

15 STAT 6032-001 (#701555)
Applied Statistics II
Spring 2013

Mondays/Wednesdays, 3:35 pm – 4:55 pm, Room 220, 60WCHARL

Instructor: *Xia Wang*
<http://homepages.uc.edu/~wang2x7>
Department of Mathematical Sciences, French Hall West 4428E
(513) 556-3295 (6-3295 from on campus phones)
xia.wang@uc.edu

Office Hours: *M/W 2:20 pm-3:20 pm; F 11:20 am -12:20 pm*

Course Description: The course covers the theory and application of analysis of variance with one-, two-, and higher-way layouts, random effects and mixed models. Mathematical and interpretational aspects of the models will be covered along with statistical estimation, confidence intervals and multiple hypothesis testing. SAS statistical software will be used. Specific topics include: ANOVA for some standard experimental designs.

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

Textbook: *Design and Analysis of Experiments*, 8th Edition, D. C. Montgomery, Wiley
The supplemental text material and data sets from the book examples and homework problems can be found at: <http://www.wiley.com/college/montgomery>
SAS Software is strongly recommended for this course. Schedule for the labs on campus can also be checked on <http://labs.uc.edu/labHours.php>.

Exam dates

Midterm 1 Monday **February 11**, in class

Midterm 2 Monday **March 11**, in class

Final Exam Wednesday **April 24**, 2:15 pm – 4:15 pm.

Homework due dates

HW#1 January 28	HW#5 March 25
HW#2 February 4	HW#6 April 1
HW#3 February 25	HW#7 April 8
HW#4 March 4	HW#8 April 15

Tentative Schedule (as of December 24, 2012):

Week Beginning:	Topic	Reading Assignment
January 7	Experiments with a Single Factor	Chapter 1; Chapter 2 (Review); Chapter 3: 3.1-3.6; 3.8-3.9
January 14		
January 21		
January 28	Randomized Block, Latin Squares, and Related Designs	Chapter 4: 4.1-4.4
February 4	The Two-Factor Factorial Design	Chapter 5: 5.1, 5.2, 5.3, 5.4, 5.6
February 11	The 2 ^k Factorial Design	Chapter 6: 6.2-6.5
February 18		
February 25	Blocking and Confounding in the 2 ^k Factorial Design	Chapter 7: 7.2-7.8
March 4		
March 11	The One-Half Fraction of the 2 ^k Design	Chapter 8: 8.2
	Midterm 1 February 11	
	Midterm 2 March 11	
March 18	<i>Spring Break</i>	
March 25	Experiments with Random Factors	Chapter 13: 13.1-13.3; 13.5-13.7
April 1		
April 8	Nested and Split-Plot Designs	Chapter 14: 14.1-14.4
April 15		
April 22	Final Exam Week	
	Final Exam April 24 2:15 pm – 4:15 pm	

Homework:

- 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 8½×11 sheets, stapled in the upper left-hand corner;
- Electronically handed-in homework is **not** 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.

Examinations:

- There will be two midterms during the semester (Midterms) and the final examination (Final Exam).
- The Final Exam is cumulative. The chapters to be covered in Midterm 1 and Midterm 2 will be announced before the examination date.
- The examination dates are as specified in the syllabus or as announced if there is any change (updates will be posted on UC Blackboard accordingly). **Exams will cover materials from the textbook, lectures and handouts.**
- All three examinations (Midterms and Final Exam) are **close-book**.
- A calculator (no cell phone calculators or PDAs) may be brought to exams.
- There will be **NO SCHEDULED MAKE-UP** examinations (including the Midterms and the Final Exam). When there are unavoidable circumstances, the student must contact the instructor **before** the examination date. **DOCUMENTATION IS REQUIRED.** For medical circumstances, the student must contact the instructor with a written medical excuse document signed by a qualified professional.

Final Course Grade:

The upper limits for contributions to the final grade are HW (25%), 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 work until they have received their final grade. It is the student's responsibility to get the graded homework and the exams from the instructor.

Electronic Communication

Course announcements and materials are posted on Blackboard through the semester. 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.)