

15 STAT 533-001 (#405405)

Analysis of Variance

Spring 2012

Mondays/Wednesdays, 3:00 pm – 4:15 pm, Room 140, 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: *Mondays/Wednesdays 1:00 pm -2:45 pm or by appointment*

Course Description: ANOVA for some standard experimental designs and unbalanced designs. Multiple comparisons. Nested designs. Repeated measures designs. The analysis of covariance.

Bok area: QR (Quantitative Reasoning)

Prerequisites: Applied Regression Analysis (15 STAT 532)

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, SAS codes, announcements, etc. **Visit it frequently!!!**

Text: *Applied Linear Statistical Models (with CD), 5th edition, by Kutner, Nachtsheim, Neter and Li*

The *Student Solutions Manual* and all the data files on the compact disk can be downloaded from the book's website at: www.mhhe.com/kutnerALSM5e.

Lab hours: SAS Software is strongly recommended for this course. Computer Lab 120 at 60 West Charlton (Sander Hall) is scheduled to open at 7 am and close at 10 pm, M – F. Schedule for the labs on campus can also be checked on <http://labs.uc.edu/labHours.php>.

Exam dates

Wednesday **April 25**, 3:00 pm- 4:15 pm.

Wednesday **June 6**, 2:15 pm – 4:15 pm.

Homework due dates

HW#1 due on April 9	HW#5 due on May 14
HW#2 due on April 16	HW#6 due on May 21
HW#3 due on April 23	HW#7 due on May 30
HW#4 due on May 7	

Tentative Schedule (as of May 14, 2012):

Week Beginning:	Topic	Reading Assignment
Mar. 26	Introduction to the Design of Experimental and Observational Studies Single-Factor Studies (I)	Chapter 15: 15.1-15.4 Chapter 16: 16.3-16.7
Apr. 2	Single-Factor Studies (II)	Chapter 17: 17.1-17.7
Apr. 9	Single-Factor Studies (II) (continued) Single-Factor Studies (III) Two-factor Studies with Equal Sample Sizes	Chapter 18: 18.1-18.3, 18.5 Chapter 19: 19.1-19.9
Apr. 16	Two-factor Studies with Equal Sample Sizes (continued) Two-factor Studies- One Case per Treatment Randomized Complete Block Designs	Chapter 20: 20.1-20.2 Chapter 21: 21.1-21.5
Apr. 23	Randomized Complete Block Designs (Continued)	
Apr. 30	Analysis of Covariance Two-factor Studies with Unequal Sample Sizes	Chapter 22: 22.2-22.4 Chapter 23: 23.1-23.4
May 7	Random and Mixed Effects Models	Chapter 25: 25.1-25.4
May 14	Nested Designs	Chapter 26: 26.1-26.5
May 21	Repeated Measures Designs	Chapter 27: 27.1-27.4
May 28	Repeated Measures Designs (continued)	

Homework:

- 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 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 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 one examination during the quarter (Midterm) and the final examination (Final Exam).
- The exam dates for each exam 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 textbook, lectures and handouts.**
- Both 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.

Final Course Grade:

The upper limits for contributions to the final grade are HW (25%), Midterm (35%) and Final Exam (40%).

The traditional letter grades will be used: 90% and up=A(or A-), 80-89%=B(+/-), 70-79%=C(+/-), 60-69%=D(+/-), and Below 60%=F.

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.

Electronic Communication

Course announcements and materials are posted on Blackboard through the quarter. Beyond class and office hours, the best way to contact the instructor is by email (xia.wang@uc.edu).

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.)