

ITP 357 - Enterprise Network Design (3 Units)

Instructor	Harrison Cavallero	Lecture	Tuesday 2:00PM – 3:20PM
Office	OHE 530 A	Lab	Thursday 2:00PM – 3:20PM
Office Hours	TBA	Location	OHE 406 (Lecture &Lab)
Email	hcavalle@usc.edu		

Required Text:

- CCNA Routing and Switching 200-120 Official Cert Guide Library Hardcover – Box set, June 2, 2013
by Wendell Odom (Author)
ISBN-13: 978-1587143878 ISBN-10: 1587143879 Edition: 1st

Description:

This course focuses on the fundamentals of networking and enterprise level networks. The structure of this class will be unconventional:

Each week will begin with 20-30 minutes of instruction providing foundational information to the students on topics that they would focus on during the weeks lesson. It will be the student's responsibility to review the week's material before attending class. During the rest of the class time, the students will work on the lab assignment that reinforces the ideas presented during the week.

For the midterm of the class, each student would be required to take the Cisco ICND1 100-101 (which is the first half of the CCNA exam). For the final, students can elect to take the second half of the CCNA exam (ICND2 200-101) or complete a final project on an advanced topic agreed up with the instructor.

Goals:

- Identify the various components of the OSI networking model
- Describe the different types of networks
- Understand how to deploy enterprise Ethernet LANs
- Understand and configure an enterprise router
- Properly configure and use an integrated operating system (IOS)
- Subdivide a network using subnets
- Prepare students for CCNA exam

Resources:

- blackboard.usc.edu
- docs.google.com [at the end of the semester for future use]

Evaluation:

Grading will be based on percentages earned in assignments. Students will have structured labs throughout the semester, to be conducted during the scheduled lab time.

Labs / Homework	30%
Presentation / Project	20%
Midterm	15%
Final Exam	25%
Participation	10%

Grading Scale:

The following is the grading scale to be used for the final grades at the end of the semester. Note all the numbers are represented in percentages.

> 93	A
90 - 92.9	A-
87 - 89.9	B+
83 - 86.9	B
80 - 82.9	B-
77 - 79.9	C+
73 - 76.9	C
70 - 72.9	C-
67 - 69.9	D+
63 - 66.9	D
60 - 62.9	D-
< 59.9	F

Policies:

- Projects turned in after the deadline will automatically have 5% deducted per day. Projects will not be accepted after 1 week beyond the project's deadline
- No make-up exams (except for medical or family emergencies) will be offered nor will there be any changes made to the Final Exam schedule.
- It is your responsibility to submit your project on or before the due date. It is not the responsibility of the lab assistant. Do not turn in anything to your lab assistant!
- All projects will be digitally submitted through blackboard except when specified otherwise. Always keep a backup copy of your labs.

Academic Integrity:

The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. It is often

difficult to distinguish between a culpable act and inadvertent behavior resulting from the nervous tension accompanying examinations. When the professor determines that a violation has occurred, appropriate action, as determined by the instructor, will be taken.

Although working together is encouraged, all work claimed as yours must in fact be your own effort. Students who plagiarize the work of other students will receive zero points and possibly be referred to Student Judicial Affairs and Community Standards (SJACS).

All students should read, understand, and abide by the University Student Conduct Code listed in Scampus, and available at:

<https://scampus.usc.edu/university-student-conduct-code/>

Students with Disabilities:

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to your TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. – 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

Examinations:

Midterm	TBA
Final Class	TBA
Final Exam	TBA

Course Schedule:

<u>Lesson / Week</u>	<u>Topic</u>	<u>Required Reading</u>
1	Introduction	TBA
2	Ethernet and Data Encapsulation	TBA
3	TCP/IP and Subnets	TBA
4	Subnetting	
5	VLSM, Summarization, and Troubleshooting TCP/IP	TBA
6	IP Routing (OSPF & Static)	TBA
7	Layer 2 Switching	TBA
8	Security	TBA
9	NAT	TBA
10	IPv6	TBA
11	Enhanced Switched Technologies	TBA
12	IP Services	TBA
13	More Routing (EIGRP, OSPF++)	TBA
14	Wide Area Networks	TBA
15	CCNA Routing/Switching Review	TBA