**MATH-40011 and MATH-50011 Introduction to Probability
Theory and Applications
Fall 2013. Professor Oana Mocioalca**
Classroom and time: LC107, MW 2:15-3:30PM
Office: MSB 308,
Tentative Office Hours: MW 12:45 - 2PM, or by appointment
Phone: 330-672-9083
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Textbook:
• " A First Course in Probability" by Sheldon Ross. Any edition will be fine
but the first couple of weeks I will use the page and problem numbers in the
2006 edition.
Suggested additional reading:
There are lots of books at the same level as the course.
• Hoel, P.; Port, S. and Stone, C. Introduction to Probability Theory, 1971
(This is an old book, however is short but crisp and still carries the relevant
material.)
• Hogg, Robert V. and Tanis, E. Probability and Statistical Inference
• Stirzake, David Elementary Probability, 1994
• Lipschutz, Seymour Theory and Problems of Probability, 1965. This old
book is a good source of nice problems and their solutions...
Prerequisites and suggested preparation:
This is a basic calculus-based first course in the theory and applications
of probability. It develops quantitative methods for solving problems that
involve randomness (uncertainty). Many probability computations are based
on summing infinite series or on evaluating integrals, often in more than one
dimension, so **Calculus II** is a prerequisite for this class.
Grading scheme
• Homework assignments: 20%
• Midterm I 15% midterm II %25
• Final exam 40%

Homework: The only way to be sure you are learning the course ma-
terial is to solve problems. Almost weekly problem sets will assigned. The
previous week's homework will be collected at the BEGINNING of the class.
Identical solutions are NOT acceptable. Your homework must reflect YOUR
understanding of the material. See bellow the KSU policy on plagiarism,

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which will not be tolerated. No late homeworks will be accepted. A few hours late homework will receive partial credit.

Midterm

We will have two in class midterms after approximately. No notes or books allowed.

Final Exam

Final exam will be comprehensive on the scheduled date.

Signs of collaboration or plagiarism will be dealt with harshly.

Aides and Logistics

• There are about 32 classes in the fall semester and about 50 topics to be covered. So most of the time we will cover 2 topics per class.

• All applied quantitative fields (Finance, Economics, Physics, Chemistry, Biology, Mathematics, Statistics) model randomness through the language of probability. If you want to study any of these fields you need to know probability!

• Probability is one of our core courses in the applied math program.

• It is strongly recommended if you plan on going into CS.

• A good grade in this course is a MUST Pre-req. to get into MSFE program.

• No make up exams will be given. • For most of the homework problems I will post solutions on the web, after the homework was collected. **Main topics of the course**

• Combinatorial Analysis

• Sets and Probability Spaces

• Random Variables

• Expectations

• Distribution theory

• Conditional Expectations

• Limit Theorems

Student Accessibility Policy:

University Policy 3342-3-01.3 requires that students with disabilities be provided reasonable accommodations to ensure their equal access to course content. If you have a documented disability and require accommodations, please contact the instructor at the beginning of the semester to make arrangements for necessary classroom adjustments. Please note, you must first verify your eligibility for these through Student Accessibility Services (contact 330-672-3391 or visit www.kent.edu/sas for more information on registration procedures).

Registration Requirement:

The official registration deadline for this course is September 08th, 2013. University policy requires all students to be officially registered in each class they are attending. Students who are not officially registered for a course by published deadlines should not be attending classes and will not receive credit or a grade for the course. Each student must confirm enrollment by checking his/her class schedule (using Student Tools in FlashFast) prior to the deadline indicated. Registration errors must be corrected prior to the deadline. The last day to withdraw is November 3rd, 2013.

STATEMENT ON ACADEMIC DISHONESTY
Excerpted from the University's Administrative policy and
procedures regarding student cheating and plagiarism. Policy #3342-3-07

(A) Policy statement. It is the policy of the university that:

(1) Students enrolled in the university, at all its campuses, are to perform their academic work according to standards set by faculty members, departments, schools and colleges of the university; and

(2) Cheating and plagiarism constitute fraudulent misrepresentation for which no credit can be given and for which appropriate sanctions are warranted and will be applied.

(B) Intent and scope of the policy.

(1) In providing this policy, the university affirms that acts of cheating and plagiarism by students constitute a subversion of the goals of the institution, have no place in the university and are serious offenses to academic goals and objectives, as well as to the rights of fellow students.

(2) It is the intent of this policy to provide appropriate sanctions, to provide fair and realistic procedures for imposing those sanctions, to provide safeguards for any student suspected of cheating or plagiarism, and to coordinate the policy with procedures of the code of student conduct, rule

3342-4-15 of the Administrative Code and of this register.

(3) This policy applies to all students of the university, graduate and undergraduate, full or part-time, whose conduct is of such a nature prohibited by the policy. Other offenses of a nonacademic nature are covered by the code of student conduct, rule 3342-4-15 of the Administrative Code and of this register.

(C) Definitions. As used in this rule:

(1) "Cheat" means intentionally to misrepresent the source, nature, or other conditions of academic work so as to accrue undeserved credit, or to cooperate with someone else in such misrepresentation. Such misrepresentations may, but need not necessarily, involve the work of others. As defined, cheating includes, but is not limited to:

(a) Obtaining or retaining partial or whole copies of examination, tests or quizzes before these are distributed for student use;

(b) Using notes, textbooks or other information in examinations, tests and quizzes, except as expressly permitted;

(c) Obtaining confidential information about examinations, tests or quizzes other than that released by the instructor;

(d) Securing, giving or exchanging information during examinations;

(e) Presenting data or other material gathered by another person or group as one's own;

(f) Falsifying experimental data or information;

(g) Having another person take one's place for any academic performance without the specific knowledge and permission of the instructor;

(h) Cooperating with another to do one or more of the above; and

(i) Using a substantial portion of a piece of work previously submitted for another course or program to meet the requirements of the present course or program without notifying the instructor to whom the work is presented.

(j) Presenting falsified information in order to postpone or avoid examinations, tests, quizzes, or other academic work.

(2) "Plagiarize" means to take and present as one's own a material portion of the ideas or words of another or to present as one's own an idea or work derived from an existing source without full and proper credit to the source of the ideas, words, or works. As defined, plagiarize includes, but is not limited to:

(a) The copying of words, sentences and paragraphs directly from the work of another without proper credit;

(b) The copying of illustrations, figures, photographs, drawings, models, or

other visual and nonverbal materials, including recordings, of another without proper credit; and

(c) The presentation of work prepared by another in final or draft form as one's own without citing the source, such as the use of purchased research papers.

Academic Sanctions, From Section D

The following academic sanctions are provided by this rule for offenses of cheating or plagiarism. Kent campus instructors shall notify the department chairperson and the student conduct office each time a sanction is imposed. Regional campus instructors shall notify the regional campus dean and the student conduct officer each time a sanction is imposed. Regional campus student conduct officer shall notify the Kent student conduct office each time a sanction is imposed by a regional campus Instructor. The following academic sanctions are provided by this rule for offenses of cheating or plagiarism. In those cases the instructor may:

1. Refuse to accept the work for credit; or
2. Assign a grade of "F" or zero for the project, test, paper, examination or other work in which the cheating or plagiarism took place; or
3. Assign a grade of "F" for the course in which the cheating or plagiarism took place; and/or;
4. Recommend to the department chair or regional campus dean that further action specified in the rule be taken. The department chairperson or regional campus dean shall determine whether or not to forward to the academic dean or to the vice president for the extended university a recommendation for further sanction under this rule.