Mathematics MAT 112 : Basic Statistics
Fall 2014
MWF 8:30 a.m. - 9:20 a.m., Hubbard 210
MWF 9:30 a.m. - 10:20 a.m., Hubbard 210
MWF 10:30 a.m. - 11:20 a.m., Hubbard 210

Instructor: Dr. Brad Emmons
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Course Materials

Introductory Statistics, Eighth Edition, Prem S. Mann (required)
A four-function calculator (required)

Introduction

Statistics is the branch of mathematics devoted to the study of collecting, organizing and interpreting data. Increasingly it is recognized that any educated person, regardless of the field of study, shall be acquainted with statistical reasoning. It is a goal of this class to make you more familiar with how statistical reasoning plays a roll in our lives. 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 two in-class exams as well as a final cumulative exam. The exams will test your understanding of statistical concepts, your ability to work through some of the computations, as well as your ability to apply the techniques to certain applications. The first exam is scheduled for Friday, September 26, the second exam is scheduled for Friday, October 31. The final exam will be held on Saturday, December 13 from 8:00 - 11:00 a.m. for section A, Friday, December 12 from 9:00 a.m.- 12:00 p.m. for section B, and Wedneday, December 10 from 9:00 - 12:00 for section C. All exams will count for 20 percent of your final grade. 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. I will be collecting homework problems every day. The homework problems will range in difficulty and include both computational problems as well as conceptual problems. The purpose of this is to help you identify where you might have difficulties. If you encounter any trouble with an assignment or a concept, seek help! Homework will count for 20% of your final grade.

Quizzes

Every other Friday, starting with September 5, we will have an in-class quiz. There will be a total of 6 quizzes throughout the semester. You should treat the quizzes as mini-exams, covering material from approximately 6 days worth of course work. The quizzes will consists of 4 or 5 problems similar to problems from your graded homework, and they are to make sure that you are keeping up with the concepts presented in class, and to identify where you are having problems before you take the exams. The quizzes will count for 20% of your final grade.

Attendance

Attendance in MAT 112 is extremely important. There is no official attendance policy for my courses. Although I *highly recommend* that you make an effort to be in class each day, on time, and willing to learn.

Grading

Your grade in this course will be based on three main factors: homework, quizzes and exams. The homework will be worth 20% of your final grade, the quizzes will be worth 20%, and the exams 60%. In addition to these factors, minor ethereal factors such attendance, class participation, 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, quizzes, 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

Friday, September 5 – Quiz I
Friday, September 19 – Quiz II
Friday, September 26 – Exam I
Friday, October 10 – Quiz III
Monday, October 13 – Fall Break
Friday, October 24 – Quiz IV
Friday, October 31 – Exam II
Friday, November 14 – Quiz V
Wedneday, November 26 - Friday, November 28 – Thanksgiving Break
Friday, December 5 – Quiz VI
Monday, December 8 – Last Day of Classes
Wednesday, December 10, 9:00 - 12:00 – Final Exam, Section C
Friday, December 12, 9:00 - 12:00 – Final Exam, Section B
Saturday, December 13, 8:00 - 11:00 - Final Exam, Section A

Special Needs

If you have a disability for which you are requesting an accommodation, you are encouraged to contact both your instructor and Academic Support Services, 315-792-3032 or khenkel@utica.edu.

Any student who has need of special adaptations or accommodations due to documented learning or physical disabilities should notify me within the first two weeks of class. Instructors, Academic Support Services, and other appropriate counselors will work with you to adapt and accommodate your special needs. Every effort will be made to help you master the course content in an effective and appropriate way.

Intellectual Honesty

Academic honesty is necessary for the free exchange of ideas and Utica College expects academic honesty from all students.

Academic dishonesty includes both cheating and plagiarism. Plagiarism is the intentional or unintentional use of other peoples ideas, words, and/or factual information without crediting the source. Cheating refers to both the giving and the receiving of unauthorized assistance in the taking of examinations or in the creation of assigned and/or graded class work.

Utica College faculty are authorized to assign a wide range of academic penalties for incidents of academic dishonesty. Depending on the nature of the offense, the penalty may include a reduced grade for the particular assignment or course, a grade of F for the course, or the grade of F for cheating on the course.

Incidents of academic dishonesty are reported to the Vice President for Academic Affairs who will refer any repeat offense, or any particularly egregious first offence, to the Academic Standards Committee which may recommend a more severe penalty than that imposed by the faculty member.

Syllabus
MAT 112 : Basic Statistics
Fall 2014

Week 1	August 27	Course Policies, Syllabus, Basic Terms
	August 29	Section 1.7 – Summation Notation
Week 2	September 1	Section 2.1 – Qualitative Data
	September 3	Section 2.2, 2.3 – Quantitative Data
	September 5	Section 3.1 – Measures of Central Tendency, **Quiz I**
Week 3	September 8	Section 3.2 – Measures of Dispersion
	September 10	Section 3.3 – Mean, Variance for Grouped Data
	September 12	Section 3.4 – Standard Deviation
Week 4	September 15	Section 4.1 – Experiments, Outcomes, and Sample Space
	September 17	Section 4.2 – Calculating Probability
	September 19	Section 4.3 – Marginal and Conditional Probability, **Quiz II**
Week 5	September 22	Sections 4.4 – Intersections of Events
	September 24	Section 4.5 – Unions of Events
	September 26	**Exam I**
Week 6	September 29	Section 4.6 – Factorials, Permutations, and Combinations
	October 1	Sections 5.2 – Probability Distribution of a DRV
	October 3	Sections 5.3, 5.4 – Mean and Standard Deviation of a DRV
Week 7	October 6	Section 5.4 – Binomial Distribution
	October 8	Section 5.5 – Hypergeometric Distribution
	October 10	Section 5.5 – Hypergeometric Distribution, **Quiz III**
Week 8	October 13	`NO CLASS`
	October 15	Sections 6.1 – The Normal Distribution
	October 17	Section 6.2 – Standardizing a Normal Distribution
Week 9	October 20	Section 6.3 – Applications of Normal Distribution
	October 22	Section 6.4 – Determining z and x Values
	October 24	Sections 7.1 – Sampling Distributions, **Quiz IV**
Week 10	October 27	Sections 7.2, 7.3 – The Sampling Distribution of $\overline{x}$
	October 29	Section 7.4 – Applications of the Sampling Distribution of $\overline{x}$
	October 31	**Exam II**
Week 11	November 3	Sections 7.5 – The Sampling Distribution of $\widehat{p}$
	November 5	Section 7.6 – Applications of the Sampling Distribution of $\widehat{p}$
	November 7	Section 8.2 – Est. of μ : σ known
Week 12	November 10	Section 8.4 – Est. of p : Large Samples
	November 12	Section 8.4 – Est. of p : Large Samples
	November 14	Section 9.1 – Hypothesis Testing : Introduction, **Quiz V**
Week 13	November 17	Section 9.2 – Hyp. Tests about μ : σ known
	November 19	Section 9.4 – Hyp. Tests About p : Large Samples
	November 21	Section 9.4 – Hyp. Tests About p : Large Samples
Week 14	November 24	Section 10.1 – Inferences about the Difference Between Two Means
	November 26	`NO CLASS`
	November 28	`NO CLASS`
Week 15	December 1	Section 12.1 – The F Distribution
	December 3	Section 12.2 – One-Way Analysis of Variance
	December 5	Section 12.2 – One-Way Analysis of Variance, **Quiz VI**
Week 16	December 8	Review