STA 363 - Regression and Design of Experiments
Spring 2011

Course Information
Class: MWF 11:15pm-12:05pm in UPH 316
Instructor: Dr. Byran Smucker (UPH 317)
Office Hours: W 3:30pm-4:30pm; F 9am-10am; or by appointment
E-mail: smuckerb@muohio.edu
Office Phone: 513.529.0955
TA: Jacob Mauch (UPH 302)
TA E-mail: mauchjc@muohio.edu
TA Office Hours: Tu 1pm-2pm; Th 1pm-2pm

Course Website
Please access http://www.users.muohio.edu/smuckebj/STA363/STA363.html for all necessary class-related documents.

Required Textbook

Course Description
Applications of statistics using regression and design of experiments techniques. Regression topics include simple linear regression, correlation, multiple regression and selection of the best model. Design topics include the completely randomized design, multiple comparisons, blocking and factorials. Prerequisite: STA 261 or STA 301 or STA 368 or DSC 205 or permission of instructor.

Textbook Coverage
Chapters 2 – 8 (regression); chapters 11 – 12 (experimental design/ANOVA).

Software
We will be using the statistical software Minitab (version 16) extensively throughout the course. I will use it in class to demonstrate material and analyze data, and you will use it both in-class and in homework assignments. Minitab version 16 can be purchased for $25 from the bookstore (temporary license which expires in July 2011). Alternatively, it is available in the King Library. Unfortunately, Minitab software cannot be run directly on a Mac.

Homework
Regular homework assignments will constitute a significant portion of the course grade. You may work together, but the work you turn in must be your own. If it is evident that submitted homework is not your own work, you may be assigned a 0 for that assignment. Homework assignments should be turned in at the beginning of class on the day they are due. Any assignment turned in later than the first 10 minutes of class will be given a 50% grade reduction. Each day after the due date will result in an additional 10% reduction. An exception to this reduction policy will be considered for legitimate circumstances that are presented to me (via e-mail or in person) before the due date. I will drop the lowest homework score at the end of the semester.
In-Class Assignments
There will be approximately 14 in-class assignments throughout the semester. These assignments may use part or all of a given class period and will consist of you working alone or with classmates. I will strive to allow enough time for them to be completed, and will be available to provide guidance throughout. However, if you are not able to complete them during class, you may turn them in at the beginning of the next class period. These will also be graded, but on a coarse scale (a 0 if you showed little or no effort and/or missed the questions completely; a 1 if the assignment was partially completed and/or partially correct; and 2 if essentially or completely correct). Occasionally, some or all of an in-class assignment may be extra credit. These assignments are designed to set the lecture ideas in your mind, as well as provide practice for the homework and exams. Thus, they are very important. I will drop the lowest two in-class assignment scores.

Exams
There will be three exams throughout the semester (50 minutes each), and a comprehensive final (110 minutes). Exams will be in-class and closed-book, but I will allow a single 3x5 formula card (both sides) for you to use during each of the midterm tests. For the final, you may have four of these cards. If it increases your grade, your final exam score will be counted in place of the lowest midterm score. To receive full credit for exam answers, you must show all work. A correct answer alone will not receive full credit, if there are steps to be shown. If extenuating circumstances require you to miss an exam, let me know at least three days in advance and we will work something out.

Grading
Your final grade will be comprised of the following elements:

    20%  Homework Assignments
    10%  In-Class Assignments
    15%  Exam 1
    15%  Exam 2
    15%  Exam 3
    25%  Final exam

Letter grades (percentages reflect the minimum requirement for a particular letter grade):

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I reserve the right to lower these thresholds, but will not raise them.

Important Dates
• No Classes: Martin Luther King Day (Monday, January 17); Spring Break (March 6-13)
• Academic Deadlines: January 31 is the last day to drop without a grade; March 24 is the last day to withdraw from the course with ‘W’ and also the last day to change to/from an audit
• Final Exam: Monday, May 2 from 12:30-2:30 in UPH 316

Academic Integrity
All Miami University policies concerning academic integrity apply to this course. See www.muohio.
edu/integrity/index.cfm for details.

Disabilities
If you have a disability, please see me and I will be glad to make any necessary accommodations. For more information, see the Office of Disability Resources (www.units.muohio.edu/oeeo/odr/) and/or Learning Disability Services (www.units.muohio.edu/saf/1rn/RLC1LD.html).

Diversity and Discrimination
Please see www.miami.muohio.edu/documents_and_policies/diversity_statement/ and www.miami.muohio.edu/documents_and_policies/nondiscrimination.cfm. Respecting each other is important.