



## SOUTHWESTERN ILLINOIS COLLEGE COURSE SYLLABUS

### Cisco Network Fundamentals CISC-151-061 Fall, 2016

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#### **GENERAL INFORMATION**

**Instructor:** Charles Hannon  
**Class time:** 5:30 pm – 10:00 pm  
**Credit hours:** 4  
**Class Location:** Room 335  
**Phone:** 618-931-0600 ext. 7363  
**Toll Free:** (866) 942-SWIC (7942)  
**Office Hours:** MW 12:30 pm – 1:30 pm TH 12:30 pm – 1:30 pm  
**Office:** Room 334A  
**E-mail:** Charles.hannon@swic.edu  
**Website:** <http://www.charleshannon.net>

#### **COURSE DESCRIPTION**

This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Labs use a model Internet to allow students to analyze real data without affecting production networks. Packet Tracer (PT) activities help students analyze protocol and network operation and build small networks in a simulated environment.

#### **PREREQUISITES**

Concurrent enrollment with CISC-152

#### **COURSE OBJECTIVES**

Upon successful completion of this course, students will be able to:

- Understand and describe the devices and services used to support communications in data networks and the Internet
- Understand and describe the role of protocol layers in data networks
- Understand and describe the importance of addressing and naming schemes at various layers of data networks in IPv4 and IPv6 environments

Design, calculate, and apply subnet masks and addresses to fulfill given requirements in IPv4 and IPv6 networks  
Explain fundamental Ethernet concepts such as media, services, and operations  
Build a simple Ethernet network using routers and switches  
Use Cisco command-line interface (CLI) commands to perform basic router and switch configurations  
Utilize common network utilities to verify small network operations and analyze data traffic

### **METHODS OF PRESENTATION:**

Lecture, Discussion, Computer Aided Instruction, Demonstrations, Hands-On Labs.  
Individual presentations will be given on a related, approved, topic.

### **TEXTBOOKS AND COURSE MATERIALS**

Required Materials:

Cisco Networking Academies Curriculum, Cisco Systems Inc. © 2014 (on-line)  
Accessible at <http://www.netacad.com>  
Introduction to Networks, Lab Manual  
Cisco Press © 2014. ISBN 13: 978-1-58713-353-4 Optional:  
Introduction to Networks, CCNA Exploration Companion Guide.  
Cisco Press © 2014. ISBN 13: 978-1-58713-316-9

[www.cisco.swic.edu/cisc](http://www.cisco.swic.edu/cisc)  
o user: Cisco310 pass:  
RouterFun@8

[www.netacad.com](http://www.netacad.com)

You will also need:

1 - 1" 3ring binder for IOS Engineering Journal  
1 - Composition booklet for Reflection Journal (provided)  
1 - Google Docs\Wiki account to create e-Portfolios  
24/7 broadband access to the internet

### **GRADING PROCEDURE**

A =

- 94+% average on all Chapter exams
- 5 Engineering Journal entries
- Reflection Journal
- Oral presentation
- >85% Final Online exam

- <3 absences
- 5 ePortfolios or 5 Skills Integration Challenge PTA

B =

- 87+% average on all Chapter exams
- 5 Engineering Journal entries
- Reflection Journal
- Oral presentation
- >75% Final exam
- <4 absences
- 5 ePortfolios or 5 Skills Integration Challenge PTA

C =

- 70+% average on all Chapter exams
- 5 Engineering Journal entries
- Reflection Journal
- Oral presentation
- >60% Final exam
- <5 absences
- 5 ePortfolios or 5 Skills Integration Challenge PTA

**Master Learning – Chapter exams will be repeatable. Students will have 5 attempts at each Chapter exam. One attempt on the Final exam.** e-Portfolios and Engineering labs can have many drafts.

### **ACADEMIC RIGOR STATEMENT**

Students need to understand that for every hour spent in class, two hours may be required outside of class. That means in one week student may have to put in a total of 30 hours to class work EVERY week. Since you have 10 hours in class per week you may be expected to put in as many as 20 hours outside of class.

### **ATTENDANCE POLICY**

College Policy: Students are expected to be present for all assigned classes, lectures or laboratory sessions. In the event of an absence, a student must show the instructor that the absence has been for a good cause. If a student is absent more times during the semester that the number of times the class meets per week, the student may be dropped from the course at the discretion of the instructor. When a student is dropped by an instructor with an effective date before the midterm date of the class, a “W” will be recorded. When a student is dropped for non-attendance by an instructor with an effective date after the midterm date, the instructor will have the prerogative to assign a grade of “F” or “WF”. **Please note: Instructors can**

**assign a W (Withdrawn) or WF (Withdrawn Failing) grade before the published last date to withdraw from a class.**

### **WITHDRAWAL**

College Policy: It is the student's responsibility to withdraw from classes when not in attendance. Failure to properly withdraw could result in a failing grade. **Please note: Instructors can assign a W (Withdrawn) or WF (Withdrawn Failing) grade before the published last date to withdraw from a class.**

Students may drop a course by notifying the Office of Admissions and Records in writing or by completing an official Drop/Add/Section Change form.

### **TARDINESS, LATE FOR CLASS**

Tardiness may be dealt with as a nuisance activity as addressed in the Student Conduct Code; individual instructors may establish additional penalties for tardiness.

### **HOMEWORK ASSIGNMENTS, FAILURE TO FOLLOW INSTRUCTIONS**

In order to receive full credit, assignments must be turned in on time; individual instructors may establish additional penalties for late assignments.

### **FAILURE TO TAKE TEST**

Students should not expect to make up a test that is missed; individual instructors will determine the penalty for missed tests. If a student misses a final exam, a 0 (zero) may be assigned for the final exam.

### **PHONES AND OTHER ELECTRONIC DEVICES IN CLASSROOM**

All phones and other electronic devices should be turned off prior to entering the classroom. Failure to follow this policy will be considered a student disruption under the Student Conduct Code.

### **UNAUTHORIZED COMPUTER USE IN CLASSROOM**

Unauthorized computer use, including accessing the Internet and checking email during class, can be considered a disruption under the Student Conduct Code.

### **CHEATING/ACADEMIC DISHONESTY**

Students are expected to comply with the academic integrity policy stated in the Student Conduct Code of Southwestern Illinois College. Academic misconduct can include, but is not limited to, cheating, plagiarism and forgery; failure or refusal to follow clinical practice standards; and soliciting, aiding, abetting, concealing, or attempting such acts. Violations of this code may result in one of the following being imposed: **Disciplinary Reprimand, Probation, Social Probation, Suspension, Expulsion, Failing Grade or Withdrawal from course.** Additional information

regarding Academic Regulations may be found on pages 28-33 of the 2008-2009 college catalog.

Cheating: Includes, but is not limited to, working on a class assignment with others, including student tutors, when the instructor has not said that such collaboration is permitted. (While it is permissible to have general discussions about course work, unless your instructor tells you otherwise, any work you hand in must be a result of your individual effort and not the result of collaboration or plagiarism.)

Plagiarism: Failing to enclose in quotation marks, failing to cite a source, or incorporating another's work into your own work. **This includes information copied from the Internet.**

### **DISABILITY & ACCESS CENTER**

Students with disabilities who believe that they may need accommodations in the class are encouraged to contact the Disability & Access Center at 618-222-5368 or 618-234-3347 (TDD) as soon as possible to ensure that such accommodations are implemented in a timely fashion.

### **STUDENT LEARNING OUTCOMES**

The assessment of student learning is an integral part of the educational experience at Southwestern Illinois College. To this end, the faculty continually assess student learning to improve student success. Occasionally you will be requested to participate in college-wide and discipline specific assessment activities. Please take these assessments seriously. The data that is collected will provide valuable information to faculty and will be used to improve student learning at SWIC.

### **POLICY FOR INCLEMENT WEATHER CONDITIONS**

During times of inclement weather, Southwestern Illinois College has three options for dealing with the situation: cancel classes and cease all business, exercise the delayed-start option, or keep the college open. If the college chooses to use the delayed-start option rather than close, the college will open at 10 a.m. The decision to cancel classes or exercise the delayed-start option will be posted on the home page of Southwestern's Web site (<http://www.swic.edu>) as well as broadcast on FOX 2 (KTVI), KMOV-TV Channel 4, KSDK-TV Channel 5, and radio stations KMOX-AM 1120 and WIL-FM 92.3.

### **STUDENT EMAIL ACCESS**

All SWIC students have been assigned a student e-mail account. This e-mail account is an official means of college communication and students are expected to check their account on a regular basis. To access this account, please visit [estorm.swic.edu](http://estorm.swic.edu).

## SAFE ZONE

I am a member of the Safe Zone Program: Allies for Gender and Sexual Diversity. This means that I promise to provide confidential support for members of the college community who are gay, lesbian, transgender, intersex, asexual, or crossdressing. I am available to listen if you wish to talk or to refer you to appropriate resources in the community.

## TOPICAL OUTLINE

WEEK	MODULE and TOPIC	ASSIGNMENTS
1	<b>Course Introduction:</b>	LABS: 1.2.4.4
	Exploring the Network	
2	<b>Module 2:</b> Configuring NOS	LABS: 2.1.4.8, 2.2.3.3, 2.3.2.5,
3	<b>Module 4:</b> Network Access  <b>Module 5:</b> Ethernet	LABS: 4.2.4.5  LABS: 5.1.4.4, 5.2.1.7, 5.3.3.5
4	<b>Module 6:</b> Network Layer <b>Module 7:</b> Transport Layer	LABS: 6.3.1.10, 6.4.1.2, 6.4.3.3, 6.4.3.4, LABS: 7.3.1.2
5	<b>Module 8:</b> IP Addressing  <b>Module 9:</b> Subnetting IP Networks	LABS: 8.1.3.8, 8.2.5.3, 8.3.2.5, 8.3.2.6, 8.3.2.8  LABS: 9.1.4.6, 9.1.4.7, 9.2.1.5, 9.3.1.4,
6	<b>Module 10:</b> Application Layer  <b>Module 11:</b> It's a Network	LABS: 10.2.1.8, 10.2.2.8, 10.2.3.2, 10.4.1.2, 10.4.1.3  LABS: 11.3.2.2, 11.3.3.4, 11.4.2.5, 11.5.2.4

7	Hands-On Finals	Engineering Journals draft
8	Oral Presentations Makeup Tests Online Final Comprehensive Test	All e-Portfolios and Engineering Journals due

Revised 8/13/ 16