

ECE 6010 – Stochastic Processes

Fall 2016 Syllabus

Instructor: Reyhan Baktur

Office/Phone: EL 150/ 797-2955

Office Hours:

Thursday 2:30-4:30,

Open door policy (you may come in while my door is open)

Appointment via email: reyhan.baktur@usu.edu

Course Info: ECE 6010 — Stochastic Processes

Class Time: 11:30 am to 12:20 pm M, W, F

Class Location: Engineering Lab 109

Textbook(s):

“Probability, Random Variables, and Random Processes: Theory and Signal Processing Applications” by John J. Shynk, Wiley.

Notes by the Instructor.

Course Website:

We will use Canvas for this course. All lecture notes and class-related materials will be posted there. Please make sure your account is working, and let me know if you have any difficulty accessing it.

Topics:

The following topics will be covered (subject to changes):

1. Introduction to probability
2. Random Variables
3. More on Random Variables (Expectations, Multiple Random Variables, and Characteristic Function)
4. Basic Concepts of Random Processes
5. Analytical Properties of Random Processes
6. Markov Processes and Markov Chains
7. Parameter Estimation

Exams:

- A midterm exam (take home)
- A final exam (take home)

Homework and Computer Assignments

Homework assignments will be given throughout the semester on a weekly basis. In addition to homework, computer assignments are even more important components of this course to help you apply the abstract theories covered in this class.

Your Final Grades:

Final score = 20% Midterm+20%Final+35% Homework+25% Project

We may adjust the scale according to how the semester goes. After all, the subject is “random” ☺

Final grade:

A: 93 to 100 A-: 90 to 92

B+: 87 to 89 B: 83 to 86 B-: 80 to 82

C+: 77 to 79 C: 73 to 76 C-: 70 to 72

D+: 65 to 69 D: 60 to 64

F: Lower than 60.

Course Policy:

- You may discuss out-of-class projects and problems with each other, but you must turn in your **own** solutions on assignments. All computer assignments must be the result of your own work. You may discuss issues regarding the use of computer workstations and MATLAB but you must not share code and/or results. If you turn in code or results developed fully or in part by someone else, then you will not get any credit for the homework or projects. The person who gives out the code or answer will have the same punishment.
- Students will need access to a computer with MATLAB loaded on it for programming homework.
- Notes will be posted on Canvas. It is important that you check the website for new updates before coming to the class.
- You are asked to turn in the ELECTRONIC COPY (MS Word) of programming homework and project reports. Good grammar and proper English is a requirement for homework.
- The homework with electronic version is to be turned in via e-mail attachment or flash drive. Please do not embed the attachment to the email text.
- Reasonable neatness is required on handwritten assignments and exams.

Cheating Policy: Just do not try that!

What happens if you cheat?

- If you are caught cheating on your project, you will get zero point for the first time and you will get an F for the class if you do it for a second time.

- If you are caught cheating on any form of the exam, you will get an F for the class and you will be reported to the department.

Things that constitute cheating

- Copying someone else's code from class. It is ok to work together, but each student should write and comment his/her own code.
- Copying code from textbooks, website, or from former students. You may use reference material to help you to understand, but you have to create your own code and get it working.
- If you let other student use your code, then you are regarded as cheating.

What happens if others cheat?

This could lower your grade. Please tell me or other professors if you see cheating. You may do this anonymously. The ECE department is committed to reducing instances of cheating in our labs and classes.

Attendance:

Attendance is optional. If you miss a class, see a classmate about any assignments that may have been given and/or check the website. If the instructor is late to class by more than 15 minutes, then students may leave without penalty.

Course Accessibility:

In cooperation with the Disability Resource Center, reasonable accommodation will be provided for qualified students with disabilities. Please meet with the instructor during the first week of class to make arrangements. Alternate format print materials (large print, audio, diskette or Braille) will be available through the Disability Resource Center.

Tutoring Center:

The College of Engineering has an Engineering Tutoring Center. Tutoring services are available free of charge to all College of Engineering students. You can find help for any engineering required courses, .i.e. math, chemistry, physics, and all engineering classes. The Tutoring Center is located in ENGR 322 and 324. Hours are Monday through Friday 8:00 AM to 5:00 PM with extended hours on Tuesday and Thursday until 7:00 PM.