

EE 351K – Probability and Random Processes
Course Syllabus
Unique Section: 16365
Fall 2019

Instructor	Dr. Pedro Santacruz
Unique Section	16365
Lecture	TR 3:30pm – 5:00pm, CPE 2.204
Email	pedro.santacruz@utexas.edu
Office	EER 3.812
Office Hours	MF 10:30am-12:00pm

TA Information:

For help on class content, though, you may interact with the TAs. TA email addresses are included, but your first stop for assistance should not be to send an email to the instructors or the TAs. Instead, for online help on algorithms related questions, try Piazza.

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Rebecca Phung (rebecca.phung@utexas.edu)

Jordan Pamatmat (jordan.pamatmat@utexas.edu)

Office hour times and locations for TAs will be posted on Canvas.

Course Description

This course is an introduction to probability, statistics, and random processes for engineers. It will focus on the fundamentals and applications of probability models and associated computations in computer and communication systems, algorithms (e.g. web search), and logistics, etc.

Prerequisites

Mathematics 427J or 427K with a grade of at least C-.

Required Text

Introduction to Probability, Dimitri Bertsekas and John Tsitsiklis, Athena Scientific, 2nd edition, 2008. Homeworks may be derived from the text and the associated material (e.g. instructor manual).

Online Platforms

Homework and related class material will be posted on *Canvas* – UT's course management platform: <http://canvas.utexas.edu>. This will be the main source of current class information: (i) class announcements, (ii) the homework assignments, (iii) and solutions. Please check this page regularly; you are responsible for everything that is posted on Canvas.

We will be using *Piazza* – an online discussion platform – for posting and answering questions regarding class and homework.

Assignments

Homework assignments will be given out weekly. Homework must be submitted online by the beginning of lecture and solutions will be available after the due date.

1. Do NOT submit HW via email. Submit HWs online as PDFs only
2. Late submission will NOT be accepted (absolutely!)
3. There are no make-up homework assignments

To get credit for your homework, submissions must be neat, clean, and must be done professionally. There are 12 homework sets. The lowest scoring homework will be dropped when computing your overall grade.

Evaluation and Grading

The overall course grades (letter-grades) will be assigned based on the grading standard as shown below. The weights of the whole course work assignments are:

- | | |
|-------------------------|-----|
| • Homework assignments: | 15% |
| • Midterm Exam 1: | 25% |
| • Midterm Exam 2: | 25% |
| • Final Exam: | 35% |

The grade you are given on an exam, an assignment, or as your final grade, is not the starting point of a negotiation; it is your grade unless a concrete error has been made. Do not come to the instructors or TAs to ask for a better grade because you want one or you feel you deserve it. Come only if you can document a specific error in grading or in recording your scores. Errors can certainly be made in grading, especially when many students are involved. But keep in mind that errors can be made either in your favor or not. So, it is possible that if you ask to have a piece of work re-graded your grade will go down rather than up.

Remember that the most important characteristic of any grading scheme is that it be fair. Keep this in mind if you're thinking of asking, for example, for more partial credit points on a problem. The important thing is not the exact number of points that were taken off for each kind of mistake. The important thing is that that number was the same for everyone. So, it can't easily be changed once the grading is done and the exams or assignments have been returned.

Final Grades: Final grades will be assigned according to the following standard criteria:

Final Average	Letter Grade
93 - 100	A

90 – 92	A-
87 – 89	B+
83 – 86	B
80 – 82	B-
77 – 79	C+
73 – 76	C
70 – 72	C-
67 – 69	D+
63 – 66	D
60 – 62	D-
0 – 60	F

Final class grades will be calculated to 2 decimal places and rounded to the nearest integer. 89.49 is a B+. 89.50 is an A-. The line has to be drawn somewhere, and no special allowances will be made for students whose final average falls near, but below the cutoff. There is a possibility of curves on the exam and quiz grades. There will not be a curve on programming assignments. Non-academic explanations for poor class performance will have no bearing on the assignment of grades. The instructors reserve the right to lower the letter grade cutoffs for final grades; such changes will be determined only after all assignments and exams have been graded. We expect that +/– grades will be assigned in this class.

Grade Disputes and Corrections

If you are dissatisfied with a grade you receive, you must submit your complaint briefly in writing or by email, along with supporting evidence or arguments, **within one week** of the date that we first attempted to return the exam or assignment to you. Complaints about grades received after the one-week deadline will be considered only if there are extraordinary circumstances for missing the deadline (e.g., student hospitalization). No new disputes will be accepted after 11:59 AM two days before the course grade sheets must be turned in.

Academic Dishonesty

Integrity is a crucial part of your character and is essential for a successful career. We expect you to demonstrate integrity in this course and elsewhere. In particular, your assignments must represent your own work and understanding. Academic misconduct such as plagiarism is grounds for failing the class.

You may discuss homework problems with other students, but you are not allowed to copy from others. A good rule to follow is that you should be working alone when preparing the document you will be submitting.

Students who violate University rules on scholastic dishonesty in assignments or exams are subject to disciplinary penalties, including the possibility of a lowered or 0 grade on an assignment or exam, failure in the course, and/or dismissal from the University. Changing your exam answers after they have been graded, copying answers during exams, or plagiarizing the work of others will be considered academic dishonesty and will not be tolerated. Plagiarism detection software will be used on the programs submitted in this class. If cheating is discovered, a report will be made to the Dean of Students.

Attendance

Attendance is expected. Whether you come to class or not, you are responsible for keeping up with what happens in class. If you miss a class (other than for illness or an emergency), it is not reasonable for you to expect us to repeat the material that was covered in the class that you missed just for you. This applies both to the content of the class as well as to announcements about class policies, events, deadlines, etc. Students can expect a lower letter grade if they miss too many lectures.

Students Rights and Responsibilities

- You have a right to a learning environment that supports mental and physical wellness.
- You have a right to respect.
- You have a right to be assessed and graded fairly.
- You have a right to freedom of opinion and expression.
- You have a right to privacy and confidentiality.
- You have a right to meaningful and equal participation, to self-organize groups to improve your learning environment.
- You have a right to learn in an environment that is welcoming to all people. No student shall be isolated, excluded or diminished in any way.

With these rights come responsibilities:

- You are responsible for taking care of yourself, managing your time, and communicating with the teaching team and with others if things start to feel out of control or overwhelming.
- You are responsible for acting in a way that is worthy of respect and always respectful of others.
 - Your experience with this course is directly related to the quality of the energy that you bring to it, and your energy shapes the quality of your peers' experiences.
- You are responsible for creating an inclusive environment and for speaking up when someone is excluded.
- You are responsible for holding yourself accountable to these standards, holding each other to these standards, and holding the teaching team accountable as well.

OTHER COURSE RELATED POLICIES

Learning Disabilities

If you have a learning disability that requires special attention, either during class or during an exam, please give the instructor of the section you are registered for a letter from the Dean of Students describing what needs to be done. You should do this during the first week of classes. (The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641.)

Religious Holy Days

A student who is absent from an examination or cannot meet an assignment deadline due to the observance of a religious holy day may take the examination on an alternate day, submit the assignment up to 24 hours late without penalty, or be excused from the examination or assignment,

ONLY if proper notice of the planned absence has been given to the instructor at least fourteen days prior to the classes scheduled on dates the student will be absent. For religious holy days that fall within the first two weeks of the semester, notice should be given on the first day of the semester. A student who fails to complete missed work within the time allowed will be subject to the normal academic penalties.

Classroom Behavior

You have the right to learn in every class you attend. But you also have the responsibility to help ensure that every other student shares that right. Specifically:

1. Under normal circumstances, class will start on time and end on time.
2. Come to class on time. Do not leave early. These things are very disruptive. Recognize that the buses and the parking space situation are unpredictable elements and allow for that. If you must come late or leave early (for example because of a doctor's appointment), let the instructor know in advance.
3. Don't be disruptive during class. Don't chat with your neighbors or rustle a newspaper.
4. Don't allow your electronic devices to be disruptive. Turn off your cell phone, beeper, and watch alarm. You are welcome (and even encouraged to use your computer in class, e.g., to take notes, look at supporting material, etc.) Do not let your computer become a distraction for you or others near you (i.e., watching videos or chatting online during lecture can be very distracting to you, your classmates, and your instructor).
5. Don't leave your mess lying on the classroom floor when you leave—pick it up and throw it in a trash can.

Online Privacy

Web-based, password-protected class sites are associated with all academic courses taught at The University. Syllabi, handouts, assignments and other resources are types of information that may be available within these sites. Site activities could include exchanging e-mail, engaging in class discussions and chats, and exchanging files. In addition, electronic class rosters will be a component of the sites. Students who do not want their names included in these electronic class rosters must restrict their directory information in the Office of the Registrar, Main Building, Room 1. For information on restricting directory information see:

<http://www.utexas.edu/student/registrar/catalogs/gi06-07/app/appc09.html>

Further, the instructors own the course material. Sharing course material with anyone not explicitly associated with this course in this semester is a violation of the instructors' intellectual property rights. You may not share these course materials with other students and you may not share them on public websites designed for collecting such information.

Course Policies Caveat

As departmental, college and UT policies change, we reserve the right to alter these course policies during the course of the semester.