Math 4653, Section 001  Elementary Probability  Spring 2017

Hours and Location: Tuesdays and Thursdays 10:10 am - 12:05 pm, Vincent Hall 1

Instructor: Brittany Baker
Office: 526 Vincent Hall
Email: bake0573@umn.edu
Course website: http://math.umn.edu/~bake0573/4653Spring2017.html

Office hours:
Monday 1:00 - 2:00 pm  Tuesday 8:30 - 9:30 am
Wednesday 3:00 - 4:00 pm  Thursday 8:30 - 9:30 am

Description: This is a one-semester course in probability theory. We will cover the basic concepts of probability theory: random variables, distributions, expectations, variances, conditional probabilities, Bernoulli Trials, Bayes’ formula, limit theorems, and Markov Chains. The emphasis will be on working with concrete problems that arise in applications, but reading and understanding proofs will also be an important part of the course.

Textbook: Grinstead and Snell, Introduction to Probability, Second Revised Edition

Prerequisites: Math 2263 or 2374 or 2573 required. Math 2283 or 2574 or 3283W recommended.

Grades:
Grades will be based on quizzes, two midterm exams, a final exam, and a project, each of which are given the following point values:

<table>
<thead>
<tr>
<th>Quiz</th>
<th>20 points each (200 points total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterms</td>
<td>200 points each</td>
</tr>
<tr>
<td>Final Exam</td>
<td>250 points</td>
</tr>
<tr>
<td>Project</td>
<td>150 points</td>
</tr>
<tr>
<td>Total</td>
<td>1000 points</td>
</tr>
</tbody>
</table>

Exams:
There will be two in-class midterm exams. They are tentatively scheduled for Thursday, February 16th (Chapters 1, 3 - 5) and Thursday, April 6th (Chapters 6 - 10). The cumulative final exam will take place at the university-scheduled time of 8:00 - 10:00 am on Saturday, May 13th.

If you have a conflict with any exam dates, please contact the instructor immediately.

Quizzes:
There will be twelve quizzes total, each taking place in class on Thursdays, except for days when there is a midterm exam. Your two lowest quiz scores will not be counted toward your final grade.
Suggested homework exercises from the book will be assigned at the end of every week. You are strongly encouraged to work through the homework problems to help you prepare for the quiz on the following Thursday. You should work together with other students, ask questions in class, and utilize office hours to help you understand material.
Project:
You will work with two other students to prepare a 20-minute in-class presentation. The project is very open-ended with only three main requirements:

1. Your project involve some sort of probability theory. You do not need to include deep theory, but probability must be an essential part of your project.
2. Your project must be interesting. You should be excited about what ever you choose so that your presentation is engaging. This is your opportunity to get really creative for a math course.
3. You must give clear explanations. Every student in the course should be able understand how probability relates to your project based on your presentation.

Groups and presentation dates will be assigned on Thursday, February 16th, after the first midterm exam. Presentations will take place on Thursdays, March 23rd through April 27th (except April 6th).
As a warm-up to finding a project topic, each student is expected to find a “newspaper” article with probability in it. The warm-up exercise is due on Tuesday, February 23rd, and will be used for an in-class discussion.
In addition to the presentation and the warm-up, your attendance and participation during other projects will be part of your overall grade for the project. If you are unable to attend class during one or more of the presentation times, you must contact the instructor ahead of time.

Drop Deadlines:
The schedule for drop deadlines can be found at the following site:
https://onestop.umn.edu/dates-and-deadlines/canceladd-deadlines

Extra Help:
Do not hesitate to come to my office during office hours or by appointment to discuss a homework problem or any aspect of the course. If you would like to hire an outside tutor (for a fee), you can find a list of such people through the undergraduate mathematics office 115 Vincent Hall or ugrad@math.umn.edu.

Disability Accommodations:
If you feel that you have a learning disability that would prevent you from doing your best on quizzes or exams within the time frame, you should immediately contact the Office for Students with Disabilities to see if they can authorize accommodations for you. Reasonable accommodations will be provided for students with disabilities on an individualized and flexible basis. The staff at Disability Services will determine said accommodations through consultation with the student. Information is available on their website at https://diversity.umn.edu/disability/, by calling 612-626-1333 (for both voice and TTY), or by sending an email to drc@umn.edu.

University Grading Policies: http://policy.umn.edu/education/gradingtranscripts

Student Conduct and Scholastic Dishonesty:
The University of Minnesota Student Conduct Code governs all activities in the University, including this course. Students who engage in behavior that disrupts the learning environment for others may be subject to disciplinary action under the Code. This includes any behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities. Students responsible for such behavior may be asked to cancel their registration (or have their registration canceled).
Scholastic dishonesty includes plagiarizing, cheating on assignments or exams, using a calculator while taking an exam or quiz, engaging in unauthorized collaboration on academic work, and taking, acquiring, or using exam materials without faculty permission. Scholastic dishonesty in any portion of the academic work for a course shall be grounds for awarding a grade of F or N for the entire course. For more information see http://www.oscai.umn.edu.