Michigan State University
ECE457: Communication Systems
Spring 2013

Course Information
Instructor: Prof. Tongtong Li
Office: 2308K Engineering Building
Phone: (517) 355-7688
Email: tongli@egr.msu.edu
Class Hours: MWF, 9:10am-10:00am
Classroom: 221 Natural Resources Building
Instructor’s Office Hours: MWF 10:20am-11:00am or by appointment
Course Website: https://angel.msu.edu/default.asp

Required Text

References

Simulation Tool
• Matlab simulations will be part of the homework assignments. Matlab tutorials can be found on the ECE 457 Angel course website under Lessons.

Exams, Homework and Grading Policies
• Midterm Exams: 50% There will be two 50-minutes midterm exams. Exam dates will be announced in class two weeks in advance. In the event that you must miss an exam (for any reason), the makeup will be a qualitative oral exam with me.
• Final Exam: 40% Final exam will be on Tuesday, April 30, 7:45-9:45 a.m. It will be a comprehensive exam that covers all course material.
• **Homework: 10%** Homework assignments will be posted on the Angel website regularly, together with their due dates. Posting of new assignments will be announced in class. You must submit your homework before the class on the due date. **No late homework will be accepted.** Two lowest homework scores will be dropped when computing your average homework grade. You must receive a passing grade on the Homework to pass the course. Homework solutions must be original copies in the students own handwriting. No other submissions will be graded. Solutions must be clear and neatly written to receive credit.

**Grading Scale:**

\[
\begin{align*}
\geq 90\% & = 4.0 & \geq 85\% & = 3.5 & \geq 80\% & = 3.0 & \geq 75\% & = 2.5 \\
\geq 70\% & = 2.0 & \geq 65\% & = 1.5 & \geq 60\% & = 1.0 & < 60\% & = 0.0
\end{align*}
\]

The above scale is guaranteed. The instructor reserves the right to adjust each grading transition as she sees fit at the end of the semester.

**Other Policies**

• **Attendance Policy:** Attendance is required. Spartan Life, Section 2.3.3: “The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards.”

• **Classroom Policy:** “The student’s behavior in the classroom shall be conducive to the teaching and learning process for all concerned.” This means that I do not appreciate late arrivals, sleeping, reading the paper, ringing cell phones, rude interruption of the lecture, etc. Please try to develop your professional skills while in this class.

• **E-Mail Policy:** All e-mails to me regarding this course MUST start the subject with “ECE 457”. If you wish to request a meeting with me via e-mail, I suggest e-mailing me more than 24 hours in advance. Please send me three days/times that you can meet.

• **Calculator Policy:** Only simple (non-programmable/graphing) calculators are allowed in class.

**Course Outline**

• Introduction to Communication Systems

• Signals and Systems

• Analysis and Transmission of Signals

• Amplitude Modulation

• Angle Modulation

• Sampling and Pulse Code Modulation

• Digital Communication System Design

Lectures will be based on but not limited to the contents in the required textbook.