

# **SYLLABUS**

Mr. John Cannady

## **NETWORKING 2**

### **Textbook**

None

### **Instructional Philosophy**

Students will be expected to meet all course objectives. Students should demonstrate their understanding through completion of lab work, projects, and activities assigned. Lab activities will require students to apply concepts and troubleshooting techniques taught in class. The skills learn will enable students to become proficient at computer hardware, software, networks, and the Internet.

### **Program Goals**

The Networking 2 program will

- a. Develop organizational skills
- b. Enable students to complete all labs
- c. Encourage participation in class discussion
- d. Enable students to participate in all lab skills
- e. Encourage participation and cooperation in other assigned projects and activities related to the unit being studied

### **Prerequisite**

None

### **Course Schedule**

The Networking 2 course is a 1 credit course.

### **Course Fees/Club Dues**

Course Fee: \$20

Skills USA Fee: \$25

### **Grade Scale**

A = 90 - 100

B = 80 – 89

C = 70 – 79

D = 60 – 69

F = 0 -59

### **Assessments**

#### **1. Major (65% of Grade)**

- a. Skills
- b. Projects
- c. Major Assessments
- d. End of Chapter/Module
- e. Major Online Assessments
- f. Community and Home Service
- g. Parent Signed Forms/Assessments

#### **2. Minor (35% of Grade)**

- a. Journals
- b. Homework
- c. Daily Tasks
- d. Notes Check
- e. Online Assignments
- f. End of Chapter Reviews
- g. Open Book Assessments
- h. Contribution in class lesson
- i. Team Development Exercises
- j. Returned Items (Signed Papers)
- k. In or Out-of-Class Assessments

## **Teacher Credentials**

- \*M.S., Adult Education, Troy University of Montgomery
- \*B.S., Management of Human Resources, Faulkner University
- \*A.A.S., Instructional Technology/Military Science, CCAF
- \*A.A.S., Aerospace Ground Equipment Technology, CCAF
- \*Professional Educators Certificate: JLC-0034-7927
- \*CCNA: CSC011079748
- \*CCAI: 3391181CCNA
- \*C-Tech Copper Based Systems Instructor: 01-04-C-0601-1
- \*C-Tech Fiber Based Systems Instructor: 01-04-F-0601-1
- \*Microsoft Certified Professional: F866-3365
- \*MTA: Windows Operating System Fundamentals: F866-3366
- \*MTA: Windows Networking Fundamentals: F866-3367
- \*PC Pro A+: C923
- \* Internet and Computing Core (IC3): 21July2004
- \*Internetworking Level 1 Certification: 347927
- \*Industrial Maintenance Level 1 Certification: 347927

## **Essential Questions**

- What is the difference between hardware, software, and firmware?
- What types of devices use USB ports?
- What are common input and output devices?
- What is the definition of processing?
- What are the most common types of storage devices?
- Why is it important to increase componentization and standardization?

## **Course Description**

Students in Grades 9-12 experience significant growth and development as they assume more complex responsibilities such as working and making career choices. They are continuing to develop unique personalities and are making important life decisions. High school students are developing and practicing leadership and interpersonal communication skills in the school and community that facilitate entrance into adulthood. They continue to experience physical and emotional changes as well as to seek opportunities for developing independence and individuality.

Grades 9-12 students have broadened their perspective regarding the importance of existing and developing technologies and have an understanding of the scope of technology in today's world. As students progress through the high school years, they are able to address a variety of problems on a variety of topics in a logical manner. Technology offers students an efficient means by which many types of problems may be solved.

Networking 2 is a one-credit course designed to provide students with skills involving hands-on learning by installing a router, configuring a server, and performing disaster recovery. This course includes a strong emphasis on proper safety practices and industry ethics. The prerequisite for this course is Networking 1.

Career and technical student organizations are integral, co curricular components of each career and technical education course. These organizations serve as a means to enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and broaden opportunities for personal and professional growth.

The content standards in this course are designed around content organizers that emphasize hands-on, practical activities that extend beyond the computer classroom or laboratory. Course content should be integrated into other curricular areas to allow students to reinforce and expand technology competencies. As students become proficient users of computers and other technologies in the classroom, the benefits of using these tools for researching, analyzing, and synthesizing information beyond the classroom become evident. Technology literate students realize that technology tools and resources enhance not only educational endeavors but also personal and professional success as well.

## Course Goals

# NETWORKING 2

### **Advanced Networking**

Students will:

1. Describe the structure of the Internet and how it affects communication between hosts, including installing, configuring, and troubleshooting network devices for Internet and server connectivity.
2. Design a basic wired infrastructure to support network traffic, shared resources, and Web services.
3. Utilize mathematics skills to implement basic wide area network (WAN) connectivity using Telco services.
4. Justify the use of Network Address Translation (NAT) and Port Address Translation (PAT).
5. Describe the Open System Interconnection (OSI) model and the process of encapsulation.

### **Troubleshooting and Maintenance**

6. Demonstrate proper disaster recovery procedures.
7. Perform server backups.
8. Interpret various Transmission Control Protocol (TCP) and Internet Protocol (IP) messages.
9. Isolate system failures to improve network performance.
10. Utilize an organized, layered procedure to troubleshoot problems.

### **Security**

11. Utilize research results to assist in selecting a network monitoring system.
12. Evaluate network security considerations for improved network security.

### **Career Opportunities**

13. Determine career and entrepreneurial opportunities, responsibilities, and educational and credentialing requirements related to small to medium business or Internet Service Provider (ISP) professions.

### **Attachment (A)**