



Computer Networking

Course Syllabus for
CNS 141 - 001
Cisco Networking Basics Competencies
Spring 2010

Reza Dai

GENERAL INFORMATION

College Credits 4 credits; Lecture: 3 hours; Lab: 2 hours
Lecture Monday 11:00 - 1:30; Skokie Main Bldg P150
Office: Des Plaines Room 2719 / Skokie Room P110
Telephone: (847) 376-7114
E-mail: rdai@oakton.edu
URL: <http://www.oakton.edu/~rdai>

OFFICE HOURS

Day	Hours	Campus / Room
Monday	10:00 - 11:00 and 1:30-3:30	Skokie @ Room P110
Tuesday	12:20 - 12:50 and 2:55 - 4:25	Des Plaines @ Room 2719
Wednesday	By appointments only	rdai@oakton.edu
Thursday	12:20 - 12:50 and 2:55 - 4:25	Des Plaines @ Room 2719
Saturday	1:00 - 2:30	Des Plaines @ Room 2719 or 2627

Other times available by appointment only

PREREQUISITE

None

COURSE (CATALOG) DESCRIPTION

This is the first course in the Cisco Networking Academy sequence of four courses. This course introduces networking and general network concepts and builds the fundamental laboratory skills in wiring and testing. The course introduces the seven-layer OSI model and the concepts involved with routing and routing protocols.

LEARNING OBJECTIVES

By the end of this course the student should understand the fundamental OSI layer structure as well and the general function of each layer. The student will achieve basic wiring and cable making skills with knowledge of LAN layout. The student should understand the electrical fundamental of data transmission and how the data moves in the networks.

ACADEMIC INTEGRITY

Students and employees at Oakton Community College are required to demonstrate academic integrity and follow Oakton's Code of Academic Conduct. This code prohibits:

- ▶ cheating,
- ▶ plagiarism (turning in work not written by you, or lacking proper citation),
- ▶ falsification and fabrication (lying or distorting the truth),
- ▶ helping others to cheat,
- ▶ unauthorized changes on official documents,
- ▶ pretending to be someone else or having someone else pretend to be you,
- ▶ making or accepting bribes, special favors, or threats, and
- ▶ any other behavior that violates academic integrity

There are serious consequences to violations of the academic integrity policy. Oakton's policies and procedures provide students a fair hearing if a complaint is made against you. If you are found to have violated the policy, the minimum penalty is failure on the assignment and, a disciplinary record will be established and kept on file in the office of the Vice President for Student Affairs for a period of 3 years.

Details of the Code of Academic Conduct can be found in the Student Handbook.

CLASS POLICIES

In order to make our class a comfortable and encouraging learning environment for everyone, the following is a set of class policies.

- ▶ Please treat other students, lab assistant, and your instructor with courtesy and respect.
- ▶ Please be on-time for class. If you are late, enter quietly and find out what you've missed from your classmates.
- ▶ For the courtesy of others, if you need to take a call, answer the call outside of the classroom.
- ▶ You should not be surfing the net during lecture unless you are following the lecture using the on-line materials.
- ▶ Do not install any software on the computers in the classroom or the lab.
- ▶ Do not change the desktop or any of the default configurations of the computer unless it is part of a lab exercise.
- ▶ Any misuse of the equipment or unprofessional conduct will not be tolerated.

OUTLINE OF TOPICS

- ▶ Living in a Network Centric World
- ▶ Communicating over the Network
- ▶ Application Layer Functionality and Protocols
- ▶ OSI Transport Layer
- ▶ OSI Network Layer
- ▶ Addressing the Network - IPv4
- ▶ OSI Data Link Layer
- ▶ OSI Physical Layer
- ▶ Ethernet
- ▶ Planning and Cabling Networks
- ▶ Configuring and Testing Your Network

METHODS OF INSTRUCTION

A combination of lectures, lab, and on-line activities will be used to master the material.

COURSE PRACTICES REQUIRED

All assigned work must be completed and the Cisco on-line final examination must be passed. Failure to pass the Cisco final exam will keep you from being able to register for the next course in the sequence.

INSTRUCTIONAL MATERIALS

Textbook (optional)	Network Fundamentals, CCNA Exploration Companion Guide, By Mark Dye, Rick McDonald, and Antoon Ruffi. Published by Cisco Press, ISBN-10: 1587132087 http://www.ciscopress.com/bookstore/product.asp?isbn=1587132087
Lab Manual (highly recommended)	Network Fundamentals, CCNA Exploration Labs and Study Guide By Antoon Ruffi, Priscilla Oppenheimer, Belle Woodward, Gerlinde Brady Published by Cisco Press, ISBN-10: 1587132036 http://www.ciscopress.com/bookstore/product.asp?isbn=1587132036

METHODS OF EVALUATING STUDENT PROGRESS

The following point distribution will be used to evaluate your progress:

Quizzes: There will be weekly quizzes. Each quiz will be given at the beginning of the class period and covers materials covered in the previous lecture.	300
Labs: Labs are scheduled on a weekly basis and are due the following week. These labs are designed to reinforce lecture materials. See the Course Schedule for the lab assignments.	100
Final Lab: The final hands-on lab will test your knowledge of the materials learned in the lab assignments.	25
Final Exam: The Final Exam is a comprehensive exam and it covers chapters 2 through 11.	75

Total Points	500
---------------------	------------

GRADE DISTRIBUTION: Final Grade will be assigned as follows:

Points Earned	Grade
450 - 500	A
400 - 449	B
350 - 399	C
300 - 349	D
Less than 300	F

OBSERVANCE OF RELIGIOUS HOLIDAYS

Oakton Community College recognizes the broad diversity of religious beliefs of its constituencies. The College has embraced a practice of shared responsibility in the event a religious observance interferes with class work or assignments. Students who inform instructors well in advance of an intended absence for a major religious observance will not be penalized. The instructor will make reasonable accommodations for students, which may include providing a make up test, altering assignment dates, permitting a student to attend another section of the same course for a class period or similar remedies. Instructors are not responsible for teaching material again.

DISABILITIES

If you have a documented learning, psychological, or physical disability you may be entitled to reasonable academic accommodations or services. To request accommodations or services, contact the ASSIST office (635-1658) in the Learning Center (Room 2400 Des Plaines). All students are expected to fulfill essential requirements. The college will not waive any essential skill or requirement of a course or a degree program.

ADDITIONAL OAKTON INFORMATION

Please note the following dates:

February 14	Last day to withdraw from 16 week courses and have course dropped from record*
February 14	Last day to change to Audit for 16 week courses*
February 15	Presidents' Day holiday, College closed
February 21	Incomplete (I) grades from fall 2009 semester for which faculty have not submitted final grades will become an "F" after this date.**
March 12 noon	Last day for filing Graduation Petitions
March 14	Last day to withdraw with a W from 16-week courses* Students will receive a grade in all courses in which they are enrolled after March 14.
March 15 - 21	Spring Recess, College closed
March 22	Classes resume after Spring recess
March 29	Registration opens for summer 2010 sessions
April 12	Registration opens for fall 2010 sessions
May 13, 14	Evaluation Days***
May 17	Grading Day. Faculty on campus and available to students at designated times.
May 17	Summer 2010 interim classes begin
May 18 noon	Grades due
May 18	Commencement
May 28	Summer hours begin. College closed Friday through Sunday until the week of August 9.

* Consult Registration & Records for deadlines on classes meeting less than 16 weeks.

** Students must make arrangements with individual faculty members regarding deadlines to submit required work for Incomplete (I) grades.

*** Two days to be used for instruction or final student evaluations or culminating course activities. Classes not scheduled to meet on these days and classes which do not meet for the duration of a semester will ordinarily use the last class session(s) for instruction or final student evaluations or culminating course activities.

**** Faculty on campus and available to students at designated times.

The instructor reserves the right to make changes to the syllabus on an as needed basis. Any such changes will be announced in class. If you are not in class, it is your responsibility to find out about these changes from one of your classmates.

TENTATIVE TOPICS AND COURSE SCHEDULE

The following is intended to be an accurate outline of the course schedule, but the instructor reserves the right to make modifications dependent upon pace and progress, and potential class cancellations, e.g. snow days

Week of	Lecture Topics	Quizzes	Labs / Assignments
Feb. 08	Course Introduction Net Academy Login Chapter 1 - Living in a Network Centric World		- Skills Integration Challenge 1.7.1 - Introduction to Packet Tracer
Feb. 22	Chapter 2 - Communicating over the Network		- Lab 2.6.1 - Topology Orientation and Building a Small Network - Lab 2.6.2 - Using Wireshark™ to View Protocol Data Units
Mar. 1	Chapter 3 - Application Layer Functionality and Protocols	Chap. 2	- Lab 3.4.2 - Managing a Web Server - Lab 3.4.3 - E-mail Services and Protocols
Mar. 8	Chapter 4 - OSI Transport Layer	Chap. 3	- Lab 4.5.1 - Observing TCP and UDP using Netstat - Lab 4.5.2 - TCP IP Transport Layer Protocols, TCP and UDP
Mar. 22	Chapter 5 - OSI Network Layer	Chap. 4	- Lab 5.5.1 - Examining a Device's Gateway - Lab 5.5.2 - Examining a Route
Mar. 29	Chapter 6 - Addressing the Network - IPv4	Chap. 5	- Lab 6.7.1 - Ping and Tracert - Lab 6.7.2 - Examining ICMP Packets
Mar. 5	Chapter 7 - OSI Data Link Layer	Chap. 6	- Lab 7.5.2 - Frame Examination - Skills Integration Challenge 7.6.1 - Data Link Layer Issue
Apr. 12	Chapter 8 - OSI Physical Layer	Chap. 7	- Skills Integration Challenge 8.5.1 - Connecting Devices and Exploring the Physical View - Activity 8.3.7 - Simple Wireless LAN Model
Apr. 19	Chapter 9 - Ethernet	Chap. 8	- Activity 9.8.1 - Address Resolution Protocol (ARP) - Lab 9.8.2 - Cisco Switch MAC Table Examination
Apr. 26	Chapter 10 - Planning and Cabling Networks	Chap. 9	- Lab 10.3.2 - How Many Networks - Lab 10.6.2 - Establishing a Console Session with HyperTerminal
May. 3	Chapter 11 - Configuring and Testing Your Network Final Hands-on Lab	Chap. 10 Chap. 11	- Activity 11.2.3 - Use Packet Tracer to Practice IOS Configuration Management - Activity 11.3.3 - Test Connectivity to a Host on the Local Network - Lab 11.5.1 - Basic Cisco Device Configuration
May 10	Final Exam (Covers Chapters 2-11)		