

MATH 3160 - Probability - Fall 2017

Syllabus

- **Instructor:** Patricia Alonso Ruiz (office MONT405), patricia.alonso-ruiz@uconn.edu.
- **Lecture times and locations:** Section 002, TuTh, 09:30–10:45 in MONT111.
- **Textbook:** The essential material for this course will be available at the following website: www.probability.oer.math.uconn.edu. It mainly builds on the lecture notes by Prof. Richard Bass, video lectures by Joe Chen and Tom Roby. Further supplementary resources are the book *A First Course in Probability*, 7th/8th/9th Ed., by Sheldon Ross and *Introduction to Probability* by Charles M. Grinstead and J. Laurie Snell. Note that the lectures will NOT follow any text verbatim.
- **Topics and approx. class plan:** Combinatorial analysis (1 week); Kolmogorov's axioms of probability and combinatorial probability (1.5 week); conditional probability and Bayes' formula (2 weeks); discrete random variables (2.5 weeks); continuous random variables (2 weeks); joint distributions, independence, sums of independent random variables, order statistics and transformations (2 weeks); conditional distribution, conditional expectation, covariance, correlation, moment generating function (1.5 week); limit theorems (1 week).
- **Grades:** quizzes 10%; 2 midterm exams, 25% each; final exam, 40%.
- **Office hours:** Tu 14:00–17:00. Do not hesitate to e-mail me to set up an appointment.

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- **Prerequisites:** Calculus, up to and including series, limits, partial differentiation, and multiple integration. Recall that MATH 2110Q, 2130Q or 2143Q are strictly enforced as a prerequisite for MATH 3160.
 - **Exams:** There will be two in-class midterms (tentative dates Th 10/05 and Th 11/16) and a final exam. Please let me know if you anticipate any conflict with either midterm date by the end of the 2nd week of classes. Otherwise, the dates will become official. **No make-up exams will be offered** unless under the most extreme circumstances, such as a serious illness or family emergency. If you anticipate such circumstances, please notify me asap, and well in advance of the scheduled exam date.

The **final exam date** will be announced by the registrar a few weeks into the semester. You **MUST** contact the **Dean of Students Office (DSO)** regarding any conflict with the scheduled final exam times by the end of the third-from-last week of the semester. Please note that vacations, previously purchased tickets or reservations, social events, misreading the exam schedule and over-sleeping are not viable excuses for missing a final exam. If you think that your situation warrants permission to reschedule, please contact the DSO with any questions. No exceptions will be done! Once the DSO grants permission to reschedule your final exam, they will notify me, and I will confirm an alternate arrangement with you.

- **Homework:** Assignments will be posted every **Thursday**. Each assignment consists of around 10 problems drawn from materials covered in the preceding week. All assigned problems are subject to appear in the quizzes and/or the exams.
- **Quizzes:** They will be given **every Thursday** starting the 2nd week of classes (excepting the two midterm exam weeks). They will start at 09:30 sharp, take 10-15 minutes, and cover the assignment posted the previous week. **No make-up quizzes** will be given under any circumstance. In the end, your lowest quiz score will be dropped.
- **Exam guidelines:** You are allowed to bring n pages of handwritten notes (both sides of an 8 x 11 paper) to the n th exam held. **These and your writing utensils are the only items allowed on the exam. No calculator is allowed;** the exam problems will not involve tedious calculations.

Homework assignments form an integral component of the course. You should make every effort to solve the assigned problems using the concepts learned from the lectures and readings. Remember that if you don't do the homework, you cannot do well on the exams. **Collaboration on HW is encouraged.**

If you encounter difficulties or have questions concerning HW, there are many options to solve them: ask me (in class or during office hours), post your question on HuskyCT or ask your mates.

- **Course web site:** A HuskyCT course site will be operational, where all announcements, assignments and discussions can be found. Please, check it regularly to keep updated with what is going on in class.

If you want to ask a HW/lecture question, post your question on HuskyCT. By doing so, everyone will be able to see it and respond to it, and the whole class benefits. **I will not respond to HW problems via e-mail.**

- **Further important dates:** M 9/11, add/drop via Student Admin closes (without a "W"); M 10/30, Last day to drop a course (with a "W").
- **Course preparation:** To keep up with the course, you will need to spend 2+ hours studying on your own for each class meeting. Work on the corresponding homework problems: this is especially important in the last 2/3 of the course, where the current material builds upon the previous material.
- **The Student Code:** Everyone is expected to read and abide by the [UConn Student Code](#), especially [Appendix A: Academic Integrity in Undergraduate Education and Research](#) and the associated [FAQ](#). Any academic misconduct will be dealt with under the policy stated there.