INSTRUCTOR NAME: Michael J. Haber, PhD

INSTRUCTOR CONTACT INFORMATION: Office – GCR Building, room 354. Phone: 404-727-7698. E-mail: mhaber@emory.edu

OFFICE HOURS: Mondays 12:00 – 1:00 pm or by appointment.

BRIEF COURSE DESCRIPTION: Presents modern statistical methods used to analyze time-to-event data. Provides background theory, but emphasis is on using methods and interpreting results. Methods include Kaplan-Meier curves, the logrank test, Cox regression, model-fitting strategies, model interpretation, stratification, time-dependent covariates, and introduction to parametric survival models. Computer software for survival data analysis is discussed and demonstrated.

LIST SCHOOL LEVEL, DEPARTMENT, AND/ OR PROGRAM COMPETENCIES

School-level competencies

Use analytic reasoning and quantitative methods to address questions in public health and population-based research

Department competencies

Apply existing statistical theory and methods to a broad range of medical or public health problems
Conduct of appropriate statistical analyses for a broad range of applications
Communicate the results of statistical studies both orally and in writing to other investigators

ACADEMIC HONOR CODE

The RSPH requires that all material submitted by a student in fulfilling his or her academic course of study must be the original work of the student.
LIST LEARNING OBJECTIVES ASSOCIATED WITH THE COMPETENCIES

- Students will understand the basic theoretical concepts underlying survival analysis.
- Students will learn to analyse survival data using the most important statistical techniques, such as the Kaplan Meier method, the logrank test and Cox regression.
- Students will learn to use computer software packages, such as SAS and R, to analyze real-life survival data.
- Students will learn to interpret the results of their analyses and communicate them to researchers from other medical and health-related fields.

EVALUATION

Homework --- 20%
Mid-term exam --- 20%
Final exam --- 30%
Final project --- 30%