

PURDUE UNIVERSITY  
School of Electrical and Computer Engineering  
ECE 302 Probabilistic Methods in Electrical and Computer Engineering  
Summer 2016  
Course Information

**Prerequisites:** MA 266 (or equivalent)  
ECE 301 (may be taken concurrently)

**Instructor:** M. Rodrigo Castellanos  
MSEE 333  
castellm@purdue.edu

**Teaching Assistant:** Praharshith Gurajala  
pgurajal@purdue.edu

**Lecture Schedule:** M-F 9:50-10:50AM in PHYS 203

**Office Hours:** TA: MWF 1:00-3:00PM in EE 208  
Instructor: 3:00-4:00PM in EE 208

**Course Website:** [https://www.projectrhea.org/rhea/index.php/2016\\_Summer\\_ECE\\_302\\_Castellanos](https://www.projectrhea.org/rhea/index.php/2016_Summer_ECE_302_Castellanos)

**Course Textbook:**

A. Leon-Garcia, *Probability, Statistics, and Random Processes for Electrical Engineering*, 3rd Edition, Prentice-Hall, 2008, ISBN No. 9780131471221.

**Reference Notes:**

Prof. Gelfand's Notes : <https://engineering.purdue.edu/~gelfand/ECE302>

## **Course Outcomes:**

Any student who successfully fulfills the course requirements will have demonstrated:

- i. an ability to solve simple probability problems in electrical and computer engineering applications.
- ii. an ability to model complex families of signals by means of random processes.

The midterms and the final exam will be used to assess demonstration of the learning objectives.

## **Homework:**

Homework will be assigned on a weekly basis and will generally be assigned and due on Tuesday. Assignments will be posted on the course website. A hard copy of the homework will be collected at the beginning of class on the due date. Late homework will not be accepted. Homework will be checked for completion and 2-3 problems will be graded thoroughly per assignment. Solutions will be posted on the course website. The lowest homework score will be dropped.

## **Quizzes:**

There will be 5-10 unannounced quizzes given throughout the semester on randomly selected days. Quizzes will take place during the last 10 minutes of class and will focus on basic concepts covered in lecture. The lowest two quiz scores will be dropped.

## **Exams:**

There will be two in-class midterms and one final exam. Exams will be closed book and closed notes, but calculators may be allowed. Some formulas and tables may be provided. The exam dates will be announced in class and posted on the course website. Once determined, exam dates are fixed and cannot be changed. Exams cannot be taken early and no make-up exams will be provided so plan your academic and business trips accordingly. A midterm may only be missed due to a well-documented university accepted excuse. In these cases, the final exam will substitute the missed exam. The following are the tentative exam dates:

Midterm 1	Thursday, June 30
Midterm 2	Thursday, July 21
Final Exam	August 3-5 (TBD)

Revised 06/06/16

Midterm exams will cover the material from lecture, reading, and homework through the class two periods before the exam. The final exam will be cumulative. The exam material will be discussed in class prior to the exam. Midterm review sessions will be held in class the day prior to the exam. A final exam review session will be held on the last day of class.

If you have a disability or other needs, please see the Disability Resource Center (DRC) for possible accommodations. The web location is <http://www.purdue.edu/odos/drc/>.

### **Grades:**

Your final grade will be computed as follows:

Homework	10%
Quizzes	10%
Midterm Exams	40% (20% each)
Final Exam	40%

Grades will be uploaded on Blackboard. Request for a regrade of an exam must be submitted in writing to the instructor within one week of the date that the material is returned to you. The grade for any missed exam will be replaced with the final exam. The course will not use the plus-minus grading scale. The course will be graded on a curve.

### **Academic Dishonesty:**

The ECE faculty expect every member of the Purdue community to practice ethical behavior. Any actions that might unfairly improve a student's score will be considered cheating and will not be tolerated. Examples of academic dishonesty include (but are not limited to):

- Sharing results or other information during an exam.
- Bringing forbidden material or devices to an exam.
- Working on an exam before or after the allotted time.
- Requesting a regrade for work that has been altered.
- Representing other's work as your own.
- Fabricating an excuse to miss an exam.

Revised 06/06/16

At the instructor's discretion, cheating on an assignment, quiz or exam will result in a reduced score, zero score, or a failing course grade. All occurrences of academic dishonesty will be reported to the Assistant Dean of Students and copied to the ECE Assistant Head for Education. If there is any question as to whether a given action might be construed as cheating, please see the instructor or TA before you engage in this action.

### **Campus Emergencies:**

In the event of a major campus emergency, please see the course website for further information.

### **Advice and Suggestions**

- Attend class and ask questions.
- Do the homework. Exam problems will be similar to homework problems.
- Working together is encouraged, but try the homework problems on your own first. In any case, the final write-up must be your own.
- Do the suggested reading.
- Take advantage of office hours.
- Online resources can be helpful if they are correct and if you do not cheat.