Introduction to Probability and Statistics (MTH 220)

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Office: 312 MNB  
Office Hours: TR 2-5, W 1:30-2:45, None on MF

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Text: McWilliams, A First Course In Probability & Statistics.

Course Goals: To equip students with the skills necessary to use data in order to make better decisions. Specifically, to master basic skills in the sciences of probability and statistics that will empower students when it comes to interpreting data. A major goal of the course is to teach the students that data drives decision making in all facets of life. Learning to organize, summarize and make inference from data will allow us to develop more successful policies in among other disciplines business, education, medicine, engineering, law, and politics.

Specific Topics Covered: Basic Rules of Counting and Probability, Random Variables and their properties, Discrete and Continuous Probability Distributions with a focus on the Binomial, Normal and Exponential Distributions, Descriptive Statistics including histograms, numerical measures of center and spread, Sampling Distribution, Inferential Statistics including topics in both point and interval estimation as well as tests of hypothesis.

Specific Course Policies: No make-up exams are given. Exception to the no make-up policy concerning exams is handled on a case by case basis only if the student provides notification to the instructor before 5:00 on the day that the exam was given. There is no need to notify me when and if you were to ever miss class – I keep no record of such instances -- and missing a class with as much detail as this one polices itself as far as grades are concerned. (Consistently on faculty reviews, students tell me that getting notes from a friend and reading them is NOTHING like sitting through the lecture and it was a big mistake of theirs to think it would be OK)

If a lecture is missed, class notes are the students responsibility to obtain from a fellow classmate. My lecture notes are not available after the lecture has been given. Upon request, any handout or assignment given on the date of absence will be provided to a student who was not in class.

Exams: There will be four closed notes exams. All exams take seven to nine days to grade and return. You will not get your exam back the lecture after you take it. The Final Exam is comprehensive and closed notes. You must take the final at the designated time of 8:00 AM on Thursday, May 14. You cannot switch times.

Homework: Homework is given daily in the form of "Lecture Review Worksheets". After each lecture, you will need to download the worksheet, complete it, and turn it in at the beginning of the NEXT CLASS PERIOD. It is expected that you will work all the homework assigned in preparation for the exams. The lecture review worksheets will be graded by one of my student assistants. If you have a question about how your paper was graded, please call this to my attention and not the attention of the student grader. I will spot check the grading to make sure it is being done to my satisfaction.
Grading Breakdown: Homework: 15%, Final Exam: 25%, Each Regular Exam: 15%. If the Final is greater than your lowest test grade: Homework: 15%, Final Exam: 35%, Three Regular Exams: 15%, Lowest Exam: 5%.

Preferred Method of Communication: If you cannot come by during office hours or talk to me before or after lectures, the preferred method of communication is via e-mail. Although frequently you will be able to get through to talk to me on the phone, I tend to answer e-mail messages with more regularity than I check phone messages. Often, I screen phone calls or disconnect the phone in my office altogether. However, rest assured that outside of class or office hours you will be able to communicate with me via e-mail. I can check these messages from both home and off campus and can often reply at hours that are not during the typical work day. PLEASE ONLY USE THE E-MAIL ADDRESS LISTED ABOVE. I will not reply at other addresses which are posted in university literature.

Note about Expectations: I expect you to review the notes I give you in class on average four to five times a week. Studying just a few hours a week for this course is unacceptable. Not studying for this course for a period of three consecutive days is unacceptable. Just reviewing homework and the book for the test will not make you prepared. You must have a deep, deep understanding of the notes you take in class to be successful. Just being "loosely familiar" with the notes is not close to being prepared for exams.

Exam Structure: All exams in this course are approximately 50% conceptually driven and 50% calculation driven. Every exam will have a short true/false section followed by a fill-in-the-blank and short answer section. These sections comprise about half the exam and are there to test concepts & definitions – there will be NO calculations on the first half of each exam. The second part of each exam consists of problems that test both computational ability and conceptual understanding.

Note about Cell Phones/Pagers/Electronics: Kindly make sure your cell phones, etc. are turned off when you come to class. A cell phone ringing during an exam will constitute a 10 point penalty on that exam. My advice: DO NOT BRING CELL PHONES on exam days AT ALL.


Passive people are not the best learners. Cultivate a healthy and active passion to broaden your formal education. Success is often directly proportional to desire. You have to want it. Take responsibility for your own actions and decisions since I certainly will not take responsibility for your actions in your place. Learn to say “no” to the people and things that take away time that should be spent studying. Strike a healthy balance between academic and social activities. Tipping this scale in the direction of extracurricular activities is often academic suicide.

Don’t whine. Its annoying and never convinces people that you are worth working with.

Learn to run far, not fast. Perseverance is the most underrated of all human qualities.

Realize that there is a consequence for the decisions you make – the good ones and the bad ones. Don’t use the word “given” when it comes to grades – grades are “earned” – not “given”. Break down whatever barrier might exist between you and your unwillingness to come talk to me. I am here to help you – take full advantage of this time. Don’t wait – be active – do it now. Remember – you choose how you spend your time. Not anyone else. You waste it – it’s your fault. You manage it well – it’s your gain. It is your choice.