WLAN security issues and vendor interoperability strategies.

**Grade Basis:** L  
**Credit hours:** 3.0  
**Lecture hours:** 3.0  
**Lab hours:** 1.0

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## **ITNW 1354 - Implementing and Supporting Servers**

Implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment.

**Grade Basis:** L  
**Credit hours:** 3.0  
**Lecture hours:** 3.0  
**Lab hours:** 1.0

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## **ITNW 2305 - Network Administration**

Topics include network components, user accounts and groups, network file systems, file system security, and network printing.

**Grade Basis:** L

**Credit hours:** 3.0  
**Lecture hours:** 3.0  
**Lab hours:** 1.0

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### **ITSC 1305 - Introduction to PC Operating Systems**

Introduction to personal computer operating systems including installation, configuration, file management, memory and storage management, control of peripheral devices, and use of utilities.

**Grade Basis:** L  
**Credit hours:** 3.0  
**Lecture hours:** 2.0  
**Lab hours:** 3.0

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### **ITSC 1316 - Linux Installation and Configuration**

Introduction to Linux operating system. Includes Linux installation, basic administration, utilities and commands, upgrading, networking security, and application installation. Emphasizes hands-on setup, administration, and management of Linux.

**Grade Basis:** L  
**Credit hours:** 3.0  
**Lecture hours:** 2.0  
**Lab hours:** 4.0

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### **ITSY 1300 - Fundamentals of Information Security**

An introduction to Information security including vocabulary and terminology, ethics, the legal environment and risk management. Identification of exposures and vulnerabilities and appropriate countermeasures are addressed. The importance of appropriate planning, policies and controls is discussed.

**Grade Basis:** L  
**Credit hours:** 3.0  
**Lecture hours:** 3.0  
**Lab hours:** 1.0

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### **ITSY 2317 - Wireless Security Development**

Development of information security policies, standards, and guidelines for an organization. Includes Demilitarized Zone (DMZ), antivirus, Virtual Private Network (VPN), wireless communications, remote access, and other critical administrative and operational security policies. Identification of exposures and vulnerabilities and appropriate countermeasures are addressed. Emphasizes wireless security goals of availability, integrity, accuracy, and confidentiality in the design, planning, implementing, operating, and troubleshooting of wireless LAN along with appropriate planning and administrative controls.

**Grade Basis:** L  
**Credit hours:** 3.0  
**Lecture hours:** 3.0  
**Lab hours:** 1.0

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### **ITSC 2339 - PC Help Desk**

Diagnosis and solution of user hardware and software related problems with on-the-job and/or simulated projects.

**Grade Basis:** L  
**Credit hours:** 3.0  
**Lecture hours:** 3.0  
**Lab hours:** 1.0

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### **ITNW 2355 - Server Virtualization**

An in-depth study of the installation, configuration, management and troubleshooting of a virtualized server environment.

**Grade Basis:** L

**Credit hours:** 3.0  
**Lecture hours:** 3.0  
**Lab hours:** 1.0

**Prerequisites:**

- [ITNW 1354](#) - Implementing and Supporting Servers

**Restrictions:**

- ITNW 1354 (Implementing and Supporting Servers) -or- ITNW 2305 (Network Administration) is acceptable as a prerequisite.
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## **ITSC 1342 - Shell Programming**

Reading, writing, and debugging shell scripts. Development of scripts to automate frequently executed sequences of commands. Covers conditional logic, user interaction, loops, and menus to enhance the productivity and effectiveness of the user. Intended for programmers who are familiar with operating environments and reading and writing various shell scripts.

**Grade Basis:** L  
**Credit hours:** 3.0  
**Lecture hours:** 3.0  
**Lab hours:** 1.0

**Prerequisites:**

- [ITSC 1316](#) - Linux Installation and Configuration
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