

Courses Taught

[BST.C501 Biostatistical Methods \(3\)](#)

This course introduces the basic principles and methods of biostatistics, sampling, and study design. Emphasis is on fundamental concepts and techniques of descriptive and inferential statistics with applications in basic science and clinical research, public health, and epidemiology. The core content includes sampling theory; research design; basic statistics including probability, descriptive statistics, inferences for means and proportions; and regression methods. Multivariable methods are introduced. The analytic methods and applications will be linked to topics developed in advanced coursework and epidemiology and biostatistics.

[BST.C520 Survival Data Analysis \(3\)](#)

This course treats statistical methods for analyzing survival data derived from laboratory, clinical, and epidemiological studies of humans. Both parametric and nonparametric approaches are presented. Focus is on practical applications of these methods to clinical and epidemiological research. SPSS and SAS statistical packages will be used for analysis.

[BST.C521 Categorical Data Analysis \(3\)](#)

Prerequisite: BST.C510 or BST.C511 (or concurrent), or permission of Instructor. This course introduces the theory and application of methods for categorical data, with emphasis on biomedical and social science applications. The course will cover the following topics: analysis of two-way, three-way, and higher dimension contingency tables using log-linear model, measures and tests of association for nominal and ordinal tables, logistic regression, weighted least squares, generalized linear models, and the use of computer software analyzing categorical data.

[BST.C522 Longitudinal Data Analysis \(3\)](#)

This course provides an applied introduction to modern statistical methods in the context of growth curve modeling and focuses on practical aspects of longitudinal data analysis rather than on theoretical derivations. Students will learn how to choose appropriate analysis methods for a given application problem. Upon successful completion of this course, the students should be able to understand the mechanisms of longitudinal (or repeated measures of) outcome data; formulate a statistical problem from a real application; identify appropriate methods for the problem at hand; understand the strength and limitation of the methods chosen; use common software to conduct data analyses; and correctly interpret results.