Math 362 Syllabus, Fall 2009

Mark Steinberger

Office                ES 136A
Hours                 MW 1:40–2:10 & 3:45–4:15; F 1:40-2:35; and by arrangement
Email                 mark@albany.edu
                      Please include Math 362 in the subject line.
Text                  Mathematical Statistics,
                      Wackerly, Mendenhall and Scheaffer
Final Exam            Tuesday, December 15, 8:00am–10:00am
My home page          http://math.albany.edu/~mark
Course home page      http://math.albany.edu/~mark/classes/362/

Probability is used in a variety of contexts, from gambling to statistics. The idea is to model a repeated process and obtain estimates for the relative likelihood of different outcomes. Using statistics, you can test such a model to see if it accurately reflects the data generated by carrying out such a process. If the model is accurate, it can then be used for prediction. The interplay goes back and forth, because statistics cannot guarantee the accuracy of the model. Instead, it gives an estimate based on probability.

In this course, we study both discrete and “continuous” probability. (Continuity here is not identical to the notion of a continuous function in calculus.) Discrete probability applies to situations in which the number of possible outcomes is finite or countable (e.g., dice, cards, roulette, polling a population). Continuous probability applies to situations in which the outcome could be any real number (e.g., recording the height or weight of the individuals in a population). Continuous probability will use methods from calculus, while discrete probability uses simple arithmetical operations. Continuous models can actually be used to estimate the probabilities of discrete problems in appropriate cases, and can result in easier calculation.

We will cover Chapters 2–7 in Wackerly, Mendenhall and Scheaffer.

There will be three in-class exams and a final exam. The dates of the in-class exams will be announced in class one week prior to each exam. The final is Tuesday, December 15, 8:00am–10:00am.

There will also be graded in-class projects or quizzes every class period. The projects and quizzes will be based on having studied the preceding lecture(s), and also any homework problems assigned. Homework will not be graded.
Each exam (including the final) counts for 20% of your grade, and the in-class work counts for the final 20%.

Please do ask lots of questions. Your questions are a very good indicator of what you understand. My goal here is to teach you, not to penalize you. The test for all of us is how you do on the exams, projects and quizzes. So please make use of the class and office hours to get my help. I am happy to give it. Remember, if you have a question, there will be at least 5 others in the class with the same question. I hope one of you will ask it, because that is how we learn.

Most people learn mathematics more quickly and thoroughly if they discuss it. Verbalizing a question is often the most important step in solving it. So please make frequent use of office hours. It is also very useful to get to know your fellow students and form study groups.

The ultimate test is being able to solve problems. Keep your curiosity alive and follow it where it leads.

Academic policies.

Attendance. Your in-class performance is key to your success in this course. Attendance, itself, is not graded. Instead, graded in-class activities and assignments constitute an important part of the course grade. Keeping a passing average on these is not possible without consistent attendance. Missing class (or part of a class) means the student earns an automatic “0” credit for the activities or assignments missed. See below for policies related to extreme emergencies and extended illnesses.

Make-up policy. Since there will be occasions in your life when missing a class meeting is simply unavoidable, this course has three NO-FAULT safety valves.

Safety valve 1. You may drop 3 in-class assignment grades. So, if you must miss class for any reason, it will be possible (up to 3 times) to drop the zero you would automatically receive for missing the assignment. You can use this safety valve for both legitimate and non-legitimate absences—you do not need to warn me or bring documentation or offer explanations. This safety valve is for you to manage. Be careful not to waste your drops on frivolous things early in the semester, since you may need them if you catch a cold or need to leave town for a day, later in the semester. If you do not use your safety valve for missed classes, you will be able to use your safety valve to improve your grade, by dropping any low scores you make even when you DO attend.

Plan carefully for classes that you know you will need to miss. It is your responsibility to manage your absences by using your safety valves. If you need to be out of class for any reason, make sure you have conserved your “droppable” grades to cover the class you need to miss.
Safety valve 2. The final exam grade can replace one major test during the course — to upgrade a disappointing performance or to offset a “0” you earned if you missed the test.

Safety valve 3. If you become seriously ill during the semester, or become derailed by unforeseeable life problems, and have to miss so many assignments that it will ruin your grade, you and I will schedule a special meeting in order to make arrangements for you to take the appropriate administrative steps. Don’t wait until too late to see me when you get in trouble.

Cell phones. Please mute your cell during class. Texting during class is not permitted.

Academic honesty policy. Students are on their honor to be ethical and honest in carrying out all the assignments and requirements of this course. Any violations of this code, such as cheating, copying, plagiarism, or misrepresentation of one’s own work, will meet with the appropriate penalties and discipline as outlined in UAlbany regulations. If you have an unclear picture of what constitutes plagiarism, or the limits of acceptable group collaboration, please ask the instructor for clarification.

It’s also the responsibility of every student to report any observed instances of cheating and plagiarism.

Disciplinary actions for such offenses are severe, and include loss of course credit, suspension, and expulsion from the university.

Special needs. Students who have special needs due to learning or other disabilities will be accommodated, and should inform the instructor at the beginning of the semester. Students who request accommodation will be asked to provide appropriate documentation, which may be obtained through the student services office.