

C S 50A Syllabus

This class provides you with an introduction to 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. Students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

Student Learning Outcomes for this class:

1. OSI Model

You will demonstrate understanding of the role of the OSI Model in Networking

2. Network Communications

You will demonstrate an understanding of communications between two hosts on an IP network connected by an arbitrary collection of routers and switches.

Course Summary:

This class utilizes three different Web Sites

1. This Canvas site <https://foothillcollege.instructure.com> (your username and password are your MyPortal credentials)

The Canvas site is where you will find the weekly assignments, this site is where assignments are posted but the assignments are actually performed on one of the other sites.

2. The Cisco Networking Academy site <https://cisco.netacad.com> (Links to an external site.)Links to an external site. (You were sent an email telling you how to confirm your Cisco Networking Academy account)

Each week you must go to the Cisco Networking Academy site, read the assigned Module, take the quiz and then take the weekly exam. The quiz is scored by it is not part of your grade, its' purpose is to help you evaluate your understanding of the Module that you read. When you are ready, you will take the weekly exam, each exam only count 1% of your class grade.

I recommend that you first do the reading and take the quiz. Then do the Labs and finally take the Module Exam.

3. The NETLAB site is <https://openlab.bayict.cabrillo.edu> (Links to an external site.)Links to an external site. (Your NETLAB username is your Foothill Student ID and **the initial password is foothill123, not your MyPortal password** (Links to an external site.)Links to an external site.)

You will perform the assigned labs on the NETLAB site, the lab documents are downloaded from this Canvas site, the labs are provided to you as Word Documents. You will download the labs each week and use them when you perform the Labs using NETLAB. As you perform the Labs you should answer the questions presented in the Lab document.

NETLAB is a Web Based front end to the Cisco Routers and Switches that you are learning to configure. The set of Routers, Switches, and PCs that you will be accessing is called a Pod. You will reserve a Pod for your exclusive use.

When you complete the Lab and the Lab write-up you will submit it for grading on the Canvas site.

How to ask questions and/or contact one of the instructors: Please use Canvas for all communications, use Discussions to ask questions regarding any of the Course Material, discussions have been setup **for each chapter**.

- Questions about the Reading
- Questions about the Labs
- Questions about the Quiz
- Questions about the Exams

If you need to ask one of us a private question please use the Inbox on the far right of this page.

All of the assignments for the class are listed in the Module section, the Syllabus includes a summary of the dates that all assignments are due.

Methods of Evaluation (All work must be completed by the scheduled due dates, this distribution may change)

Chapter Exams 10%

Labs 50%

Final Exam 40%

Grading

Grade	Grade
A 90 to 100%	D 60 to 69.9%
B 80 to 89.9%	F < 60%
C 70 to 79.9%	

Recommended Supplemental Textbooks These books are not required but can be very helpful to help you understand the material, they are design to assist you when you are studying for the Cisco CCENT and CCNA Exams.

[Cisco CCENT/CCNA ICND1 100-105 Official Cert Guide covers C S 50A & B or \(Links to an external site.\)Links to an external site.](#)

[CCNA Routing and Switching 200-125 Official Cert Guide Library covers C S 50A, B, C, D \(Links to an external site.\)Links to an external site.](#)

Class Web Sites

Canvas <https://foothillcollege.instructure.com>

Cisco Network Academy (NetAcad) <https://cisco.netacad.com> (Links to an external site.)Links to an external site.

NETLAB <https://openlab.bayict.cabrillo.edu/> (Links to an external site.)Links to an external site.

[Foothill College Academic Integrity Policy and Statement \(Links to an external site.\)Links to an external site.](#)

[Foothill College Disability Resource Center](#)

Date	Details	
Tue Sep 25, 2018	Skim Chapter 1 on NetAcad (I will not lecture on this chapter but I will answer questions)	due by 5:59pm
	Quiz for Chapter 1 on Cisco NetAcad	due by 11:59pm

Date	Details	due by
Sun Sep 30, 2018	Read Chapter 2 on NetAcad	11:59pm
	Quiz for Chapter 2 on Cisco NetAcad	due by 6pm
	1.2.4.5 Packet Tracer - Network Representation	due by 11:59pm
	2.1.4.6 Packet Tracer - Navigating the IOS	due by 11:59pm
	2.3.3.3 NetLab - Building a Simple Network	due by 11:59pm
	2.3.3.4 NetLab - Configuring a Switch Management Address	due by 11:59pm
	Exam for Chapter 1 on Netacad	due by 11:59pm
	Exam for Chapter 2 on NetAcad	due by 11:59pm
	Getting to Know You, Please Introduce Yourself to the Class	due by 11:59pm
	Lab 2.1.4.7 - Establishing a Console Session with Tera Term	due by 11:59pm
Tue Oct 2, 2018	Read Chapter 3 on Cisco NetAcad due by 5:59pm	
	Quiz for Chapter 3 on Cisco NetAcad due by 6pm	
Sun Oct 7, 2018	3.2.4.6 Packet Tracer - Investigating the TCP-IP and OSI Models in Action	due by 11:59pm
	3.4.1.2 NetLab - Using Wireshark to View Network Traffic	due by 11:59pm
	Exam for Chapter 3 on Netacad	due by 11:59pm
Tue Oct 9, 2018	Read Chapter 4 on NetAcad due by 5:59pm	
Sun Oct 14, 2018	Quiz for Chapter 4 on Cisco NetAcad	due by 6pm
	4.2.2.7 NetLab - Building an Ethernet Crossover Cable	due by 11:59pm
	Exam for Chapter 4 in Netacad	due by 11:59pm
Tue Oct 16, 2018	Read Chapter 5 on Netacad due by 5:59pm	
Sat Oct 20, 2018	4.1.2.4 NetLab - Identifying Network Devices and Cabling	due by 11:59pm
Sun Oct 21, 2018	5.1.1.7 NetLab - Using Wireshark to Examine Ethernet Frames	due by 6pm

Date	Details	
	5.1.2.8 NetLab - Viewing Network Device MAC Addresses	due by 6pm
	5.2.1.7 NetLab - Viewing the Switch MAC Address Table	due by 6pm
	5.3.2.8 Packet Tracer - Examine the ARP Table	due by 6pm
	Exam for Chapter 5 in Netacad	due by 6pm
	Quiz for Chapter 5 on Cisco NetAcad	due by 6pm
Tue Oct 23, 2018	Read Chapter 6 on NetAcad due by 5:59pm	
	6.3.2.7 NetLab - Exploring Router Physical Characteristics	due by 6pm
	6.4.3.3 Packet Tracer - Connect a Router to a LAN	due by 6pm
	6.4.3.4 Packet Tracer - Troubleshooting Default Gateway Issues	due by 6pm
	6.5.1.2 NetLab - Building a Switch and Router Network	due by 6pm
	Exam for Chapter 6 in Netacad	due by 6pm
	Quiz for Chapter 6 on Cisco NetAcad	due by 6pm
Tue Oct 30, 2018	Read Chapter 7 on NetAcad - We will discuss IPv4 tonight and IPv6 next week.	due by 10am
Sun Nov 4, 2018	Quiz for Chapter 7 on NetAcad due by 10am	
	7.1.2.9 NetLab - Converting IPv4 Addresses to Binary	due by 11:59pm
	7.1.4.9 NetLab - Identifying IPv4 Addresses	due by 11:59pm
Tue Nov 13, 2018	Read Chapter 8 on NetAcad	due by 5:59pm
	Quiz for Chapter 8 on NetAcad	due by 6pm
	7.2.5.3 NetLab - Identifying IPv6 Addresses	due by 11:59pm
	7.2.5.4 NetLab - Configuring IPv6 Addresses	due by 11:59pm

Date	Details	
Mon Nov 19, 2018	7.3.2.5 Packet Tracer - Verifying IPv4 and IPv6 Addressing	due by 11:59pm
	7.3.2.7 NetLab - Testing Network Connectivity with Ping and Traceroute	due by 11:59pm
	7.3.2.9 Packet Tracer - Troubleshooting IPv4 and IPv6 Addressing	due by 11:59pm
	Exam for Chapter 7 in Netacad	due by 11:59pm
	8.1.4.6 NetLab - Calculating IPv4 Subnets	due by 11:59pm
	8.1.4.7 Packet Tracer - Subnetting Scenario 1	due by 11:59pm
Tue Nov 20, 2018	8.1.4.8 NetLab - Designing and Implementing a Subnetted IPv4 Addressing Scheme	due by 11:59pm
	8.2.1.5 NetLab - Designing and Implementing a VLSM	due by 11:59pm
Tue Nov 20, 2018	8.3.1.4 Packet Tracer - Implementing a Subnetted IPv6 Addressing Scheme	due by 11:59pm
	Exam for Chapter 8 in Netacad	due by 11:59pm
Tue Nov 20, 2018	Read Chapter 9 on NetAcad	due by 5:59pm
Mon Nov 26, 2018	Quiz for Chapter 9 (take the quiz on Cisco NetAcad)	due by 6pm
	9.2.4.3 NetLab - Using Wireshark to Examine TCP and UDP Captures	due by 11:59pm
	9.3.1.2 Packet Tracer Simulation - Exploration of TCP and UDP Communication	due by 11:59pm
Tue Nov 27, 2018	Exam for Chapter 9 on NetAcad	due by 11:59pm
	Read Chapter 10 on NetAcad	due by 5:59pm
Mon Dec 3, 2018	Quiz for Chapter 10 (take the quiz on Cisco NetAcad)	due by 6pm
	10.2.2.8 NetLab - Observing DNS Resolution	due by 11:59pm
	10.2.3.4 NetLab - Exploring FTP	due by 11:59pm
	Exam for Chapter 10 on NetAcad	due by 11:59pm
Tue Dec 4, 2018	Lab Final Exam	due by 11:59pm
	Read Chapter 11 on NetAcad	due by 5:59pm
Tue Dec 4, 2018	Quiz for Chapter 11 on Cisco NetAcad	due by 6pm

Date	Details	
Mon Dec 10, 2018	11.2.4.6 NetLab - Accessing Network Devices with SSH	due by 11:59pm
	11.2.4.7 NetLab - Examining Telnet and SSH in Wireshark	due by 11:59pm
	11.2.4.8 NetLab - Securing Network Devices	due by 11:59pm
	11.2.5.8 NetLab - Managing Router Configuration Files with Terminal Emulation Software (Obsolete Lab)	due by 11:59pm
	11.2.5.9 NetLab - Managing Device Configuration Files Using TFTP, Flash, and USB (Obsolete Lab)	due by 11:59pm
	11.3.2.3 Packet Tracer - Test Connectivity with Traceroute	due by 11:59pm
	11.3.3.3 Packet Tracer - Using Show Commands	due by 11:59pm
Exam for Chapter 11 on Netacad	due by 11:59pm	
Tue Dec 11, 2018	Lab Final Quiz due by 8pm	
	Final Exam on NetAcad due by 11:59pm	
Thu Dec 13, 2018	11.4.3.5 Netlab - Troubleshooting Connectivity Issues	due by 11:59pm