CLASS SYLLABUS Fall 2008

Course: Math 227 Elementary Statistics
Section 3312 MW 7:00 pm – 9:05 pm, BUNG 7

Instructor: Masa Kawamata
Office Hours: MW 6:30 pm-7:00 pm or by appointment
Office: Faculty Bung D
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Text: Elementary Statistics by Allan G. Bluman, 4th Edition. A Brief Version

Prerequisite: Successful completion of Math 125 or a passing score of math placement test.

Important Dates:

Sep. 12:	Last day to ADD classes
Sep. 26:	Last day to DROP classes, without a "W"
Nov. 10:	Veterans Day Holiday (College closed)
Nov. 21:	Last day to DROP, with a "W"
Nov. 27-30:	Thanksgiving Holiday (College closed)
Final Exam:	**Wednesday, Dec 17, 8:00-10:00 pm**

Course Description: We will cover the following topics:

- Chapter 1: The Nature of Probability and Statistics
- Chapter 2: Frequency Distributions and Graphs
- Chapter 3: Data Description
- Chapter 4: Probability and Counting Rules
- Chapter 5: Discrete Probability Distributions
- Chapter 6: The Normal Distribution
- Chapter 7: Confidence Intervals and Sample Size
- Chapter 8: Hypothesis Testing
- Chapter 10: Correlation and Regression

Course Objectives: This course is an introduction of basic statistical concepts and techniques, which includes descriptive and inferential statistics, construction of statistical tables, display data with statistical graphs, correlation and regression, probability, statistical distributions, central limit theory, testing hypotheses & confidence interval of a single population for the population mean or population proportion.
Minitab is used throughout the course to present graphs, to solve exercises, to perform a simulation, and to interpret & analyze application problems.

Learning Outcomes:

- Classify branches of statistics, identify sources of data, evaluate sampling methodolgies.
- Construct pie charts, bar graphs and histograms, calculate central measures; calculate the five numbers summary, calculate standard deviation.
- Calculate probabilities, define random variables, calculate the mean and standard deviation of binomial variables, calculate probabilties using the standard normal distribution tables.
- Apply the Central limit Theorem to calculate means and proportions, calculate probabilities for the sampling distributions of the mean and proportion.
- Use graphs to determine the shape of parent distributions and estimate the central measures of populations.
- Calculate confidence intervals, calculate sample size for means and sample proportions.
- Define and test hypotheses for the mean and proportion, apply the z- and t-tests in hypotheses testing, calculate p-values.
- Compare two proportions or two means and draw appropriate conclusions, construct confidence intervals for two sample means and two sample proportions.
- Calculate the correlation coefficient, determine the regression line.

Homework Hand-written and computer homework will be assigned. Students are responsible to complete the assigned homework as each section is completed. Hand-written and computer homework will collected the day of the exam.

Exams

- There will be four classroom tests. If the final examination score is higher than the lowest score of all tests, its percentage score will be used to replace the lowest test score. There will be **no make-up** examinations. Any missed exam will receive a grade of 0.
- A comprehensive final exam will be given on Tuesday, Dec 16. There are **no make-ups** for the final and all students must take the final exam.
- All tests will be based on examples worked in class, assigned homework, and computer lab materials.

Computer Component

- Various topics in this course will be covered using Minitab software. Minitab software and the data sets needed for the class are available in all computers in the Math Center, LRC 205, LRC 234, and the LRC Computer Commons. The student version of Minitab and the data set CD are included with every new textbook for home use.
- There will be one computer-based project and one computer-based quiz covering all the lab materials. More detail will be announced during the lab.

Grading:

Homework	10%
4 exams	50%
Computer project & Quiz	10%
Final exam	30%

Grading Scale: Letter grades will be determined by your overall percentage in the course:

- A = 90%-100%
- B = 80%-89.9%
- C = 70%-79.9%
- D = 60%-69.9%
- F = 0%-59.9%

Attendance:

Students are expected to attend all class meetings. Unexcused absences of four meetings may result in excluding students from class. Students themselves are responsible for dropping a class they no longer attend; failure to do so may result in a grade of F.

Course Organization: The course will follow the attached course schedule as closely as possible.

Tutorial: Drop-in tutoring is available at the Math Center located in the basement of the Campus Center and in the Math Lab located in the Library Learning Center.

Date	Monday	Wednesday
Sept 01/ Sept 03	Labor Day	Orientation, Ch1
Sept 08 / Sept 10	Ch 2.1– 2.3	Ch 2.4– 3.2
Sept 16 / Sept 18	Ch 3.3– 3.5	**Exam** 1 (Ch 1, 2)
Sept 22 / Sept 24	**Lab I**	Ch 4.1. – 4.3
Sept 29 / Oct 01	Ch 4.4– 4.5	Ch 4.6 – 5.2
Oct 06 / Oct 08	Review (Ch 3,4)	**Exam** 2 (Ch 3, 4)
Oct 13 / Oct 15	Ch 5.3– 5.5	Ch 6.1– 6.3
Oct 20 / Oct 22	Ch 6.4– 6.5	Ch 6.6– 6.7
Oct 27 / Oct 29	Review (Ch 5,6)	**Exam** 3 (Ch 5, 6)
Nov 03 / Nov 05	**Lab II**	Ch 7.1– 7.2
Nov 10 / Nov 12	Veterans Day	Ch 7.3– 7.4
Nov 17 / Nov 19	**Lab III**	Ch 8.1– 8.2
Nov 24 / Nov 26	Ch 8.3– 8.4	Ch 8.5
Dec 01 /Dec 03	**Lab IV** Ch 10	Review (Ch 7, 8)
Dec 08 / Dec 10	**Computer Quiz (Lab V)**	**Exam** 4 (Ch 7, 8)
Dec 15 / Dec 17	**Review for the Final**	**Final Exam (8:00-10:00 pm)**