Michigan State University  
Department of Electrical & Computer Engineering  
ECE 865: Analog and Digital Communication  
Fall Semester, 2019

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Course Website: [https://d2l.msu.edu/d2l/home](https://d2l.msu.edu/d2l/home)  
Class Hours: MW, 10:20 AM - 11:40 AM  
Classroom: 2320 EB  
Office Hours: MW, 3:00pm-4:00pm or by appointment

Text


Major References


Course Outline

1. Analog vs. digital communications
2. Deterministic signals, random variables and random processes
3. A brief introduction to information theory: entropy and channel capacity
4. Modulation and demodulation techniques
5. Signal and receiver design over AWGN channels
6. Detection: ML and MAP detectors
7. Channel estimation and equalization for ISI channels
8. Error control coding and decoding (if time permits)
Grading Policy

Homework 30%
Midterms (2) 40%
Final Project 30%

Homework

Assignments and due dates will be announced in class. **Late homework and project will not be accepted.**

Email policy

When sending emails to me regarding this course, make sure you always start the subject with “ECE865”.

Attendance policy:

Attendance is required for this course since the lecture material will depart from the material in the book on a regular basis. At the same time, please be thoughtful of the professor and the other students, and do not walk in late if possible.