Department of Epidemiology and Biostatistics
College of Public Health
University of Georgia
BIOS 6380
Survival Analysis
Spring 2008

Time: Tuesday & Thursday, 2:00-3:15 pm
Location: 141 Coverdell

Instructor: Xiao Song
Office: 129c Coverdell
Email: xsong@uga.edu
Tel: (706) 542-1540
Office hours: Tuesday, 3:30-4:30 pm, or by appointment

Course Prerequisite: BIOS 7020 and STAT 6510 or equivalents

Course Resources:

- Textbook (optional): Survival Analysis: Techniques for Censored and Truncated Data, by John P. Klein and Melvin L. Moeschberger (2003, 2nd Ed.).
- References:
  - The Statistical Analysis of Failure Time Data, by John D. Kalbfleisch and Ross L. Prentice (2002, 2nd Ed.);
  - Modeling Survival Data: Extending the Cox Model, by Terry M. Therneau and Patricia M. Grambsch (2000).
  - Modeling Survival Data in Medical Research, by D. Collett;
  - Survival Analysis Using the SAS System: A Practical Guide, by P.D.Allison.
- Software: SAS
- Lecture notes and announcements will be posted on WebCT.

Course Description:

Introduction to a variety of statistical tools for the analysis of survival data, including parametric and nonparametric estimation of survival distribution, and semiparametric regression models.

Course objectives:

Students completing this course should be able to use appropriate tools to analyze survival data, implement the methods using SAS, and interpret the results.

Topical Outline

- Concepts of censoring and truncation
- Basic quantities for describing the distribution of survival data
- Parametric methods for fitting the survival data
- Nonparametric estimation method (eg. Kaplan-Meier estimates).
- Semiparametric method for regression problems (eg. Cox proportional hazards model).

Exams:

- Midterm (in class, open notes, Feb 28 or Mar 4)
- Final (in class, open notes, Thu, May 1, 3:30 - 6:30 pm)

  You must contact the instructor in advance if you are unable to take an exam at its scheduled time. Arrangements may then be made for a make-up exam.

Homework

- There is roughly one homework assignment every two weeks.
- For all assignments requiring the use of the computer, SAS codes and output should be printed and attached. However, all answers are to be given on a *separate* sheet of paper.
- You should turn in your homework in time. **No late homework will be accepted**.
- In general, only hard copy of the homework is accepted. You can drop it in my office if you cannot make the class. Under special circumstances, you may e-mail me the homework in a read-to-print PDF format. Microsoft Word files are unacceptable (often the files cannot be opened or mal-formatted or the figures do not show up or something else).

Grades:

- Homework: 20%
- Midterm: 30%
- Final: 50%

Make-Up Policy:

Make-up exams: Generally, there are no make-up exams for this course. Make-up exams will only be offered on an individual basis and only due to personal emergencies. The student must contact the instructor before exam time in order to schedule a make-up exam.

Academic Honesty:

All academic work must meet the standards contained in "A Culture of Honesty." All students are responsible to inform themselves about those standards before performing any academic work. More detailed information about academic honesty can be found at http://www.uga.edu/ovpi/honesty/acadhon.htm.

Students with Disabilities:

Students with disabilities who require reasonable accommodations in order to participate in course activities or meet course requirements should contact the instructor or designate during regular office hours or by appointment.

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.