



The mission of Northwest Kansas Technical College, as an institution of higher learning, is to prepare individuals for gainful employment in technical careers, productive personal lives and lifelong learning.

Syllabus

Course Number: TNA 220/221

Year: Fall 2009

Course Name: Cisco Networking Academy
1 & 2 with Lab

Credits: 5

Department: TNA

Class Time: Monday-Friday 7:00 AM to
9:30 AM

Instructor: Candee Cottam

Office Hours: 6:30 – 7:00 AM
2:30 – 3:00 PM

Phone Number: 785-890-1567

E-mail: ccottam@mail.nwktc.org

Placement: Sophomore

Pre-Requisite: Freshman requirements

Required Text:

**Network Fundamentals, CCNA
Exploration Companion Guide (Current
Edition), Corresponding Labs and Study
Guide**
**Routing Protocols and Concepts CCNA
Exploration Companion Guide (Current
Edition), Corresponding Labs and Study
Guide**

Course Description-

CCNA 1 introduces Cisco Networking Academy Program students to the networking field. The course focuses on network terminology and protocols, local-area networks (LANs), The Open System

Interconnection (OSI) model, network devices, cabling, cabling tools, routers, Ethernet, Internet Protocol (IP) addressing, and network standards.

Instruction and training are provided in the proper care, maintenance, and use of networking software, tools, and equipment and all local, state, and federal safety, building, and environmental codes and regulations.

CCNA 2 describes the architecture, components and operation of routers, and explains the principles of routing and the primary routing protocols.

Course Outline-

CCNA 1

Upon completion of the chapter:

Chapter 1.	Living in a Network-Centric World	Labs & Assessment
Chapter 2.	Communicating over the Network	Labs & Assessment
Chapter 3.	Application Layer Functionality and Protocols	Labs & Assessment
Chapter 4.	OSI Transport Layer	Labs & Assessment
Chapter 5.	OSI Network Layer	Labs & Assessment
Chapter 6.	Addressing the Network: IPv4	Labs & Assessment
Chapter 7.	OSI Data Link Layer	Labs & Assessment
Chapter 8.	OSI Physical Layer	Labs & Assessment

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Chapter 9.	Ethernet	Labs & Assessment
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Chapter 10.	Planning and Cabling Networks	Labs & Assessment
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Chapter 11.	Configuring and Testing Your Network	Labs & Assessment
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Upon completion of CCNA 1

Skills Based Assessments

CCNA 1 Final Assessment

CCNA 2

Upon completion of each chapter

Chapter 1.	Introduction to Routing and Packet Forwarding	Labs & Assessment
Chapter 2.	Static Routing	Labs & Assessment
Chapter 3.	Introduction to Dynamic Routing Protocols	Labs & Assessment
Chapter 4.	Distance Vector Routing Protocols	Labs & Assessment
Chapter 5.	RIP Version 1	Labs & Assessment
Chapter 6.	VLSM and CIDR	Labs & Assessment
Chapter 7.	RIP Version 2	Labs & Assessment
Chapter 8.	The Routing Table: A Closer Look	Labs & Assessment
Chapter 9.	EIGRP	Labs & Assessment
Chapter 10.	Link-State Routing Protocols	Labs & Assessment
Chapter 11.	OSPF	Labs & Assessment

Upon completion of CCNA 2

Skills Based Assessments

CCNA 2 Final Assessment

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Learner Outcomes- After completing the course, students will be able to perform tasks related to:

Perform Networking Mathematics, understand and describe terminology, and models (III D, IV D M)

Build and implement networking media: copper, optical, and wireless (IV D M)

Perform cable testing and locate and repair LAN and WAN cable faults

1. Explain Ethernet operation and 10/100/1000/10 G versions of Ethernet (IV D M)
2. Explain and implement Ethernet Switching (IV D M)
3. Perform IP addressing and calculate subnets of major IP network numbers (III M, IV D M)
4. Explain TCP/IP Protocols: IP, TCP and UDP, Application Layer Protocols (IV D M, V D)
5. Define the role of routers in WANs (IV D M)
6. Install and proficiently direct the Cisco IOS (IV D M, V D)
7. Perform router configuration (IV D M)
8. Perform router file management (IV D M, V D)
9. Compare/contrast and install RIP and EGRP Routing Protocols
10. Explain and identify TCP/IP Error and Control Messages
11. Perform router troubleshooting (IV D M)
12. Explain the intermediate operations of TCP

Outcomes that are included in the NWKTC General Education Outcomes are identified in parentheses. The label D means the student must demonstrate the outcome, and M identifies where the student outcome is measured.

NWKTC General Education Outcomes

- I. Demonstrate the values of diversity integrity, responsibility, perseverance and strong work ethics.
- II. Reads, writes, speaks, and listens on a level that facilitates the ability to work in a chosen field and be an active citizen.
- III. Performs mathematical operations necessary to be competent in personal and professional settings.
- IV. Utilizes computer technology applications in personal and professional settings.
- V. Uses systematic methods of inquiry, critical, and creative processes to identify problems and make informed decisions.
- VI. Recognizes their strengths and weaknesses as a learner, and develops strategies for time management, documentation, evaluation processes, and personal improvement.

Method of Instruction:

Lecture, class discussions, individual assignments, small group activities, and research conducted by class members.

Method of Assessment-

The instructor's evaluation of the student will be based upon class discussion, examination, class attendance, student participation, and student attitude. Participate in class activities in a positive and sincere manner during class and maintain respect for other students.

Grading scale. There is no grading curve, nor are there any expectations as to the number of A's, B's, C's, Etc. are given in a particular class. Letter grades will be assigned as follows:

90-100	A
80-89	B
70-79	C
60-69	D
Under 60	F

Course Requirement-

Understanding comes from interacting and you cannot interact if you are not in class. A large amount of class time is spent using various teaching techniques such as lecture, videos, demonstrations and class discussion. You must attend class to take advantage of this teaching technique. Make sure that you take notes on what you see and hear in class because this information will be on the tests. Something important is covered every single class meeting. Communicating your thoughts to others is an important component of learning and participation is an important part of the course. Participation requires that you are to have read and thought about the material. Participation means not only responding to questions, but also asking questions inside and outside of class.

Assignment Policy-

All assignments must be completed and handed in at the designated times assigned by the instructor. No late work will be accepted. (Usually assignments will be requested at the beginning of class; any attempted to be turned in later during the class will be late and thus, not accepted.)

Attendance Policy-Attendance is required and roll will be taken daily. Class interaction is important, and material covered in lecture may appear on test. Also, "performance" practice is highly recommended; thus student attendance is important.

See department handbook for attendance policy.

Students will be excused for verified professional development participation, as identified by their instructors.

Make-up Classes-It is the student's responsibility to complete make-up work in a timely manner.

Bibliography- cisco.netacad.net

Syllabus Information Disclaimer

I/We reserve the right to change any information contained in this document, when necessary, with adequate notice given to the student. Notice shall be given in the classroom during class. No other notice is required. It is the students' responsibility to keep up with any changes, modifications, adjustments or amendments that are made to this document.

Notice of Nondiscrimination

NWKTC does not discriminate on the basis of race, color, national origin, religion, age, disability, or sex. Accusations concerning sexual discrimination, sexual harassment, and age discrimination should be referred to the **TITLE IX COORDINATOR/AGE ACT COORDINATOR**, Director of Support Services at 785-890-3641. Accusations based on disability or race, color, or national origin should be referred to **SECTION 504 COORDINATOR/ADA COORDINATOR/TITLE VI COORDINATOR**, Director of Student Services, located at 1209 Harrison (785-890-3641).

Policy for Providing Accommodations, Adjustments or Aids to Students with Disabilities
Northwest Kansas Technical College provides and coordinates services to students with disabilities in order to accommodate their disability and promote equal access to educational opportunities. Information regarding accommodations for students with disabilities is available from the **Section 504 Coordinator/ADA Coordinator/Title VI Coordinator, Director of Student Services**, who is located in the Administration Building at 1209 Harrison, Goodland, Kansas 67735 (785-890-3641). Accommodations are provided on an individualized, as needed basis, after the student requests assistance. Students requesting assistance are encouraged to complete an intake interview with the 504 Coordinator.

It is the responsibility of the student requesting the accommodation to have current documentation from an appropriate diagnostician (e.g., physician, psychologist, or past educational organization) regarding the nature of his or her disability and the need for any requested academic adjustment or auxiliary aids. If a student does not request an accommodation, NWKTC is not obligated to provide one.

Upon receiving a request for assistance, the Coordinator will respond by granting or denying the request of assistance after meeting with the student to discuss the request, the student's history and experiences and reviewing the documentation provided by the student. The college may request a separate evaluation at the college's expense.

Upon granting the request, the Section 504 Coordinator will:

1. Prepare a written document, signed by the Coordinator and student, which specifically list the request(s) and how the college will provide the accommodations, adjustment, or aid to the student with the disability.
2. Forward a written notice of specific accommodations and adjustments to the faculty who teach the student. Any questions regarding these instructions will be directed to the 504 Coordinator.

Upon denial of the request, the Section 504 Coordinator will:

1. Prepare a written document explaining the reason(s) of the denied request and forwarding that recommendation to the College President for a final decision by the President within 10 college days.
2. Meet with the student to inform him/her of the President's decision and give a copy of the above mentioned document to the student.
3. Explain to the student that if they do not agree with the President's decision, the option to appeal is available to them by following the Student Discrimination Action Procedure beginning with step 6.

