

Computer Network Technology 2018-2019 Program Syllabus Mr. Chris Ralston

Program Overview

Do you like working with the latest technology? Are you interested in a career that field that is growing so quickly that the supply of qualified personnel cannot keep up? Do you enjoy working on and repairing devices of all kinds while working independently? If so, then the Computer Network Technology class at Greene County CTC may be right for you. In this class, students will get the opportunity to build and repair computers of all types and sizes, including tablets and smartphones. They will also configure and manage networks using the latest in automation equipment. The CNT program also provides students with the opportunity to utilize the skills obtained in class to diagnose and repair technology issues throughout the school campus.

Students are required to take the National Occupational Competency Test (NOCTI) for Computer Systems Networking and Telecommunications. Those completing the program may be employed as a network administrator, network specialist, network technician, client services analyst (end user) or network operator.

Instructional Philosophy

The CNT program at GCCTC is designed to prepare students for a career in the Information Technology (IT) field. It is designed to accommodate a wide variety of students and provide them with a valuable education in one of the fastest growing fields. Due to this class being computer-based, we have adopted a paperless classroom. All materials, assignments, and tests are provided online and accessible from any computer with an internet connection. If a student does not have access to the internet from home, hard copies of materials can be provided upon request. Adequate time is provided in class to complete most assignments, but all materials are available via the internet if a student is unable to attend class for any reason. Class time will consist of many individual tasks as well as some group activities. Individual activities will consist of worksheets, online research, and tests among other activities which will require the student to work independently. Group activities will consist of lecture, discussions, and hands-on practical exams. The curriculum is provided by the Cisco Academy and consists of several modules:

- First year students will complete the IT Essentials module which primarily reviews the various types of computer hardware and how to repair them when needed.
- Second year students will complete the Introduction to Networks module, which covers the basics of how to link various computer types together. It also explains how to diagnose and repair problems with a computer network.
- Third year students will work on the Advanced Routing and Switching module which covers more advanced networking tasks including VLANs, ACLs, and linking multiple networks together.

Course Content

The following contains the required tasks to complete the course as specified by the Pennsylvania Department of Education:

- Demonstrate knowledge of personal and environmental safety
- Demonstrate knowledge of computer hardware
- Demonstrate knowledge of troubleshooting, repair, and maintenance
- Demonstrate knowledge of operating systems and software
- Demonstrate knowledge of network technologies
- Demonstrate knowledge of network media and topologies
- Demonstrate knowledge of network devices
- Demonstrate knowledge of network management
- Demonstrate knowledge of network tools and troubleshooting
- Security fundamentals

*Other topics may be introduced during the course to enhance individual student learning experiences.

Course Objectives

Upon completion of this course the student should be able to:

- Identify related hazards and work safely to avoid those hazards
- Install, configure, and repair the different versions of the Microsoft Windows operating system
- Diagnose and repair various hardware component failures
- Configure and install Cisco Routers and Switches
- Understand and implement network security policies
- Obtain entry level employment in the Information Technology field or proceed to post- secondary training in a college or technical school for further education.

Major Course Performance Assignments

Computer Networking Performance Projects: Throughout the course students will be assessed on various IT related tasks as they acquire the skills necessary for entry into the IT field.

- Physical and Online Safety • Operating System Installation
- Networking Protocols • Workstation Configuration
- System Deployment • Preventive Maintenance
- Hardware Installation • System Diagnostics and Repair
- Network Planning • Computer Security Principles
- TCP \ IP • Wired and Wireless Connectivity
- Network Routing • Run and Terminate Data Wiring

Assignment/Grading Policy:

- All students will be required to dress professionally in the required uniform daily
- Late assignments will be docked one letter grade for each day they are late
- All students must follow the required safety procedures during all lab work

Methods of Evaluation:

A. Daily Grade – 30% overall

Students are expected to meet following requirements for a daily work grade:

- Preparation 20 points
 - Cover the proper materials for class
 - Have the proper materials to perform all tasks
- Professionalism 30 points
 - On time in the required uniform
 - Have a proper attitude and be ready to work
- Performance 30 points
 - Perform the assigned tasks as instructed within the time allotted
 - Remain on task with minimal reminders to remain focused on the task provided
- Clean up 20 points
 - Clean up work area after class
- **Total 100 points**

B. Projects and Tasks –30% overall

- Worksheets such as Study Guides and Vocabulary Sheets
- Written Assignments

C. Test – 40% overall

- Quizzes
- Written Exams
- Hands-on Evaluations

D. NOCTI & Choices 360 Portfolio

- (Seniors) NOCTI Test and portfolio-20% of final grade*
*for eligible seniors only
- (Juniors and Sophomores) Career Readiness Grade level requirements -20% of final grade

The final grade will be distributed according to the sending school's grading scale:

Final Grade	CHS	JMHS	MHS	WCHS	WGHS
A	100-93	100-92	100-92	100-90	100-90
B	92-85	91-82	91-82	89-80	89-80
C	84-75	81-70	81-70	79-70	79-70
D	74-65	69-60	69-60	69-60	69-60
F	64 and below	59 and below	59 and below	59 and below	59 and below

Class Recommendations:

All of the following skills (or items) are highly recommended for success in this class and the IT field:

- Able to work independently on required tasks during class
- Reliable internet access from home
- Familiarity with Microsoft Windows
- Able to navigate the internet
- USB Flash Drive (Minimum 8 GB in size)

Classroom Discipline

In addition to the GCCTC Student Handbook Policies and Conduct Expectations students will create a classroom set of discipline guidelines because developing rules together creates a sense of community and accountability and will provide as a model for rule development in a classroom setting. If students violate ANY of the guidelines, whether outlined by the school or teacher, the following interventions will be used:

- **First Offense:**
Warning (serious offenses will be handled with administration immediately)
- **Second Offense:**
Phone call or wmail home and/or a referral to guidance counselor
- **Third and Subsequent Offenses:**
Referral to Administration

Uniform Policy

- The uniform for this program is as follows:
- CNT Polo Shirt
- Pants (full length ONLY): (NO SHORTS)
- Shoes closed toe shoes ONLY (tennis shoes, flats, boots)

Students will be given the opportunity to change upon arrival from their home school and change before dismissal. Students will also be provided a locker in which to keep their uniform in during the week but will be responsible for the cleaning of their own uniform.

If students are dressed in anything other than the above they will receive a referral that will be sent to administration and can result in disciplinary action. The prospective student must purchase a uniform by the 2nd week of school (September 8, 2018). Uniforms are to be purchased from GCCTC (\$15-\$30) and payment arrangements can be made if necessary.

Technology and Software Use:

Students are expected to follow the technology guidelines outlined in the current edition of the GCCTC Student Handbook at ALL times. Violations of these guidelines could result in indefinite suspension of technology usage in the classroom and/or computer lab during Child Care Education and Teacher Preparation scheduled sessions.

By signing below you acknowledge having read and understood the Computer Network Technology Course Syllabus. Parents/guardians and students will be notified if any changes need to be made to the course policies. If you have additional questions and/or comments you may call the school at (724) 627-3106 to speak with the teacher or email at ralstonc@greenectc.org.

Guardian/ Parent Signature:

Date:

Student Signature:

Date:
