Statistics 6214-10:
Applied Linear Models
Spring 2014
6:10 - 8:40 Mondays in 2020 K Street - Room 14

Instructor: Dr. James Livsey
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Course Description: Linear models are statistical analysis tools commonly used in a wide variety of fields including business, medical research, and social science. In this course, we will learn how to develop linear models via simple and multiple linear regression. Topics to be covered include parameter estimation and inference, model diagnostics and prediction. Additional topics include model building, model selection and regression models with a binary response.

Prerequisite(s): An undergraduate probability and statistics class, as well as an introductory linear algebra class at the level of Math 2184.

Required Text: *Applied Linear Regression* by Weisberg, 3rd Edition

Course Objectives: At the completion of this course, students will be able to apply regression methods to analyze data, interpret the fit of a linear model, perform diagnostics to the fit, use the model to obtain predictions and make inferences on the data. Students will also be able to identify the limitations of linear models in certain modeling situations and suggest alternative strategies.

Grading:

- HW Assignments 33\frac{1}{3}\% 
- Midterm Exam 33\frac{1}{3}\% 
- Final Exam 33\frac{1}{3}\%

- **Homework Assignments**: Homework will be assigned about every other week. Late assignments will not be accepted. Students are expected to write up their own solutions to all assigned problems. If two homework submissions are very similar, students may be questioned about their solutions.

- **Midterm Exam**: The exam will be given during class time. At least two weeks notice will be given prior to exam date.
• Final Exam: In accord with university policy, the final exam will be given during the final exam period and not the last week of the semester. The exam will be cumulative (by nature of the subject) with more of a focus on material covered after the midterm.

Computing:
We will use R for analysis. Please download the R software online at: http://www.r-project.org/. A short introduction to R and tutorials for R can be found at:

http://math.illinoisstate.edu/dhkim/rstuff/rtutor.html or

Academic Integrity:
I personally support the GW Code of Academic Integrity. It states: “Academic dishonesty is defined as cheating of any kind, including misrepresenting one’s own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information.” For the remainder of the code, see: http://www.gwu.edu/~ntegrity/code.html.

Support for Students Outside the Classroom:
DISABILITY SUPPORT SERVICES (DSS)
Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Marvin Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: http://gwired.gwu.edu/dss/

UNIVERSITY COUNSELING CENTER (UCC) 202-994-5300
The University Counseling Center (UCC) offers 24/7 assistance and referral to address students’ personal, social, career, and study skills problems. Services for students include: crisis 3 and emergency mental health consultations, confidential assessment, counseling services (individual and small group), and referrals. Please see:
http://gwired.gwu.edu/counsel/CounselingServices/AcademicSupportServices

Security:
In the case of an emergency, if at all possible, the class should shelter in place. If the building that the class is in is affected, then evacuation procedures for the building will be followed. After evacuation, students should seek shelter at a predetermined rendezvous location.

University Policy on Religious Holidays:
• Students should notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance;

• Faculty should extend to these students the courtesy of absence without penalty on such occasions, including permission to make up examinations;

• Faculty who intend to observe a religious holiday should arrange at the beginning of the semester to reschedule missed classes or to make other provisions for their course-related activities.
Blackboard:
All students are required to register for the course in Blackboard, the GWU web-based instructional resource. Course information and materials, including homework assignments and grades will be posted there. It is the students responsibility to check the Blackboard website frequently for up-to-date information.

GWU Academic Calendar, Spring Semester 2014

• Classes Begin - Monday, January 13
• Martin Luther King Jr. Day (no classes) - Monday, January 20
• President’s Day (no classes) - Monday, February 17
• Spring Break - Monday, March 10 - Saturday, March 15
• “Last Day of Classes” (technically this is the second last day of class) - Monday, April 28
• Make-Up Day - Tuesday, April 29
• Designated Monday - Wednesday, April 30
• Reading Days - Thursday, May 1 - Friday, May 2
• Final Examinations - Monday, May 5 - Tuesday, May 13

Classroom Policies

• Be on time.
• No laptops, unless you can verify it is being used in a manor that aids in learning course material.
• Do not let cell phone use distract instruction.

* The instructor reserves the right to make changes to this syllabus as necessary.