ELC 4350  
Principles of Communication  
Fall 2011

Instructor: Dr. Liang Dong
Class Time: TR 3:30 PM – 4:45 PM
Classroom: ROGERS 312
Credit Hours: 3
Office: ECS (ROGERS) 301B
Phone: (254) 710-4589
E-mail: liang_dong@baylor.edu
Website: http://web.ecs.baylor.edu/faculty/dong/
Office Hours: MWF 3:30 PM – 4:30 PM; other by appointment

Course Description:

This course introduces the principles of modern communication systems and discusses basic techniques and methodologies used in the analysis and design of these systems. It takes the students through mathematical foundations of communication theory, traditional analog communication systems, and modern digital communication systems. Topics range from modulation, random process and noise to digital transmission and error-control coding. The course features implementations of communication systems and MATLAB examples to explain and verify the essential theory and current engineering practice.

Textbooks:

Required: Fundamentals of Communication Systems
Authors: John G. Proakis and Masoud Salehi
Prentice Hall

Recommended: Fundamentals of Communications Systems
Author: Michael Fitz
McGraw-Hill

Recommended: Digital Communications
Authors: John Proakis and Masoud Salehi

Computer Usage:

MATLAB Software and Simulink Toolbox (available at the ROGERS computer center)

We will use computers extensively to program and verify homework assignments. Various software tools are available at the RPGERS computer center. To effectively
implement and analyze digital signal processing algorithms, we will program in MATLAB (or C++ if you so prefer).

Exams:

There will be two in-class midterm exams and one 2-hour final exam. The exams will be closed-book. The dates for the exams are as follows.

- Midterm Exam 1  Tuesday, Oct. 11, 2011, 3:30-4:45 PM
- Midterm Exam 2  Tuesday, Nov. 22, 2011, 3:30-4:45 PM
- Final Exam      Monday, December 12, 2011, 4:30-6:30 PM

Performance Evaluation:

- Attendance       10%
- Homework         20%
- Midterm Exam 1   20%
- Midterm Exam 2   20%
- Final Exam       30%

Resources:

Website: I maintain the course website on the university’s Blackboard server at [https://my.baylor.edu/](https://my.baylor.edu/). The Blackboard site serves as the clearinghouse for all course information and documents. It is your responsibility to check the site frequently for announcements, updates, and to retrieve course materials.

Office visits: Though I have scheduled office hours, I am open for appointments most of the time. If you have questions, feel free to email me, call my office, or simply drop by.

Course Policies:

Disability accommodations:

Any student who needs learning accommodations should inform me immediately at the beginning of the semester. The student is responsible for obtaining appropriate documentation and information regarding needed accommodations from the Baylor University Office of Access and Learning Accommodation (OALA) and providing it to me early in the semester. The OALA phone number is (254) 710-3605 and the office is in Paul L. Foster Success Center - Sid Richardson - Room 190. Additional information can be found at the OALA website: [http://www.baylor.edu/oala/](http://www.baylor.edu/oala/).

Honor code:

Please read and follow the Academic Integrity and Honor Code at: [http://www.baylor.edu/honorcode/](http://www.baylor.edu/honorcode/).