13FS STAT 3038-001 (#910359)
Probability & Statistics II
Fall 2013

Mondays/Wednesdays/Fridays, 1:25 pm – 2:20 pm, Room 270, **60WCHARL**

Instructor: **Xia Wang**
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Office Hours: *M/W/F 12:15 pm -1:15 pm or by appointment*

Course Description: This course covers chi-square tests used in goodness-of-fit problems as well as contingency tables, model building, simple and multiple linear regression, analysis of variance, experimental design, reliability, and quality control.

Bok area: QR (Quantitative Reasoning)

Prerequisites: Minimum Grade of: **C-**
         MATH2063 & STAT2037 & MATH2076
      Or 15MATH264 & 15STAT362 & 15MATH352
      Or 15MATH254 & 15STAT362 & 15MATH352

Course Webpage: All course related information are posted on UC Blackboard (http://blackboard.uc.edu), including course syllabus, reading assignments, lecture notes, handouts, homework assignments, codes, announcements, etc. **Visit the Blackboard frequently!!!**

Textbook: *Probability & Statistics for Engineers & Scientist, 9th edition, by Walpole, Myers, Myers, Ye.*

     Many data sets associated with the exercises are available for download from the website http://www.pearsonhighered.com/datasets.

Lab hours: SAS Software is strongly recommended for this course. Schedule for the labs on campus can be checked on http://labs.uc.edu/labHours.php.

Examination:

     Midterm 1: Wednesday **September 25**, in class.
     Midterm 2: Wednesday **October 30**, in class.
     Final Exam: Wednesday **December 11**, 1:30 pm – 3:30 pm.

- There will be 2 midterm exams during the semester (Midterm1 and Midterm 2) and the final examination (Final Exam).
- The exam dates for each exam are as specified in the above tentative schedule or as announced if there is any change (updates will be posted on the Blackboard accordingly). Exams will cover materials from **textbook, lectures and handouts.**
- All 3 examinations are **close-book**. You are allowed one sheet of notes (8.5 x 11 inches) with formulas only for each exam. There should be no worked out examples on the formula sheet.
- A calculator (no cell phone calculators or PDAs) may be brought to exams.
- There will be NO SCHEDULED MAKE-UP EXAMS. When there are unavoidable circumstances, the student must contact the instructor before the exam date. DOCUMENTATION IS REQUIRED. For medical circumstances, the student must contact the instructor with a written medical excuse document signed by a qualified professional.

Chapters Covered on Midterm 1
Chapter 10: 10.1-10.5, 10.10-10.14
Chapter 11: 11.1-11.4

Chapters Covered on Midterm 2
Chapter 11: a few questions from Midterm 1
Chapter 11: 11.5-11.8, 11.10
Chapter 12: 12.1-12.6

Chapters Covered on Final Exam
Chapter 11: one question from Midterm 1 or Midterm 2
Or
Chapter 12: one question from Midterm 2
Chapter 12: 12.8-12.11
Chapter 13: 13.1-13.4, 13.6, 13.9
Chapter 14: 14.1-14.3

Homework:

HW#1 due on **September 4**	HW#4 due on **October 9**	HW#7 due on **November 13**
HW#2 due on **September 11**	HW#5 due on **October 16**	HW#8 due on **November 27**
HW#3 due on **September 18**	HW#6 due on **October 23**	HW#9 due on **December 4**

- Homework assignments will be due as specified in the above tentative schedule or as announced if there is any change (updates will be posted on UC Blackboard accordingly);
- Homework will be assigned one week before its due date;
- Prepare your homework with problems in order, on **one side** of standard $8\frac{1}{2} \times 11$ sheets, stapled in the upper left-hand corner. Please note that your solutions need to be presented in **a clear, readable format** with sufficient details. NO CREDIT will be given to solutions lack of details or hard to read.
- Electronically handed-in homework will **not** be accepted.
- Homework assignments must be handed in **at the beginning of the class** on the due date. Do not slide them under the instructor/grader's office door or drop them off in the instructor/grader's mailbox. THEY WILL NOT BE ACCEPTED;
- No late hand-in. If extenuating circumstances exist, you must speak directly to the instructor.

Mini-project Presentation
- Each student needs to give an in-class presentation based on a real data example. The length of the presentation should be between 3-5 minutes.
- Data is collected by the student during the first week of the semester.
- Each student is *required* to meet with the instructor before the 4th week of the semester (September 16) to discuss the data and any question regarding carrying out the mini-project. The student also needs to work with the instructor to schedule the presentation date before September 20.
- The student is encouraged to discuss with the instructor about the methods and the results for the mini-project.

Tentative Schedule (as of August 26, 2013): **Please bring a calculator with you to each class. We plan to have practice problems sessions almost every week.**

Week Beginning:	Topic	Reading Assignment
August 26	Review on one- and two-sample tests of hypotheses	10.1-10.5, 10.10
September 2	Goodness-of-Fit test; Test for contingency table *No class on September 2 (Labor Day)*	10.11-10.14
September 9	Simple linear regression	11.1-11.3
September 16	Simple linear regression (continued)	11.4-11.5
September 23	Midterm 1 Review on **September 23** Midterm 1 on **September 25**	
September 30	Simple linear regression (continued)	11.6-11.7. 11.8, 11.10
October 7	Multiple linear regression *No class on October 7 (Reading Day)*	12.1-12.3
October 14	Multiple linear regression(continued)	12.4-12.6
October 21	Multiple linear regression(continued)	12.8-12.9
October 28	Midterm 2 Review on **October 28** Midterm 2 on **October 30**	
November 4	Multiple linear regression(continued) *No class on November 11 (Veterans Day)*	12.10-12.11
November 11	One-factor experiments	13.1-13.3
November 18	One-factor experiments (continued)	13.4, 13.6, 13.9
November 25	Factorial experiments	14.1-14.2
December 2	Factorial experiments (continued) Final review on **December 6**	14.3

Final Course Grade:

The upper limits for contributions to the final grade are HW (15%), mini-project (10%), Midterm 1 (20%), Midterm 2 (20%) and Final Exam (35%). The final grade will be converted to the traditional letter grade based on the following chart:

96-100: A	87-89: B+	77-79: C+	67-69: D+	<60: F
90-95: A-	83-86: B	73-76: C	63-66: D	
	80-82: B-	70-72: C-	60-62: D-	

Students should keep all returned homework and exams until they have received their final grade. It is the student's responsibility to get the homework and the exams from the instructor.

Communication

- ✓ Course announcements and materials are posted on Blackboard through the semester.
- ✓ Make good use of the instructor's office hours. Please ask the instructor's help as soon as possible if you had difficulty in the class.
- ✓ Beyond class and office hours, the best way to contact the instructor is by email (xia.wang@uc.edu). Please note the course email correspondence must be done via UC email accounts. The instructor cannot send email to any other account (i.e. gmail, hotmail, yahoo, etc.)

Classroom Etiquette:

Our goal is to have a classroom atmosphere that allows the class to learn the material without distractions. The following behaviors will help us achieve this:

- Please turn off your cell phones or set it to vibration before coming to class.
- Please arrive in class on time.
- Please do not disrupt others during class.
- Please do not leave class early unless you have to. If you plan to leave early, sit near the door so as to disturb as few people as possible.

Academic Integrity Policy:

The University Rules, including the Student Code of Conduct, and other documented policies of the department, college, and university related to academic integrity will be enforced. Any violation of these regulations, including acts of plagiarism or cheating, will be dealt with on an individual basis according to the severity of the misconduct.

Special Needs Policy:

If you have any special needs related to your participation in this course, including identified visual impairment, hearing impairment, physical impairment, communication disorder, and/or specific learning disability that may influence your performance in this course, you should meet with the instructor to arrange for reasonable provisions to ensure an equitable opportunity to meet all the requirements of this course. At the discretion of the instructor, some accommodations may require prior approval by Disability Services.

(This syllabus is subject to changes.)