

Department of Electrical Engineering
University of Arkansas



ELEG 3143 Probability & Stochastic Process

Ch. 0 Preface

Dr. Jingxian Wu
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GENERAL INFORMATION

- **Instructor: Dr. Jingxian Wu**
 - Email: wuj@uark.edu
 - Phone: (479) 575-6584
 - Office Bell 3168

- **Office Hours**
 - Tu. Th. 1:00 PM – 2:00 PM,
 - By appointment

- **Lecture Schedule**
 - Bell 2273
 - Tu. Th. 11:00 AM – 12:15 PM

TEXTBOOK AND REFERENCES

- **Required Text Books**

- R. D. Yates and D. Goodman, *Probability and Stochastic Processes: A Friendly Introduction for Electrical and Computer Engineers*, 3rd Edition, Wiley, May 2014.

- **Required Software**

- Matlab

- **References (optional)**

- S. M. Ross, *Introduction to Probability Models*, 9th Ed., Academic Press, 2007.
- A. Papoulis and S. U. Pillai, *Probability, Random Variables and Stochastic Processes*, 4th Ed., McGraw Hill, 2002.
- G. R. Cooper and C. D. McGillem, *Probabilistic Methods of Signal and System Analysis*, 3rd Ed., Oxford University Press, 1999.

COURSE INFORMATION

- **Pre-requisite:**
 - Signal and System
 - Calculus I, II, & III

- **This course involves heavy mathematical derivations**
 - It is a Mathematics course.
 - A large number of examples will be given in class – **It's ESSENTIAL for you to repeat all the examples by yourself after class.**

- **Teaching format**
 - Slides
 - Examples
 - Exercises
 - Homework assignments (problems, software)

TENTATIVE SCHEDULE

- Week 1 (1/15, 1/17): Ch.1 Introduction to Probability
- Week 2 (1/22, 1/24): Ch. 1 Introduction to Probability
- Week 3 (1/29, 1/31): Ch. 1 Introduction to Probability
- Week 4 (2/5, 2/7): Ch. 2 Discrete Random Variables
- Week 5 (2/12, 2/14): Ch. 2 Discrete Random Variables
- Week 6 (2/19, 2/21): Ch. 3 Continuous Random Variables (Test 1 on 2/21)
- Week 7 (2/26, 2/28): Ch. 3 Continuous Random Variables
- Week 8 (3/5, 3/7): Ch. 4 Multiple Random Variables
- Week 9 (3/12, 3/14): Ch. 4 Multiple Random Variables
- Week 10 (3/19, 3/21): Spring Break
- Week 11 (3/26, 3/28): Ch. 4 Multiple Random Variables
- Week 12 (4/2, 4/4): Ch. 5 Elements of Statistics (Test 2 on 4/4)
- Week 13 (4/9, 4/11): Ch. 5 Elements of Statistics
- Week 14 (4/16, 4/18): Ch. 6 Stochastic Process
- Week 15 (4/23, 4/25): Ch. 6 Stochastic Process
- Week 16 (4/30, 5/2): Ch. 6 Stochastic Process (dead day: 5/3)
- Test 3 at the Final week

GRADING POLICY

- **Grades Percentage**

- Test 1 23%
- Test 2 23%
- Test 3 23%
- Homework 23%
- Quiz 8%

- **Grades**

- A: $90 \leq \text{grade} \leq 100$
- B: $80 \leq \text{grade} < 90$
- C: $70 \leq \text{grade} < 80$
- D: $60 \leq \text{grade} < 70$
- F: $0 \leq \text{grade} < 60$

GRADING POLICY

- **All homework need to be directly uploaded to blackboard before the due date.**
- **Due dates for homework and lab report will be strictly enforced. Late submission within one week after due will receive a 20% deduction; no credit if submitted one week past due.**
- **There will be NO make up for quizzes.**
- **If for some legitimate reason (sickness, death in the family, etc.), you cannot take an exam on the scheduled day, you must notify the instructor prior to the exam.**

ONLINE RESOURCES

- **Course Home Page**

- <https://wuj.hosted.uark.edu/teaching/eleg3143/eleg3143.html>
- Blackboard
- All the course related materials, such as slides, homework assignments, links, announcements, etc., will be posted on this website.
- Please check the webpage regularly (**at least once per week**) for update.

ADDITIONAL ISSUES

- **Academic Honesty**
 - Each University of Arkansas student is required to be familiar with and abide by the University's 'Academic Integrity Policy' which may be found at <http://provost.uark.edu/>
 - Any kind of activities related to academic dishonesty (copying homework, lab report, code, plagiarism, etc.) will be dealt with.
 - If you are not sure about plagiarism, please contact the instructor.
- **Questions are welcome in my class**
 - You are very welcome to raise any question related to course materials.
 - Please feel free to stop me at any time if you have any question.
 - You can also ask me question via email or during office hours.
- **To respect your fellow students as well as the instructor, please turn off or silencing your cell phone.**
 - No text messaging or web surfing!
- **BE ON TIME!**
- **Have Fun!**