

STAT 5179
Applied Survival Analysis
Spring 2019

Instructor: Hongyuan Cao, Ph.D., OSB 208B (hcao@fsu.edu).

Office hours: M/W 2:30pm–3:30pm or by appointment.

Department contact: Ms. Danice Stetson, 850-644-3218, danice.stetson@stat.fsu.edu.

Course website: Notes and other materials will be posted over time to the course canvas website.

Times and Place: Monday, Wednesday 3:35pm–4:50pm, OSB0110. Other on-campus events (seminars, etc) may be recommended as additions or substitutes for class meetings.

Prerequisites: Introductory statistics course (STAT 4321, or similar) and STAT 5106 (Computational methods in statistics I, or equivalent), and ability to use a computer. The *STATA* statistical package will primarily be used for worked examples, but students are free to use other software.

Description: This course will provide a comprehensive introduction to the principles and methods for the analysis of time to event data. This type of data is encountered frequently in both observational and experimental biomedical and public health research, as well as in ecology, social science, and industrial research problems. While the theoretical basis for the methodology will be discussed, the primary focus of the course will be on data analysis and interpretation of results, with numerous examples primarily from the biomedical and public health setting.

Format: The course will be primarily conducted via lectures. Students may occasionally present readings or solutions for homeworks, with discussion by all.

Other Course Activities: A number of other opportunities to learn about survival analysis methods and uses may arise around the campus. To take advantage of this resource, specific lectures may be recommended for attendance.

Texts: (University Bookstore)

Required:

Klein J, Moeschberger M *Survival Analysis: Techniques for Censored and Truncated Data*, 2nd edition, 2003. New York: Springer.

Reference:

Hosmer D and Lemeshow S. *Applied Survival Analysis: Regression Modeling of Time to Event Data*. 1999. New York: Wiley.

Kalbfleisch JD and Prentice RL. *The Statistical Analysis of Failure Time Data*. 2002. New York: Wiley.

Other readings: Selected methodological and applications articles for class discussion may be provided.