Mathematics MAT 112 : Basic Statistics
Fall 2005
MWF 8:30 a.m. - 9:20 a.m., Room 207
MWF 9:30 a.m. - 10:20 a.m., Room 210

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Office Hours: Mondays and Fridays, 10:30 a.m. - 12:00 p.m., or by appointment
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Course Materials

Introductory Statistics, Fifth Edition, Prem S. Mann (required)

Introduction

Statistics is a side-branch of mathematics devoted to the study of collecting, organizing and interpreting data. We will be studying both descriptive and inferential statistics throughout the course. We will find out how to organize data in a meaningful way, and how to make decisions based on data.

Exams

There will be a midterm exam given during the semester and a final exam. Both exams will count for 35 percent of your final grade. The exams will test your ability to work through some computational problems, as well as your ability to demonstrate knowledge of concepts. The midterm exam is scheduled for Friday, October 21 and the final exam will be at 1:00 p.m. on Thursday, December 15 for Section A, and 8:00 a.m. on Monday, December 12 for Section B. There will be NO make-ups for missed exams. Please look over your schedule as soon as possible. If you see a potential conflict, inform me immediately.

Homework

The best way to learn Mathematics is to solve problems. Homework will be assigned at the end of each class period and collected the following class period. I will choose 4 or 5 problems to grade in each assignment. To earn full credit for a problem, a complete solution to the problem must be submitted. Just writing down the answer will not earn full credit. In addition to points for each graded problem, 5 points on each assignment will count for completeness and neatness of the graded assignment. Late assignments will not be graded, but they will be eligible for the 5 completion points. If you are not in class the day an assignment is collected, you may turn in your assignment into my office later that day. However, your assignment will be considered late. The homework is designed to help you identify where you might have difficulties. If you encounter any trouble with an assignment or a concept, seek help! The homework will count for 30% of your final grade.

Attendance

While there is no official attendance policy for MAT 112, I strongly suggest you come to class prepared every day.

Grading

Your grade in this course will be based on two main factors: homework and exams. The exams will be worth 70% of your final grade, and the homework 30%. In addition to these factors, minor ethereal factors such attendance, attitude, and improvement over the course of the semester can also affect your grade. To determine your final grade, 90–100% = A, 80–89% = B, 70–79% = C, 60–69% = D, 59 and below = F, with the top two percents receiving a + and the bottom two percents receiving a −.

Calculators

Because we will be dealing with a reasonable amount of data in this course, the use of calculators will be allowed on homework and exams. However, the only type of calculator that you can use during the exams are the basic four-function calculators. That is, programmable calculators or cell phone calculators will not be allowed.

Important Dates

Monday, September 5 – Last Day to Drop/Add
Monday, October 10 – Fall Break (no class)
Tuesday, October 11 – Follow the Monday schedule
Friday, October 21 – Midterm
Friday, November 4 – Deadline for WD or P/F
November 23 - 27 – Thanksgiving Break (no class)
Friday, December 9 – Last Day of Classes
December 10, 11 – Study Days
Monday, December 12, 8:00 a.m. - 10:30 a.m. – Section B Final Exam
Thursday, December 15, 1:00 p.m. - 3:30 p.m. – Section A Final Exam

Suggestions

Come to class with your homework assignment completed every day
Study for at least 30 minutes each day in addition to completing your homework assignment
Read the section we will be covering in class *before* arriving to class
Do not fall behind!
Come to office hours to discuss homework and concepts. I am here to help!

Syllabus
MAT 112 : Basic Statistics
Fall 2005

Week 1	September 2	Section 8.1 – Sequences and their Limits
Week 2	September 5	Section 8.2 – Infinite Series ; Geometric Series
	September 9	Section 8.3 – The Integral Test; p-Series
Week 3	September 12	Section 8.4 – Comparison Test
	September 16	Section 8.5 – The Ratio Test and the Root Test
Week 4	September 19	Section 8.6 – Alternating Series; Absolute and Conditional Convergence
	September 23	Section 8.7 – Power Series
Week 5	September 26	Section 8.8 – Taylor and Maclaurin Series
	September 30	Section 9.1 – Vectors in $\mathbb{R}^2$
Week 6	October 3	Section 9.2 – Coordinates and Vectors in $\mathbb{R}^3$
	October 7	Section 9.3 – The Dot Product
Week 7	October 11	Section 9.4 – The Cross Product
	October 14	Section 9.4 – (continued)
Week 8	October 17	Review
	October 21	Exam I
Week 9	October 24	Section 9.5 – Parametric Representation of Curves; Lines in $\mathbb{R}^3$
	October 28	Section 9.5 – (continued)
Week 10	October 31	Section 9.6 – Planes in $\mathbb{R}^3$
	November 4	Section 9.6 – (continued)
Week 11	November 7	Section 10.1 – Introduction to Vector Functions
	November 11	Section 10.1 – (continued)
Week 12	November 14	Section 10.2 – Differentiation and Integration of Vector Functions
	November 18	Section 10.2 – (continued)
Week 13	November 21	Section 10.3 – Modelling Ballistics and Planetary Motion
	November 25	`NO CLASS`
Week 14	November 28	Section 10.3 – (continued)
	December 2	Section 10.4 – Unit Tangent and Principle Unit Normal Vectors; Curvature
Week 15	December 5	Section 10.5 – Tangential and Normal Components of Acceleration
	December 9	Section 10.5 – (continued)