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
Email: kawamam@lamission.edu


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 methodologies.
- 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 probabilities 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.
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<td>Sept 01/ Sept 03</td>
<td>Labor Day</td>
<td>Orientation, Ch1</td>
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<td>Sept 08 / Sept 10</td>
<td>Ch 2.1– 2.3</td>
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<td>Sept 16 / Sept 18</td>
<td>Ch 3.3– 3.5</td>
<td><strong>Exam 1</strong> (Ch 1, 2)</td>
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<td>Sept 22 / Sept 24</td>
<td><strong>Lab I</strong></td>
<td>Ch 4.1. – 4.3</td>
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<td>Sept 29 / Oct 01</td>
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<td>Review (Ch 3,4)</td>
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<td>Oct 20 / Oct 22</td>
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<td><strong>Lab III</strong></td>
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<td><strong>Lab IV</strong> Ch 10</td>
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<td><strong>Computer Quiz (Lab V)</strong></td>
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<td>Review for the Final</td>
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