STAT 6042-001 (1251)
Survival Analysis and Logistic Regression
Spring 2014

Mondays/Wednesdays/Fridays, 11:15 am – 12:10 pm, Room 270, 60WCHARL

Instructor: **Xia Wang**
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Office Hours: **Mondays** *12:20 pm-1:20 pm*
Wednesdays *10:00 am-11:00 am* and *12:20 pm-1:20 pm*

Course Description: The course covers basic concepts, models, methods, theories, and applications in survival analysis and logistic regressions. Both parametric and nonparametric methods are discussed. Logistic regression model is introduced in the framework of the generalized linear regression model. Both R and SAS statistical softwares will be used.

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: Lee and Wang, STATISTICAL METHODS FOR SURVIVAL DATA ANALYSIS, 4th edition, Wiley

Allison, SURVIVAL ANALYSIS USING THE SAS SYSTEM (OPTIONAL), 2nd edition, SAS Institute Publishers

R can be freely downloaded from http://www.r-project.org. Lab schedule for SAS Software on campus can be checked on http://labs.uc.edu/labHours.php.

Exam dates

Midterm
Wednesday **February 26,** in class

Final Exam
Monday **April 21**, 9:45 -11:45 am.

Homework due dates

HW#1 January 24	HW#5 April 2
HW#2 February 7	HW#6 April 9
HW#3 February 21	HW#7 April 16
HW#4 March 12	

Tentative Schedule (as of February 23 , 2014):

Week Beginning:	Topic	Reading Assignment
January 6	Concepts and Analysis of Survival Data	LW: Ch1, Ch2
January 13	Estimating Survival Functions: Nonparametric Methods	LW: Ch4: 4.1-4.4
January 20	Comparing Survival Distributions: Nonparametric Methods *No class on January 20 (Dr. Martin Luther King Jr.'s Birthday)*	LW: Ch5 5.1-5.3
January 27	Parametric Survival Distributions	LW: Ch6: 6.1-6.2
February 3		LW: Ch7: 7.1-7.3
February 10	Goodness-of-Fit and Model Selection	LW Ch8: 8.1-8.3, 8.4
February 17	Comparing Survival Distributions: Parametric Methods	LW Ch9: 9.1-9.2
February 24	*Midterm on Wednesday February 26*	
March 3	Regression Models for Survival Analysis	LW Ch10 10.1-10.4
March 10	Cox Proportional Hazard Model	LW Ch11 11.1-11.5
March 17	*Spring Break* ☺	
March 24		
March 31	Non-Proportional Hazards Models	LW Ch12 12.1-12.2
April 7	Logistic Regression Model	LW Ch13 13.1-13.2
April 14	*Review on Friday April 18*	
April 21	Final Exam Week *Final Exam April 21 9:45-11:45 am*	

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 $8\frac{1}{2} \times 11$ 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's mailbox. THEY WILL NOT BE ACCEPTED;
- No late hand-in. If extenuating circumstances exist, you must speak directly to the instructor.
- ANY COPYING WILL RESULT IN 0 POINTS FOR BOTH STUDENTS.

Examinations:
- There will be one midterm during the semester (Midterm) and the final examination (Final Exam).
- The Final Exam is cumulative. The chapters to be covered in Midterm 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**.
- Midterm and Final Exam are **open book**.
- A watch and a calculator may be brought to exams (no cell phone calculators or PDAs). No other electronic device is allowed during the exam.
- There will be NO SCHEDULED MAKE-UP examinations (including the Midterm 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 (30%), Midterm (30%), and Final Exam (40%). 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.

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.)