SYLLABUS

PROBABILITY FOR ELECTRICAL AND COMPUTER ENGINEERS

EE 503: Fall 2014

Fall 2014
Lecture: Friday 2:00 – 5:00 pm
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Professor Kosko
Office: EEB 438
Hours: Wed 4 - 5

Course Summary: The course focuses on reasoning with probabilistic uncertainty. This involves developing careful skills in logical reasoning and applying those skills to a wide range of problems. The course depends primarily on lecture material and handouts. Attendance is mandatory. There are weekly exams and no make-ups. Unexcused absences result in an automatic exam score of zero.


Note: The texts are secondary to in-class lecture material and homework sets.

COURSE OUTLINE

AUG 29: Logic and sets. Sigma algebras. Probability axioms.
SEP 26: Random variables. Densities and cumulative distributions.
OCT 3: Expectations and moments of random variables.
OCT 17: Stochastic convergence. Laws of large numbers.
NOV 7: Central limit theorem and applications. Confidence intervals.
NOV 28: No class. Thanksgiving holiday.
DEC 5: Markov chains. Review.
DEC 12: FINAL EXAM.
GRADING PROCEDURE

Summary: Class grade depends on weekly exams and the final exam. Homework problems are optional. Homework problems from the text do not count. Homework handouts count as extra credit.

1. Weekly Exams. 13 weekly exams. **Closed book.** 10 minutes per exam. No make-up exams. Each weekly exam is worth 6 points. Missed exams earn 0 points. The total weekly-exam score counts as 60 points or 60% of the final grade. The total weekly-exam score sums your 10 best midterm exam scores. We ignore your three worst scores. Algorithm: Label your weekly exam scores from lowest to highest: \( w_1 \leq \ldots \leq w_{13} \). Then \( w_4 + \cdots + w_{13} \) is your total weekly-exam score. Class attendance is mandatory. **Unexcused absences get an automatic exam score of zero for that session’s exam grade.**

2. Final Exam. Worth 40 points. Cumulative. **Closed book.**

3. **Homework Problems.** Textbook problems are checked but not graded. Homework handout problems are graded but count only as optional points. They count at most as 10 points if all homework sets turned in and accurately worked. Grade remains as is if only some homework turned in. How much homework affects which cases is at the discretion of the instructor and the teaching assistant. Students may discuss homework problems among themselves but each student must do his or her own work. Cheating warrants an F in the course. Turning in identical homework sets counts as cheating.

4. **Course Grade.** 100 points possible in course.
   A if 90 - 100 points
   B if 80 - 89 points
   C if 70 - 79 points
   D if 60 - 69 points
   F if 0 - 59 points .

5. **Cheating.** Not tolerated on homework or exams. Penalty ranges from F on exam to F in course to recommended expulsion.