

EEO 346 Syllabus
Fall 2017

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Learning Objective: To give students a broad background in computer networking technology and an introduction to performance evaluation.

Texts:

(A) Networks and Grids: Technology and Theory, 1st ed. by Thomas Robertazzi, 2007. Publisher: Springer (www.springer.com).

(B) Introduction to Computer Networking by Thomas Robertazzi, 2017. Publisher: Springer (www.springer.com).

Week 1 (Week of Aug. 28th): Probability Review and Problems

Week 2 (Sept. 4): Probability Review and Problems (continued)

Week 3 (Sept. 11th): Introduction to Networks.

Week 4 (Sept. 18th): Error Codes

Week 5 (Sept. 25): Routing

Week 6 (Oct. 2): Ethernet.

Week 7 (Oct. 9): Infiniband. **Midterm distributed to proctors Monday Oct. 9th, due back by Tues. Oct. 17th**

Week 8 (Oct. 16): Wireless Networks (WiFi, Bluetooth, LTE and 5G)

Week 9 (Oct. 23): MPLS.

Week 10 (Oct. 30): Optical Networks for Telecommunications.

Week 11 (Nov. 6): Software Defined Networking (SDN).

Week 12: (Nov. 13): Networks on Chips.

Week 13 (Nov. 20): Space Networking.

Week 14 (Nov. 27): Grids, Clouds and Data Centers.

Week 15 (Dec. 4th): Advanced Encryption Standard and Quantum Computing.
Final distributed to proctors Monday Dec. 11th, due back by Tues. Dec. 19th.

Grading:

Homeworks: 20%, Midterm (open book): 20%, Final (open book): 20%,
Portfolio: 20%, Chapter Writing 20%. Total is 100 points. **Midterm and Final need to be proctored (this can be done at libraries (sometimes for a fee), testing centers or community colleges. Professors, old teachers, bosses and acquaintances are no longer allowed as proctors.**

Chapter Writing

For most chapters in the Introduction to Computer Networking text you will write 200-300 words on some aspect of the chapter coverage that you find interesting. Additional sources can be used but are not necessary. The chapter writing is due the Sunday at the end of the week when the chapter is assigned (i.e. Space Networking above is assigned the week of Nov. 20th so the chapter writing for that chapter is due Sunday Nov. 26th).

Portfolio:

This is a collection of five original problems and solutions you submit involving probability, error codes and routing. It is marked for correctness and to some extent for originality, especially for the probability problems. There should be at least two probability problems.