

CIS151 – Networking Fundamentals

Fall Term 2009

Class Hours: Days: MW Time: 8:00-11:20; 12:00-3:20pm
Instructor: David R. Becker
Office Hours: M/W 11:30-12:00, Tu 2:00-3:00 or By Appointment
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Class Room: MKH-103/105
Phone: 917-4264
Office: MKH-106

Course Description: This is the first course of a four-part sequence in a curriculum governed by Cisco Systems and directed toward the Cisco Certified Network Associate (CCNA) certification. CIS 151 is also useful to all computer professionals as a single-term introduction to basic networking concepts. The course provides students with classroom and lab experience in current networking technology.

Learning Objectives:

The overall course objective is to provide the basic concepts and skills you will need to understand computer networks and that are required to advance to Semester 2 of the Cisco Certified Networking Academy Program.

Upon successful completion of the course, you are expected to be able to:

Understand the OSI Reference Model and each respective layer.

Understand Networking Media and their respective function – cables, NIC cards, routers, hubs, bridges, repeaters, etc.

Understand IP addressing.

Understand various protocols- TCP/IP, ARP, RARP, etc.

Be familiar with networking topologies and the advantages and disadvantages of each.

Communicate effectively in both written and oral forms.

Prerequisite:

CS 125 (Introduction to Software Applications) and MTH 95, or Instructor's approval.

Required Materials:

Text:

Required:

CCNA Exploration Labs and Study Guide: Network Fundamentals, Cisco Press.

CCNA Exploration Companion Guide: Network Fundamentals, Cisco Press.

Bundle ISBN: 9780131357709

Assignments:

On-line Cisco Networking Academy Curriculum: At the core of this class is the Cisco on-line curriculum. The course has been installed on the computers in MKH 103 and MKH 105 for use during class time, as well as during student-selected lab times when the classroom is available. Also, each student will have his/her own account on the Cisco Networking Academy Server which will allow each of you to access the course via any internet connected computer at: <http://cisco.netacad.net>

Lab Work: In addition to the on-line curriculum you will be assigned labs to complete. Lab work will be recorded on the appropriate pages in the Lab Companion book and turned in on the specified date as scheduled. Labs that are turned in late will be assessed a 20% penalty. **Zero credit will be given for lab work that is more than one week overdue. Lab Assignments, scoring criteria and procedures** for turning in the work will be further discussed in class for **each lab assignment**.

Skills Exam: As part of the assessment for this course you will be given two (2) practical, hands-on skills exams. Further information and details on these evaluations will be provided later in the course.

Tests:

Chapter Tests: Chapter tests will be accessed via the internet from the Cisco Networking Academy Website. The instructor will enable access to each test for a specified limited time, and students will take the test during and at the location of the class. All chapter tests are closed book. Each student's score on each test will be recorded on the Cisco Networking Academy server and you will receive immediate feedback on your score. You will be allowed to re-take up to a total of three Chapter tests during the course; this does not include the final. The most recent test score will count towards your final grade. Further information will be given in class on this subject.

Final Exam:

The Final Exam will be given on Monday: December 7th from 8:00-9:50am or 1:00-2:50pm in MKH 103/105. You will be required to attain a score of at least 70% on the final exam to pass the course and be approved for advancement to the next term of the CCNA curriculum – CIS 152. If you do not pass the final exam with a score of at least 70% the highest possible grade that you will receive in the class will be a C regardless of your total percentage level. The following scale will be used to determine your grade in this course:

Assessment Scale:

Lab Work = 20%

Skills Exam = 20%

Chapter Tests = 30%

Final Exam = 30%

Grading Scale:

A = 90-100%

B = 80-89%

C = 70-79%

Office of Disability Services:

Students who may need accommodations due to documented disabilities, who have medical information which the instructor should know, or who need special arrangements in an emergency, should **speak with the instructor during the first week of class**. If you have not accessed services and think you may need them, **please contact Disability Services, 917-4789**. If you have documented your disability, remember that you must complete a Request for Accommodations form every term in order to receive accommodations.

CS151 Networking Essentials Fall 2009 Schedule

Term Week	Date	Topic	Assignment/Assessment Event
Week 1	Sept 28	Course Introduction	Curriculum Orientation and Accounts Assigned
	Sept 30	Living in a Network Centric World Communicating Over the Network	Chapter 1 Chapter 2 Lab 1 Assignment:
Week 2	Oct 5	Communicating Over the Network	Lab 2 Assignment: Lab 1 Due
	Oct 7	Application Layer Functionality and Protocols	Chapter 3 Lab 2 Due Chapter 2 Test
Week 3	Oct 12	Application Layer Functionality and Protocols	Lab 3 Assignment:
	Oct 14	OSI Transport Layer	Chapter 4 Lab 3 Due Chapter 3 Test
Week 4	Oct 19	OSI Transport Layer	Lab 4 Assignment: PT 4.6.1, Cable Handout and Lab 2.6.1
	Oct 21	OSI Network Layer	Chapter 5 Lab 4 Due Chapter 4 Test
Week 5	Oct 26	OSI Network Layer	Lab 5 Assignment: PT 5.5.1, 5.6.1
	Oct 28	Addressing the Network	Chapter 6 Lab 5 Due Chapter 5 Test
Week 6	Nov 2		Chapter 6 Lab 6 Assignment: PT 6.5.7, 6.5.8, 6.7.1-2, 6.7.5, 6.8.1 Activity 6.1 p 178-191, Lab 6-3
	Nov 4	OSI Data Link Layer	Chapter 7 Lab 7 Assignment: PT 7.6.1
Week 7	Nov 9	OSI Physical Layer	Chapter 8 Lab 6 Due Chapter 6 Test Lab 8 Assignment Lab 8-1, PT 8.5.1 Lab 7 Due
	Nov 11	Holiday: Veteran's Day	Chapter 7 Test (due Fri Nov 13 Midnight)
Week 8	Nov 16	Ethernet	Chapter 9 Lab 9 Assignment: PT 9.9.1 Lab 8 Due Chapter 8 Test
	Nov 18	Planning and Cabling Networks	Chapter 10 Lab 9 Due Chapter 9 Test
Week 9	Nov 23	Planning and Cabling Networks Configuring and Testing Your Network	Lab 10 Assignment: PT 10.2.3, Lab 10.3.2 PT 10.6.1, Lab 10.6.2, PT 10.7.1 Chapter 11
	Nov 25	Configuring and Testing Your Network	Lab 11 Assignment PT 11.6.1, Lab 11.5.1, 11.5.2(partial), 11.5.3, 11.5.4 Lab 10 Due Chapter 10 Test
Week 10	Nov 30		Lab 11 Due Chapter 11 Test
	Dec 2	Final Review	
Final	Dec 7	Final Exam 8:00-9:50am/1:00pm-2:50pm	Comprehensive