CLASS SYLLABUS Spring 2008

Course: Math 227       Elementary Statistics
Section 0147       TTH 10:40 am – 12:45 pm, BUNG 6

Instructor: Yoon Yun
Office Hours: MW 11:45 -12:15 pm; TTH 12:45 -3:15 pm; or by appointment
Office: INST 1011
Phone: (818) 364-7691
Email: yunyh@lamission.edu


Web Site: http://lamission.edu/math/yun/

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

Important Dates:
- Feb 15-18: Presidents Day, College closed
- March 03: Last day to drop without a “W”
- March 24-30: Spring Break, College closed
- March 31: Cesar Chavez Holiday, College closed
- May 05: Last day to drop with a “W”
- May 26: Memorial Day, College Closed

Final Exam: Tuesday, May 27, 10:00-12:00 noon

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 not be picked up or graded.

Exams/Quizzes
• 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.
• There will be two computer-based quizzes covering the lab materials.
• A comprehensive final exam will be given on Tuesday, May 27. 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 printout analysis.

Grading:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>In-Class</td>
<td>8%</td>
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<tr>
<td>4 Tests</td>
<td>52%</td>
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<tr>
<td>2 Computer Quizzes</td>
<td>10%</td>
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<tr>
<td>Final</td>
<td>30%</td>
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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.

Class comportment:
All students are expected to arrive on time. Late arrivals are disruptive to both the lecturer and students. Once you are seated, do not leave the room until dismissed. Such comings and goings are also disruptive. Students must turn off cell phones while in class. Students are encouraged to ask questions and make comments on the lecture material. This should be done in a courteous manner by raising one’s hand and being recognized. Side conversations between students that disrupt the flow of the lecture will not be tolerated. It is the student’s responsibility to manage his or her academic workload. Should a student decide to stop attending class it is their responsibility to drop the class. All students appearing on the grade roster will receive a grade regardless of whether they are attending classes or not.
How to maintain “A”  Everyone starts the class with an “A”, so how do you keep it? First, it is very important to attend all class lectures. Second, in order to be good at math it takes practice, practice, and practice. This means you should do all of your homework and understand them. Do not just memorize how to do them, but understand the problem and how to solve it using the concepts learned in class. Get a study partner. Many times when a friend or study partner explains a problem or concept to you in a different way, it might make more sense. Also, you can keep each other accountable by making sure you do your homework in a timely manner. Finally, be well-prepared for exams. Do not try to “cram” before the test, but begin studying well before the test date. Get additional help if needed.

### Math 227 Elementary Statistics  Tentative Schedule

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<thead>
<tr>
<th>Date</th>
<th>Tuesday</th>
<th>Thursday</th>
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<tbody>
<tr>
<td>Feb 05 / Feb 07</td>
<td>Orientation, Ch1</td>
<td>Ch 2.1– 2.3</td>
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<tr>
<td>Feb 12 / Feb 14</td>
<td>Ch 2.4– 3.2</td>
<td>Ch 3.3– 3.5</td>
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<tr>
<td>Feb 19 / Feb 21</td>
<td><strong>Exam 1</strong> (Ch 1, 2 )</td>
<td><strong>Lab I</strong> (Ch2, 3)</td>
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<td>Feb 26 / Feb 28</td>
<td>Ch 4.1– 4.3</td>
<td>Ch 4.4– 4.5</td>
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<tr>
<td>March 04 / March 06</td>
<td>Ch 4.6 – 5.2</td>
<td>Review (Ch 3,4)</td>
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<tr>
<td>March 11 / March 13</td>
<td><strong>Exam 2</strong> (Ch 3, 4 )</td>
<td>Ch 5.3– 5.5</td>
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<tr>
<td>March 18 / March 20</td>
<td>Ch 6.1– 6.3</td>
<td>Ch 6.4– 6.5</td>
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<td>March 25 / March 27</td>
<td><strong>Spring Break</strong></td>
<td><strong>Spring Break</strong></td>
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<tr>
<td>April 01 / April 03</td>
<td>Ch 6.6– 6.7</td>
<td>Review (Ch 5,6)</td>
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<td>April 08 / April 10</td>
<td><strong>Exam 3</strong> (Ch 5, 6 )</td>
<td><strong>Lab II</strong> (Ch 4-6)</td>
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<td>April 15 / April 17</td>
<td>Ch 7.1– 7.2</td>
<td><strong>Lab III –Computer Quiz</strong> (Ch 2-6)</td>
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<td>April 22 / April 24</td>
<td>Ch 7.3– 7.4</td>
<td>Ch 8.1– 8.2</td>
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<td>April 29 / May 01</td>
<td>Ch 8.3– 8.4</td>
<td>Ch 8.5</td>
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<tr>
<td>May 06 / May 08</td>
<td>Review (Ch 7, 8)</td>
<td><strong>Exam 4</strong> (Ch 7, 8 )</td>
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<td>May 13 / May 15</td>
<td><strong>Lab IV</strong> (Ch 7, 8)</td>
<td><strong>Lab V</strong> (Ch 10)</td>
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<td>May 20 / May 22</td>
<td><strong>Lab VI –Computer Quiz</strong> (Ch 7,8,10)</td>
<td>Review for the Final</td>
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<td>May 27 / May 29</td>
<td><strong>Final Exam (10:00-12:00 noon)</strong></td>
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