Course: Introduction to Statistics
Class Time: M.W.F. 9:15 AM -10:20 AM in Science 3610
Prerequisite: High school higher algebra
Instructor: Jong-Min Kim, Statistics
Office: 2380 Science (Tel:589-6341)
Office Hours: 3:00 PM-4:30 PM M., and W. or by appointment.
Email: jongmink@morris.umn.edu
Webpage: http://cda.morris.umn.edu/~jongmink/stat1601/

Required Course Materials:

- Calculator with statistical functions (not necessarily a graphing calculator)

Course Description: Scope, nature, tools, language, and interpretation of elementary statistics. Descriptive statistics; graphical and numerical representation of information; measures of location, dispersion, position, and dependence; exploratory data analysis. Elementary probability theory, discrete and continuous probability models. Inferential statistics, point and interval estimation, tests of statistical hypotheses. Inferences involving one or two populations, ANOVA, regression analysis, and chi-square tests; use of statistical computer packages (Excel, R).

Homework: There will be homework problems given in most class periods. No late homeworks will be accepted without a valid excuse.

Quizzes: There will be several quizzes in class over suggested homework problems and/or concepts discussed in class. The quizzes will be open book and open notes, so it is imperative to bring all essential materials with you to each class. Be prepared! No makeup quizzes will be given. However, if you are planning to be gone, let me know.

Examinations: Three midterm examinations and a final exam will be given. No make-up exams will be given. If you must miss an exam, the relevant material on the final exam will be used for the missing midterm score. Each exam (including the final) will be closed-book and closed notes. however, you may use one $8\frac{1}{2} \times 11$ inch sheet of notes if you wish. You may also use a calculator. The tentative time table for the examinations is given below:

Midterm 1 Science 3610 9:15 AM -10:20 AM F., February 17
Midterm 2 Science 3610 9:15 AM -10:20 AM W., March 29
Midterm 3 Science 3610 9:15 AM -10:20 AM W., April 26
Final Exam Science 3610 1:30 PM -3:30 PM T., May 09
Grading

Grades for the course will be determined using the following weights for each component of the course:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Midterm 1</td>
<td>100 pts.</td>
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<tr>
<td>Midterm 2</td>
<td>100 pts.</td>
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<tr>
<td>Midterm 3</td>
<td>100 pts.</td>
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<tr>
<td>Final Exam</td>
<td>200 pts.</td>
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<tr>
<td>Homework</td>
<td>50 pts.</td>
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<tr>
<td>Quizzes</td>
<td>50 pts.</td>
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<tr>
<td>TOTAL</td>
<td>600 pts.</td>
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Rules for dropping and adding classes are the same as those for the university. Students are expected to attend all classes. University rules associated with academic dishonesty will be followed.

Disabilities: Reasonable accommodations will be provided for students with documented physical, sensory, learning, and psychiatric disabilities. Contact Disability Services to work out the details of accommodations. Please feel free to discuss other special needs with me.

Course Topics

- DEFINITION AND USES OF STATISTICS
- The Normal Distribution – Chapter 1
- Scatterplots, Correlation, and Least-Squares Regression – Chapter 2
- Sampling Design – Chapter 3
- Mean and Variances of Random Variables – Chapter 4
- Counts, Proportion and Sample Means – Chapter 5
- Estimating with Confidence and Tests of Significance – Chapter 6
- Inference for the Mean of a Population – Chapter 7
- Inference for a Single Proportion and Comparing Two Proportions – Chapter 8
- Inference for Two-Way Tables – Chapter 9
- Simple Linear Regression – Chapter 10 (if time permits)
- ONE-WAY ANALYSIS OF VARIANCE (if time permits)