MATHEMATICS 1110
Probability & Statistics
SYLLABUS

FALL 2010

LECTURE: MWF 1:00-:50 PM in HEBERT 201

LAB: T 2-3:15 PM

INSTRUCTOR

Maurice J. Dupre'

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TEACHING ASSISTANTS

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CATALOGUE DESCRIPTION

Elementary probability theory with applications; random variables; distributions including a thorough discussion of the binomial and normal distributions; central limit theorem; histograms; sampling distributions; confidence intervals; tests of hypotheses; linear models; regression and correlation; chi-square test; non-parametric statistics. Math-111 is a prerequisite for Math-112. These courses do not count toward the Mathematics B.S. requirement in SSE.

TEXTBOOK

The official text for the course is *PROBABILITY AND STATISTICS* by Mendenhall, Beaver & Beaver, thirteenth edition. The book is invaluable for the course and will be referred to heavily within the course of the semester.

We will cover the sections indicated in the Table of Homework problems that follow below.

WEBSITE

All course information will be available on my website and on blackboard linked to my website.

CALCULATORS

It is mandatory to have an officially supported calculator for this course. The Texas Instruments TI-83, TI-83plus , TI-84 plus are the officially supported calculators for this course. No other calculators are officially supported. You are required to bring your calculator to every classroom meeting for this course.

Introduction

Notions of probability and statistics have become part of our culture. Every time you listen to a weather report or watch a sports game, you are inundated with statistics related to the varying weather patterns and athletic performance of the players. Meanwhile, many of us use probability on a personal level, gauging the likelihood that a certain action will occur, such as winning contests or getting into a car accident. MATH 111: Probability and Statistics I, is designed to give students an introductory level approach to these and other concepts that are widely used throughout our media-driven culture.

Only a minor amount of mathematical knowledge is required for this course (high school algebra or equivalent), but that does not necessarily translate into being an easy class. There are many applied problems, and while the mathematics is very rudimentary, many students find that the actual implementation is a challenge. You should expect to spend 4-5 hours per week on average working out homework and other example problems.

Class

The class meets four times a week for day sections (three lectures and one lab), twice a week for evening sections. Attendance is mandatory. Classroom lectures WILL cover material BEYOND the textbook and students are responsible for what is covered in the classroom as well as in the textbook. <u>Attendance in lecture classes is mandatory.</u> You will have a TEST EACH WEDNESDAY IN LECTURE class meeting.

Labs

Weekly labs give students an opportunity to interact with an instructor on a more personal level to aid in solving problems. The Lab will cover several topics which are not covered in the lectures. IN PARTICULAR, THE LAB WILL COVER CHAPTERS 1,2, & 3. You will have a quiz each week in lab (except for whose weeks in which there is major test in the lecture). Each lab quiz will cover the homework assignment from the text material covered in lecture during the previous week. The lab instructor will go over the material at the beginning of lab and answer questions about homework study problems. <u>Attendance is mandatory.</u>

Grading

Frequent quizzes on homework, lecture quizzes, major tests, and a final exam determine your grade for the class. Quizzes may occur at any time in lecture or in lab as determined by your instructor. The grading scale goes as follows:

			Percentage	Final grade
TESTS	45%		90-100	A
QUIZZES	25%		80-90	B
			60-80	C
FINAL EXAM	30%		50-60	D
TOTAL	100%		below 50	F

If your instructor is convinced that you know the material better than your average indicates, he or she may give you a higher grade than indicated by your average. Your instructor may modify the percentages tabulated above.

Quizzes

There will be at least ten quizzes given during the semester. The lowest three scores will be dropped and the average of the remaining scores will determine your quiz grade. Quizzes are given at the end of each lab period and at no other time. No makeup quizzes will be given.

Homework

Homework will be assigned weekly and discussed in lab meetings. The quiz problems each week will be taken from the homework problems or very similar to homework problems.

Tests

TESTS will be given within the LECTURE class on Wednesdays. In the case of an absence due to medical emergency, a doctor's note may be required. Other excuses for absences will be dealt with on an individual basis. Make-up exams will not be administered. In case of an excused absence from a major test, the overall test average will be computed on the basis of the other tests and the final exam.

Final Exam

DATE AND TIME ON WORK SCHUDULE & LOCATION TO BE ANNOUNCED

Homework Problems

Below are listed the homework study problems for the LECTURE CLASS for the entire semester, listed by chapter number. Your Lab instructor may also recommend other homework problems to study. Also there will be plenty of study problems and test problems posted online at my website:

www.math.tulane.edu/~dupre

as well as lectures from last semester MATH-111.

Work Schedule: The approximate dates for the coverage of various topics will be posted online as the WORK SCHEDULE.

Table of Homework Study Problems

Chapter	Sections	Required Problems	
4	1-8	2,4,5,7,8,9,10,19,20,25,26,29,33,35,42,44,46,49 51,52,58,59,64,65,70,71,72,82,83,84,85,87,88,91,100	
5	1-4	3,4,11,21,23,40,41,50,53,63,66,70,74,88,92	
6	1,2,4	4,13,15,25,30,34,43,47,89,90	
7	1-6	15,19,20,23,28,30,32,33,35,40,41,42,47	
8	1-7, & 9	3,5,7,14,22,23,25,27,30,34,37,39 40,44,47,49,52,53,68,69,70,71,80	
9	1-3	3,4,5,6,7,8,9,10,12	
10	1-3	1,2,4,5,7,8,10	

ANY PROBLEM WHICH ASKS FOR THE USE OF TABLES IN APPENDIX I OF THE TEXTBOOK SHOULD INSTEAD BE WORKED WITH YOUR CALCULATOR

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