EE361: SIGNALS AND SYSTEMS II

INTRODUCTION

INSTRUCTOR

- Dr. Brendan Morris
- Office: SEB 3216
- Office Hours
  - MW 1:30-2:30
  - Email for appointments at other times via WebEx/Google Meet
  - Best contact is email brendan.morris@unlv.edu

- At UNLV since 2011
- Mostly teach EE courses but research is in Computer Vision (CS area mainly)

CLASS WEBSITE

- http://www.ee.unlv.edu/~b1morris/ee361

- This will have the most up-to-date information about the class.
  - Weekly schedule
  - Tentative dates for exams
  - Homework assignments

- Syllabus – Full course description online

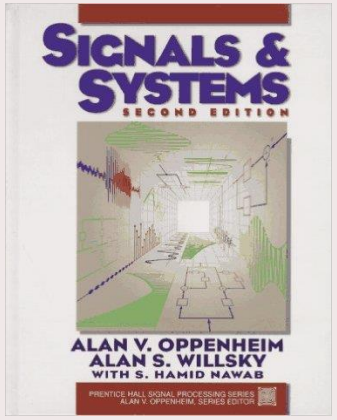
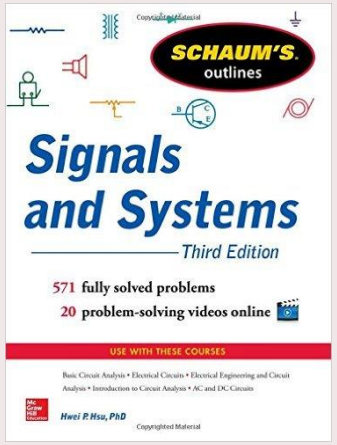
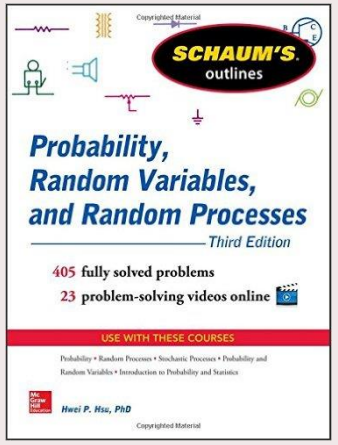
WEBCAMPUS USAGE

- Webcampus Usage
  - Panopto Recordings – prerecorded lecture
  - Zoom – in-class recordings
  - Assignments – homework + exam submission
  - Grades - gradebook for tracking points

IMPORTANT DATES

- In-Class Sessions (Q&A)
  - TuTh 14:30-15:45, SEB 1245
- Final
  - Th Dec. 14 15:10-17:10
  - Look up your final exam schedule now to determine conflicts
- Exams: 2x Quizzes and Midterm (tentative)
  - 9/19, 10/12, 11/16

TEXTBOOK

Required		
Signals and Systems, A.V. Oppenheim, A.S. Willsky, and S.H. Nawab, 2nd Edition, ISBN: 0-13-814757-4	Schaum's Outlines: Signals and Systems, H. Hsu, ISBN: 978-0071829465 [link]	Schaum's Outlines: Probability, Random Variables, and Random Processes, H. Hsu, ISBN: 978-0071822985 [link]
		
First half of course (Chapters 1-5)	← Both →	Second half of course

USEFUL TEXTS

- Oppenheim and Willsky is expensive and you may not have it if you did not take ee360 with me
  - May only need Schaum's Outlines: Signals and Systems
- Recommended texts
  - Schaum's Outlines: Probability and Statistics, M Spiegel, ISBN: 9780071795579 [link]
  - Linear Systems and Signals, B.P. Lathi, 2nd Edition, ISBN: 978-0-19-515833-5

GRADING

- Quizzes (2): 20%
- Midterm: 25%
- Final: 25%
- Homework: 20%
- Participation: 10%

- Grading Scale
  - Grades follow the typical scale but is curved such that the average grade is around a C+/B-
  - The curve can only help you.

HOMEWORK

- One homework assignment a week
- Students may work together in study groups but all assignments must be completed individually.
- Homework will be due as indicated on Webcampus. No late homework will be accepted unless prior notification and arrangements are made.

- Start early
  - Give yourself plenty of time to work through problems completely and get answers to questions before submission
  - Avoid technical glitches → use phone scanning app

EXAMS

- Exams will be comprehensive but will emphasize newer material
- Quizzes are short 45 minute exams
- Midterm – first half of the class on OW book
- Final – covers full course but will emphasize topics from Quiz02 on (overlap with first half of course)

PARTICIPATION

- Progress will be tracked using online class quizzes
  - Short quizzes associated with each "lecture"/Discussion
  - Intended to help you identify areas that require more clarification
  - Administered via Webcampus
- Not insignificant – 10% of grade
  - Each quiz is worth 5 points → an individual class or problem will have very little effect on your final grade
  - Quizzes will have >5 points possible, allowing you to miss some questions without grade penalty
- Class quizzes are a tool for you to get help and practice questions under lower stakes constraints (e.g. timing)

LECTURES AND READING

- My lectures will be made available through WebCampus using the Panopto Recordings navigation link
  - Will have captions and text search
- In-class sessions will be recorded and made available through Zoom

- Reading the book actually helps
  - Please come prepared to class having read content
  - Ask questions during the discussion

- Workload – this class will require significant time and effort outside of lecture

COURSE OVERVIEW

- First Half – Signals/Systems
- Fourier Series
  - Break periodic signals into harmonics
- Fourier Transform
  - Represent frequency content of a signal
- The analysis should feel very similar to LT/Z from EE360

- Second Half – Randomness
- Probability
- Random Variables
- Multiple RVs
- Functions of RVs
- Random Processes (“random signals)
- RPs + LTI Systems

CHALLENGES

- This course is difficult due to its dual identity
  - Good news: the first half tends to be easier
  - Bad news: the second half moves very quickly
- Reading the book is helpful
  - 2^{nd} half has much less context since Schaum's focuses mainly on equations

POLICIES

- As a university student it is your responsibility to conduct yourself ethically and with integrity as described in the Academic misconduct Policy. Cheating and plagiarism will not be tolerated. Any student caught cheating will be given an F grade. (https://www.unlv.edu/studentconduct/misconduct/policy)

TIPS FOR SUCCESS

- **Participate**: Attend discussion session and take part.
- **Practice**: Spend ample time on homework and other problems.
- **Question**: Do not be afraid to ask questions.
- **Network**: Find people taking the same courses as you and build study groups.
- **Review**: Don't just do what is asked in class. Find extra practice problems.
- **Be RESPONSIBLE**: You are an adult and must be responsible for your academic career.

QUESTIONS?