

UALR Department of Systems Engineering
SYEN 3314 – Probability Theory and Random Signals
Summer 2009

Instructor

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Office hour (lecture questions): open

Meeting times

The class meets on Mondays and Wednesdays at 1:30 – 5:15 pm in ETAS 359.

Catalog Description

Prerequisite: MATH 2453. Sample space and events, axioms of probability, conditional probability, independence, Bayes' rule, discrete and continuous random variables and probability distributions, joint probability distributions, random sampling, limit theorems, confidence intervals, hypothesis testing, introduction to random processes. Three hours lecture. Three credit hour.

Textbook

Roy D. Yates and David J. Goodman, *Probability and Stochastic Processes: A friendly introduction for electrical and computer engineers*, Wiley, 2nd edition.

Web Page

Course related information announcements, and homework solutions:

<http://syen.ualr.edu/nxbouaynaya/Teaching.htm>

Homeworks

Homeworks are due on Mondays at the beginning of the lecture. Since the solution will be posted on the course web page immediately after the lecture, no late homework will be accepted. Students with documented medical reasons may be excused.

Study Guidelines

In order to get the most out of the course, try to stay ahead. By the weekend, make sure you have reviewed the material covered in the lectures of the preceding week. Read the assigned material, but at a minimum, make sure to review your lecture notes. This way, the next lectures will be much more informative and meaningful. Feel free to go to the instructor's office hours if you have questions regarding the material covered in the lecture or solutions of homeworks that were posted on the web page, if you want to discuss your work, etc. Also, it is a good idea to retain a copy of your homework before you turn it in. This lets you compare them with our solutions

right away, rather than waiting a week until they come back to you graded. In the exams and the homeworks, we expect you to concisely explain your reasoning. Giving a numerical answer, even correct, does not guarantee full credit if you don't justify it. Partial credit may be given if you show a correct understanding of the problem and the concepts involved.

Grading

Homework and class participation	10%
Surprise quizzes	15%
Midterm I	20%
Midterm II	25%
Final exam	30%

The homework and class participation grade is evaluated based on class attendance, class participation, and the average of all homework grades.

A missed quiz entails a zero grade.

Tentative Course Outline

Week 1: Experiments, Models and Probabilities

Week 2: Discrete Random Variables

Midterm I (June 8)

Week 3: Continuous Random Variables

Week 4: Pairs of Random Variables

Midterm II (June 22)

Week 5: Sums of Random Variables

Final (June 29)

UALR Academic Offenses

According to UALR academic offenses, the following offenses are subject to grade penalty and/or disciplinary action:

Cheating on an examination or quiz: To give or receive, to offer or solicit information on any quiz or examination including (a) copying from another student's paper; (b) using prepared materials, notes, or texts other than those specifically permitted by the professor during an examination; (c) collaborating with another student during an examination; (d) buying, selling, stealing, soliciting, or transmitting an examination, or any material purported to be the unreleased content of an upcoming examination, or the use of such material; (e) substituting for another person during an examination or allowing such substitution for oneself; (1) bribing a person to obtain examination information.

Plagiarism: To adopt and reproduce as one's own, to appropriate for one's own use and incorporate in one's own work without acknowledgment, the ideas of others or passages from their writings and works.

Collusion: To obtain from another party, without specific approval in advance by the professor, assistance in the production of work offered for credit to the extent that the work reflects the ideas or skills of the party consulted rather than those of the person in whose name the work is submitted.

Duplicity: To offer for credit identical or substantially unchanged work in two or more courses, without specific advance approval of the professors involved.

Reference: <http://ualr.edu/deanofstudents/index.php/home/academic-offenses/>

For example, copying from an instructor manual is *plagiarism* because the student is attempting to use someone else's work without acknowledgement. It is also *collusion* because the student is getting help from sources unapproved by the instructor.

Students with Disabilities: It is the policy of the University of Arkansas at Little Rock to create inclusive learning environments. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or to accurate assessment of achievement—such as time-limited exams, inaccessible web content, or the use of non-captioned videos—please notify the instructor as soon as possible. Students are also welcome to contact the Disability Resource Center, telephone 501-569-3143 (v/tty). For more information, visit the DRC website at <http://ualr.edu/disability/>.