

# ECE600: Random Variables and Signals

Prof. Mark R. Bell

mrb@purdue.edu

(765)494-6412

## ECE600 Contact Info.

- Instructor: Prof. Mark R. Bell
  - Phone: (765) 494-6412
  - email: mrb@purdue.edu
- Webpage: <http://engineering.purdue.edu/~mrb/>  
(and follow the ECE600 link.)

# ECE600 Course Website

<http://engineering.purdue.edu/~mrb/>

(and follow the ECE600 drop-down menu.)

- All course information, except lecture videos, will be distributed through the course website.
- Lecture Videos are automatically recorded and uploaded to the course Brightspace page.

## Prof. Bell's Zoom Office Hours

- ▶ Monday: 10:00-11:30am
  - ▶ Wednesday: 1:00-2:30pm
  - ▶ Additional Office Hours by Appointment
- A Zoom link for Office Hours will be sent out 5 minutes before each scheduled office hours session to all registered students.

# ECE600 TA Info.

- TA: Brad Fitzgerald
  - email: [fitzge45@purdue.edu](mailto:fitzge45@purdue.edu)
  - TA's Office Hours:
    - Mondays: 4:30-6:30pm (Zoom)
    - Tuesdays: 3:00-5:00pm (in-person)
    - Wednesdays: 10:00am-Noon (in-person)
    - Thursdays: 8:00-9:00am (Zoom)
    - 3:00-4:00pm (in-person)
    - Fridays: 2:00-4:00pm (Zoom)

## Prerequisites

- Graduate Standing
- Solid Understanding of Calculus and Fourier Transforms.
- Some mathematical maturity.

# Textbook

- A. Papoulis and S. U. Pillai, Probability, Random Variables, and Stochastic Processes, 4th ed., McGraw-Hill, 2002.
- The third edition of Papoulis is acceptable if you already have it.
- There is also a free online textbook that closely follows the first part of the course:  
R. M. Gray and L. D. Davisson, Introduction to Statistical Signal Processing, Cambridge University Press, 2004. (A free pdf copy of the text can be downloaded from <https://ee.stanford.edu/~gray/sp.html>)

# Additional Resources

- Hwei Hsu, Schaum's Outline on Probability, Random Variables, and Random Processes, 4th Edition (Schaum's Outlines) McGraw-Hill Education, 2019.

(This is a useful reference with many solved problems, topically layed out very similarly to the Papoulis text.)

# Course Grading

- 3 Midterms Exams: 20% Each
- 1 Final Exam: 40%
- Homework will not be collected  
—but you must do it!!!

## Course Schedule

Session No	Date	Event
1	1/9/24	Lecture
2	1/11/24	Lecture
3	1/16/24	Lecture
4	1/18/24	Lecture
5	1/23/24	Lecture
6	1/25/24	Lecture
7	1/30/24	Lecture
8	2/1/24	Lecture
9	2/6/24	Exam 1
10	2/8/24	Lecture
11	2/13/24	Lecture
12	2/15/24	Lecture
13	2/20/24	Lecture
14	2/22/24	Lecture
15	2/27/24	Lecture
16	2/29/24	Lecture
17	3/5/24	Lecture
18	3/7/24	Exam 2
Spring Break (March 11-16, 2024)		
19	3/19/24	Lecture
20	3/21/24	Lecture
21	3/26/24	Lecture
22	3/28/24	Lecture
23	4/2/24	Lecture
24	4/4/24	Lecture
25	4/9/24	Exam 3
26	4/11/24	Lecture
27	4/16/24	Lecture
28	4/18/24	Lecture
29	4/23/24	Lecture
30	4/25/24	Lecture

# Course Grading (Cont.)

- No Make-up Exams.

- If you miss a midterm exam, your final exam score will be used in its place.

- Homework:

- There will be weekly homework assignments.
- Homework solutions will be posted to the course website
- Do the homework!!!

I look forward to getting started with you in Session 1 of ECE600, on Tuesday, January 9, 2024