**Class of '26 -'27**
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Monday through Friday; 7am to 12pm

**Tom P. Haney Technical College**
**Computer Systems & Information Technology (CSIT)**
**Program Type:** Career Preparatory - Information Technology
**Program Number:** Y100200
**Program Length:** 900 hours

# OCP B - Computer Network Technician (CTS0083 150 Hours)
# OCP C – Computer Networking Specialist (CTS0084 150 Hours)
## CompTIA CertMaster Learn Network+ N10-009

### COURSE DESCRIPTION

The Tom P. Haney Technical College uses CompTIA CertMaster course curriculum to help you get the tech career you deserve with industry-leading certifications and expert knowledge. Today's job market demands individuals have demonstrable skills, and the information and activities in this course can help you build your network administration skill set so that you can confidently perform your duties in any entry-level network support technician role.

With CompTIA Network+, you can unlock a diverse range of career paths, from network administration and support to cybersecurity, creating opportunities for advancement and specialization in the rapidly evolving IT industry. CompTIA Network+ is a global IT certification validating candidates have the core skills necessary to establish, maintain, troubleshoot, and secure networks in any environment, regardless of technology and platform.

| GRADING SCALE | OCP A WEIGHTED GRADE CALCULATION |
|---|---|
| A = 90-100% | CertMaster Lab Assignments = 25% |
| B = 80-89% | CertMaster Formative Assessments (Exams) = 10% |
| C = 70-79% | Summative Assessment (Canvas Exams) = 50% |
| F = 0-69% | Employability Skills = 15% |

**NOTE:** Your weighted grade in each OCP must be greater than or equal to 80% to pass this course.

### COURSE ORGANIZATION

This instructor-led course utilizes online course materials via *haney.instructure.com* (Canvas) and CompTIA's CertMaster Learn Network+ course material meaning that most activities are completed online. All email correspondence with students will take place via their student email account. Students need to check this email daily for information from the instructor and the college. Students will also need to log into Canvas daily to check for new announcements regarding any changes or information about instructional material, assignments. and activities and to upload their completed lab assignments. After every course chapter, students will complete the

associated summative chapter exam. These assessments will have a time limit and allow for only one submission. Students will also complete hands-on labs to practice the skills learned in the lesson.

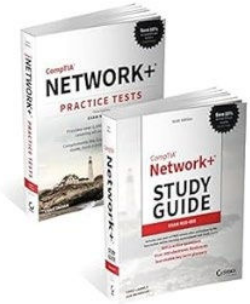
This course can prepare you for the CompTIA Network+ (Exam N10-009) certification examination and a job role in network administration. It utilizes a learning progression model to help you learn and build skills related to the course objectives and job task requirements. This learning methodology uses a series of steps to contextualize what you're learning, elaborate on areas where additional instruction is needed, and provide relevance through practice and personalized feedback. You'll then apply what you learned and demonstrate the skills you've gained through a series of lab activities and quizzes.

On course completion, you will be able to:

- Deploy and troubleshoot Ethernet networks.
- Support IPv4 and IPv6 networks.
- Configure and troubleshoot routers.
- Support network services and applications.
- Ensure network security and availability.
- Deploy and troubleshooting wireless networks.
- Support WAN links and remote access methods.
- Support organizational procedures and site security controls.
- Summarize cloud and data center architecture.

**REQUIRED TEXTS:**

No textbook is required for this class. Below is a list of recommended reference books that can help you in class and/or study for your certification exam.




**CompTIA Network+ Certification Kit: Exam N10-009 7th Edition** by Todd Lammie, Jon Buhagiar, Craig Zacker; ISBN-13 ： 978-1394242047

**ATTENDANCE POLICY**

Students are required to attend class Monday through Friday, 7 AM to 12 PM. Class will begin at 7 AM with morning announcements and chapter reviews. It is important to be on time each day. College policy requires that a student be present 90% of the enrollment period designated hours.

For CSIT, an enrollment period is 450 hours (one semester), therefore a student is allowed to miss 45 hours per semester. If a student exceeds 45 hours absence in an enrollment period, the student will be withdrawn from the CSIT program. This policy is not negotiable. Withdrawal exceptions cannot and will not be made for any student exceeding their allowed 10% absences. Students will be responsible for any missed work or assignments. NOTE: Military veterans or dependents using VA assistance have a different attendance policy. Please refer to the Tom P. Haney Student Handbook for more information on Haney's attendance policy.

**ACADEMIC INTEGRITY**

Tom P. Haney Technical College is committed to providing an honest and fair learning environment and to preparing students for academic and career success. Students are expected to recognize and uphold standards of intellectual and academic integrity. Integrity means being honest, responsible, respectful, and ethical, and applies whether working independently or collaboratively, regardless of the level of supervision. Integrity and honesty are a part of professionalism and demonstrate employability skills. The College will not tolerate any dishonest practices, including plagiarism, in the academic environment.

**ELECTRONIC DEVICE POLICY**

- Cell phones are not allowed to be used in the classroom. Students will be able to store their cell phones in a cell phone locker in the back of the classroom. Students are allowed to use their cell phones outside of class when on breaks or at lunch. Please refer to Haney's Student Handbook for more information on our cell phone policy.
- Personal laptops and tablets are not allowed to be used in the classroom. If laptops are required in this course, the college will provide one per student. Students are not allowed to take their assigned laptops home for any reason and must be placed in the laptop cart at the end of the day.

**FOOD AND DRINK POLICY**

Food is not allowed in the classroom. Snacks and lunches are to be eaten in the Bldg 3 atrium or outside while on breaks. Water is allowed in class provided you use a container with a secured top such as water bottles, Tervis or Stanley tumblers. Fast food cups and aluminum cans are not considered secure containers. If you doubt your drink container is allowed, then ask your instructor.

**STUDENTS WITH DISABILITIES STATEMENT**

If you have a disability that may affect your academic performance and are seeking accommodations, it is your responsibility to inform the Student Services (Bldg 1). You may contact Ms. Sandy Johnson at (850) 767-5500 ext. 767-5527 if you have any questions concerning accommodations and services. You may visit the Disability Services webpage or the Disability Services section of the Student Handbook to learn more about accommodations and special services. It is important to request accommodations early enough to give the Counseling Services office adequate time to consider your request and recommend reasonable accommodations. Students are encouraged to initiate the request process as soon as possible at the beginning of a semester or class. Accommodations are not retroactive and only become active after all required

documents are submitted. Instructors will provide necessary accommodations based solely on the recommendations of the Disability Services office.

**COURSE CHAPTERS/MODULES AND OBJECTIVES**

Listed below are the current set of chapters/modules and their associated competencies outlined for this course. Each module is an integrated unit of learning that consists of content, activities and assessments that target a specific set of competencies. The size of the module will depend on the depth of knowledge and skill needed to master the competency.

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| **Module 1.0 – Explaining Network Topologies** | Explain network types and characteristics.<br>Compare and contrast OSI model layers.<br>Configure SOHO networks.<br>Explain CompTIA's troubleshooting methodology. |
| **Module 2.0 – Supporting Cabling and Physical Installations** | Summarize Ethernet standards.<br>Summarize copper cabling and connector types.<br>Summarize fiber optic cabling and connector types.<br>Describe physical installation factors for rack-based installations in server rooms and datacenters.<br>Deploy and troubleshoot Ethernet cabling. |
| **Module 3.0 – Configuring Interfaces and Switches** | Deploy networking devices.<br>Explain network interfaces.<br>Deploy common Ethernet switching features.<br>Troubleshoot transceiver and switching issues. |
| **Module 4.0 – Configuring Network Addressing** | Explain IPv4 addressing schemes.<br>Explain IPv4 forwarding.<br>Configure IP networks and subnets.<br>Use appropriate tools to test a host's IP configuration.<br>Explain IPv6 addressing schemes.<br>Troubleshoot IP networks and hosts. |
| **Module 5.0 – Configuring Routing and Advanced Switching** | Compare and contrast routing concepts.<br>Compare and contrast dynamic routing concepts.<br>Install and troubleshoot routers.<br>Explain tiered switching architecture.<br>Explain virtual LANs. |
| **Module 6.0 – Implementing Network Services** | Compare and contrast transport protocols.<br>Use command line tools to scan network ports.<br>Explain the use of network addressing services.<br>Explain the use of name resolution services.<br>Configure and troubleshoot DHCP and DNS services. |

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| **Module 7.0 – Explaining Application Services** | Explain the importance of time synchronization and the role of NTP.<br>Explain the use of web, file/print, and database services.<br>Explain the use of email and voice services.<br>Explain how high availability services are provisioned using redundancy and load balancing. |
| **Module 8.0 – Supporting Network Management** | Explain the use of configuration and change management documentation.<br>Use discovery and monitoring tools to identify network assets.<br>Use event management to ensure network availability.<br>Use packet analysis and traffic metrics to troubleshoot performance issues. |
| **Module 9.0 – Explaining Network Security Concepts** | Explain common security concepts.<br>Distinguish risk, vulnerability, exploit, and threat.<br>Explain the importance of audits and regulatory compliance.<br>Summarize types of attacks and their impact on the network. |
| **Module 10.0 – Applying Network Security Features** | Explain identity and access management concepts.<br>Distinguish protocols and standards used for authentication and directory management.<br>Use defense in depth techniques to ensure that only policy-compliant devices can connect to the network.<br>Apply security rules, such as ACLs and content filtering, to manage network traffic. |
| **Module 11.0 – Supporting Network Security Design** | Explain the importance of network segmentation and use of trusted and untrusted zones.<br>Describe security implications of internet of things (IoT) and industrial internet of things (IIoT).<br>Explain the importance of physical security. |
| **Module 12.0 – Configuring Wireless Networks** | Summarize wireless standards.<br>Install and configure secure wireless networks.<br>Troubleshoot wireless networks. |
| **Module 13.0 – Comparing Remote Access Methods** | Summarize WAN provider and Internet access types.<br>Compare and contrast VPN topologies and protocols.<br>Explain remote host access and management methods. |
| **Module 14.0 – Summarizing Cloud Concepts** | Explain datacenter and storage network architecture.<br>Summarize cloud concepts.<br>Summarize the use of software, coding, and zero trust in modern network environments. |

**NOTE:** This syllabus may change at the instructor's discretion. It is the responsibility of the student to record changes.