

EE 458 ANALOG AND PULSE COMMUNICATION SYSTEMS

Official Prerequisites: Completion of EE410 with a grade C or better.

Class Schedule: MWF 15:00-15:50

Classroom: E427 **Office:** 403F

Office Hours: MW: 13:15-14:45, Tuesdays: 17:00 – 18:00

Textbook: **Communication Systems:** Fourth Edition, A. B. Carlson, P. B. Crilly, and J. C. Rutledge, McGraw-Hill, ISBN: 0-07-011127-8, 2002.

Lecture Notes: H. Abut, August 2006 Edition: (Need to login)
<http://anadolu.sdsu.edu/abut/EE458/>

Software: The Student Edition of Matlab

URL for Mathworks: www.mathworks.com/education/

Other References:

1. *Modern Analog and Digital Communication Systems*, Third Edition, B.P. Lathi, Oxford University Press, 1998.
2. *Contemporary Communication System Using MATLAB™*, J. G. Proakis and M. Salehi, PWS Publishing Co., Prentice-Hall, 1998.
3. *Analog and Digital Communication Systems*, J.D. Gibson.
4. *Digital Communications*, I. A. Glover and P. M. Grant, Prentice-Hall, 1998.
5. *Digital Communications*, Second Edition, B. Sklar, Prentice-Hall, 2001.
6. *Communication Systems*, S. Haykin, Fourth Edition, Prentice-Hall, 2001.
7. *Digital Modulation and Coding*, S.G. Wilson, Prentice-Hall, 1996.
8. *A Course in Digital Signal Processing*, B. Porat, Wiley, 1997. (It could be used in EE410 + EE556; Very good elementary text on signal processing techniques.)

Course Outline:

In principle, material from Carlson and my text draft will be followed. However, there are quite similarities between my draft and those of Carlson's, Lathi's, Haykin's and Sklar's books. Therefore, you should be able to find similar treatment of the subjects below in one of these three textbooks.

- 1. Introduction to Communication Systems and Information Theory.**
- 2. Signal and System Theory Applicable to Communications.**
- 3. Linear Systems and Signal Transmission.**
- 4. Amplitude Modulation Systems.**
- 5. Angle Modulation Systems.**
- 6. Pulse Modulation Systems.**

Performance Evaluation: (Temporary until Grader situation is finalized.)

- 1. 2 Midterms: September 29 and November 3, 2006 (20% personal low; 25% high.)**
- 2. Final (35%)**
- 3. Homeworks. (20%.)**