

ECET 4820– Fall Semester 2014 Communication Networks and the Internet

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Text:

Data Communications and Networking, 5th Ed. by Behrouz A. Forouzan, McGraw Hill, ISBN: 978-0-07-337622-6

Course Objectives:

Students, after successfully completing this course will be able to demonstrate that they can do the following:

- Demonstrate an understanding of history of telecommunications and the Internet.
- Demonstrate an understanding of the design principles and operation of the Internet and the TCP/IP protocol.
- Analyze network scenarios related to data traffic, congestion, and security.
- Demonstrate an understanding of the configuration and operation of networking devices including: routers, switches, and network analyzers.
- Solve problems related to the determination of network capacity, protocol functionality, and client-server operations.

Demonstrate the ability to configure Linux and Windows-based distributed applications, OS, and network simulation and analysis tools.

Grading Policy: There will be no make-up quizzes

A \geq 90, 80 \leq B $<$ 90, 70 \leq C $<$ 80, 60 \leq D $<$ 70, F else

Final Average = .3*L + .15*Qx + .15*Qy + .15*Qz + .25*F

Qx,y,z = highest 3 out of 4 quiz grades

F = Final Exam

L = (L1+L2+...L12)/12

Test Taking Policies:

- You may use a calculator, pencil, pen, and eraser for any test, including the final exam.
- You may not use cell phones, computers, or any other electronic device for any test, including the final exam.
- Prior to any test the instructor will verify that all computers for a given row of students are either logged out with screen turned off or shutdown. Instructor will hand out tests for that row of students once all computers are in stated mode.
- The Final Exam is required for all students, and is administered on the date/time specified by the university. The Final Exam must be taken on the scheduled date.

Laboratory Policies:

- You must have a passing lab grade to pass the course (Lab Grade \geq 60% is passing).
- Labs are to be submitted on the specified due date at the beginning of the lab period; late labs will not be accepted.

Important Dates: Monday, September 1st – Labor Day
W-F, November 26-28th – Thanksgiving Holiday
Monday, December 1st - LDOC

Honor Code: <http://www.spsu.edu/honorcode/>

ADA/504: Students with disabilities who believe that they may need accommodations in this class are encouraged to contact the counselor working with disabilities at (678) 915-7226 as soon as possible to better ensure that such accommodations are implemented in a timely fashion.

Week	Topic	Reference	Lab Due
1	Introduction; Timeline	PDF File	
2	Internet Events; Components	PDF File	
3	OSI Model; PDU Flow	Ch2, PDF File	1, Q1
4	TCP/IP	Ch19	2
5	TCP/IP	Ch19, PDF File	3, Q2
6	TCP/IP	PDF File, Ch26	4
7	Transport Layer	Ch23	5
8	Transport Layer	Ch23	6, Q3
9	Digital Transmission	Ch4	7
10	Analog Transmission, Bandwidth Utilization	Ch5,6	8
11	Switching	Ch8, 17	9
12	Routing	Ch18	10, Q4
13	Bandwidth Utilization	Ch6, PDF File	11
14	MPLS	Ch18	12
15	Review		

