

## ECE 313: Probability with Engineering Applications. Fall 2001

11 MWF, Room 260 Everitt Laboratory

**Instructor:** Professor Dilip Sarwate      109 Coordinated Science Lab      333-7473  
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**Office Hours:** Tuesdays 1:30 p.m. – 4:30 p.m. in 326B Everitt Lab  
and at other times by appointment.

**Prerequisite:** ECE 210  
A good understanding of the fundamentals of differential and integral calculus, functions of several variables, multiple integrals, etc. is assumed. On the other hand, we will not need stuff like vector calculus, gradients, Green's theorem etc.

**Teaching Assistant::** Jean-Christophe Langer      jjlanger@uiuc.edu

**Office Hours:** To be announced

**Textbook:** S. Ross, *A First Course in Probability* (Fifth or sixth edition), Prentice-Hall.

**Optional Reading:** D. V. Sarwate, *Probability with Engineering Applications*,  
Lecture Notes for ECE 313, Fall 1997. (Available on the class home page)  
D. V. Sarwate, *Probability with Engineering Applications*,  
Powerpoint slides for ECE 313, Fall 2000. (Available on the class home page)

### Books on reserve in Grainger Engineering Library:

C. Ash, *A Probability Tutoring Book*, IEEE Press, 1992.

A. W. Drake, *Fundamentals of Applied Probability*, McGraw-Hill 1967.

H. P. Hsu, *Probability, Random Variables & Random Processes*, McGraw-Hill 1997.

S. Ross, *Introduction to Probability and Statistics for Engineers and Scientists*, Wiley 1987.

R. E. Walpole and R. H. Myers, *Probability and Statistics for Engineers and Scientists*, (Sixth edition) Prentice-Hall 1999.

R. D. Yates and D. J. Goodman, *Probability and Stochastic Processes*, Wiley, 1999.

### Reference Material: (Ask at the REFERENCE desk, not the Reserve Desk, of Grainger for this book)

M. Abramowitz and I. A. Stegun, *Handbook of Mathematical Functions*,  
National Bureau of Standards, 1964; also Dover Press, 1965.

**Communications:** All students who advance enrolled in ECE 313 have been added to the ECE 313 automated mailing list, and should have received a welcoming message. Students who registered more recently should subscribe to the mailing list by sending an e-mail message to

majordomo@csl.uiuc.edu

with the single line

subscribe ece313

or

subscribe ece313 yourname@your\_preferred\_e-mail\_address

in the **body** (not the subject line) of the message.

The moderated WebBoard <http://webboard2.cet.uiuc.edu:80/~37> and the unmoderated newsgroup [uiuc.class.ece313](http://uiuc.class.ece313) are available for class-related discussions. Class information will be posted in both places from time to time. However, news-servers delete postings after a few days, so these items may disappear after a few days. A more permanent source of information is the web page for ECE 313 at

<http://courses.ece.uiuc.edu/ece313/fall01/>

which has, for example, a copy of this information sheet for the convenience of those who mislay such items. More generic information about ECE 313 is available at

<http://courses.ece.uiuc.edu/ece313/>

from where you can follow links to the home pages for ECE 313 offerings during previous semesters. In particular, please read the ECE 313 FAQ on this web page.

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*E-mail* addressed to the instructor or TA (rather than telephone calls) should be used for simple specific questions on classwork or homework, as well as for setting up appointments outside office hours, etc. If the answer to your question might be of general interest to the class as well, post it to the WebBoard, and it will be answered there. Note that the instructor and TA do not read the newsgroup on a regular basis, but do monitor the WebBoard.

**Off-campus offering:** ECE 313 is also being offered as a refresher course to off-campus graduate students via streaming video on the Internet. All on-campus students in ECE 313 this semester will have access to the materials developed for the off-campus offering, viz. the actual lecture presentations and the Powerpoint slides. Details of how to access this (password-protected) material will be announced later. The web page for the off-campus course is at <http://online.cen.uiuc.edu/webcourses/ece313>

**Homework:** Homework will be assigned on Wednesdays, and will be due in class on Wednesday of the following week at the beginning of the class period. Homework turned in late will not be accepted for academic credit. Solutions to the homework will be distributed in class. Homework and Solutions will also be posted to the class web page. If you prefer to get these documents off the web page, please let me know so that I can adjust the number of print copies accordingly, and save a few trees.

**Examinations:** Midsemester one hour examinations are scheduled for Mondays October 1 and November 12 in the classroom. Please note that the exams will last from 11 a.m. to noon, so that if you have a class immediately following ECE 313, you will be a little late getting to it on these two days. One  $8\frac{1}{2}'' \times 11''$  sheet of notes is permitted (you may use both sides); but the examinations are closed book otherwise. Calculators, laptop computers, tables of integrals, etc. are neither necessary nor permitted.

**Final Examination:** The Final Examination is scheduled for Friday December 14, 8:00 a.m. to 11:00 a.m. Two  $8\frac{1}{2}'' \times 11''$  sheets of notes are permitted on the final examination (you may use both sides); but the examination is closed book otherwise. Calculators, laptop computers, tables of integrals, etc. are neither necessary nor permitted.

**Grades:** Scores on homework and examinations will be weighted as shown below in determining your grade in this course.

15% Homework  
20% Each Hour Examination  
45% Final Examination

The lowest homework score will be dropped in computing your average homework score. For more information on the grading scheme, visit the class home page.

You can check your class standing via the Campus Gradebook. Gradebook clients are installed on most CCSO PCs and Macintoshes. Visit

<http://www.uiuc.edu/ccso/gradebook>

for more information about the Campus Gradebook or to download a Gradebook client application to your personal PC or Macintosh computer. Web browsers capable of secure communication can also be used to view their Gradebook information (subject to some delay and some loss of functionality.) More information can be found at

<https://gradebook.cso.uiuc.edu/SWA>