

Additional Course Information -Statistics 213 (L05) - Fall 2007

Office hours: Tuesday and Thursday 11:00 -12:00 or by appointment

Text book: *Stats: Modeling the World* by Bock, Velleman, and De Veaux

Labs: Pre-assigned labs will be used to write quizzes and give experience with MINITAB 14. In order to access to the programs on the computers in MS515 and MS52, you will have to use your IT login.

Aid: Non-programable (no graphing) calculators are allowed. Formula sheet will not be permitted when writing quizzes, and will be provided when writing exams.

Quizzes: You must write your quiz in your registered lab section and quizzes will be closed-book test.

Quizzes Schedule

Lab section Room	Monday (14:00-14:50) B17 (MS515); B18 (MS521)	Wednesday (10:00-10:50) B19 (MS515); B20 (MS521)
Quiz 1	Sept 24	Sept 26
Quiz 2	Oct 15	Oct 17
Quiz 3	Nov 5	Nov 7
Quiz 4	Nov 19	Nov 21
Quiz 5	Dec 3	Dec 5

Midterm: The midterm exam will be written on Thursday, October 25, in the lecture time. You may bring a nonprogrammable calculator.

Missed quizzes and midterm: Any student **missing a quiz or midterm exam** for reasons beyond the student's control will have a final grade assessed by re-weighting the quizzes in which the student has completed, provided that the necessary documentation is supplied. There will be no makeup quizzes or midterm.

Final exam: The final exam will be scheduled by the Registrar. It will be closed book, two-hour exam. You may bring a non-programable (no graphing) calculator. It should be noted that (1) a final grade of less than 50% will result in a letter grade of *F*; (2) a passing mark on the final exam (at least 50%) is required in order to earn a *C-* in the course

Tips for success in STAT213:

- *read the text*, do the labs, come to class
- *learn the language* of statistics: learning the terminology is half of the battle
- *do review* making sure you think about and understand the material: it is easy to feel you have understood completely when you actually haven't unless you try some problems without looking back at the text or notes all the time

- *ask* questions: of me, of the TA, of other students
- *keep up to date* with material
- *let me know* if you haven't understood
- *notice how* solutions are written up in class; you will be expected to do it more or less the same way on quizzes and exams

Topics:

1. Exploratory data analysis: populations and sampling, simple random sample, measures of location and spread; mean, median, mode, variance and standard deviation, quartiles. Grouped data, frequency histograms, shape, symmetry and skewness. The empirical rule. Graphical methods: stem-and-leaf plots, Box-and-whisker plots (**chapter 2, 3, 4, 5, 12, 13**)
2. Regression and correlation: scatter diagrams, linear regression and correlation. Regression predictions-descriptive methods (**chapter 7, 8, 9**)
3. Introduction to probability: Sample spaces and random events, Venn diagrams. Permutation and combinations. Definitions of probability. Basic probability laws (**chapter 14**)
4. Conditional probability: Conditional probability, probability trees, formula for total probability and Bayes' theorem (**chapter 15**)
5. Random variables: Random variables and their distributions. Joint probability distributions and independence (**chapter 16**)
6. Discrete distributions: Uniform, binomial, hypergeometric, and Poisson distributions (**chapter 17**)
7. Expectations and variances: Expectations, variance and covariance of random variables and their linear combinations. Application to discrete random variables (**chapter 17**)
8. Continuous random variables: Concept of continuous random variable and its distribution. Uniform and Normal distributions and their properties. Central limit theorem. Approximation of the binomial by the Normal distribution (**chapter 17**)
9. Sampling distributions: Distribution of the sample mean from a Normal population. Central limit theorem and large sample mean distribution. Distribution of the sample proportion (**chapter 18**)
10. Estimation and Hypothesis testing: Introduction to confidence intervals and hypothesis testing using simple examples involving means and proportions (**chapter 19, 20, 23**)

Tentative Course Schedule: labs, quizzes, midterm

	Monday	Tuesday	Wednesday	Thursday	Friday	Topic
Quiz & Labs (topic)	lab (14:00-14:50) B17 (MS515) B18 (MS521)	class (9:30-10:45) SA104	lab (10-10:50) B19 (MS515) B20 (MS521)	class (9:30-10:45) SA104		
	Sept 10 no lab	11	12 no lab	13	14	1
Lab 1 (1)	17	18	19	20	21	1, 2
Quiz 1 (1, 2)	24	25	26	27	28	2, 3
Lab 2 (1)	Oct 1	2	3	4	5	3, 4
	8 Thanksgiving Day: no lab	9	10 no lab	11	12	4, 5
Quiz 2 (3, 4)	15	16	17	18	19	5, 6
Midterm (1-5)	22	23	24	25 Midterm in class	26	6
Lab 3 (6)	29	30	31	Nov 1	2	7
Quiz 3 (5, 6)	5	6	7	8	9	7
	12 Reading Day no lab	13 Reading Day no class	14 no lab	15	16	8
Quiz 4 (6, 7)	19	20	21	22	23	8
Lab 4 (8)	26	27	28	29	30	9, 10
Quiz 5 (8, 9)	Dec 3	4	5	6	7	10
Final Examination: Dec 10-19						