CTSC 5610
Introductory Statistical Methods II

Faculty: Felicity T. Enders, Ph.D.
Credits: 3
Quarter: Fall
Prerequisites: CTSC 5600 and 5601

This course is required for the CTS Postdoctoral Master’s Degree program.

Overview
This course provides an introduction to methods for statistical modeling. Specific topics covered include simple linear regression and multiple linear regression and introduces some extensions of these methods such as logistic regression and Cox regression. General concepts taught include graphical methods, descriptive statistics, and statistical inference. Particular attention is given to verification of model assumptions, interpretation, and generalization of results. The course is a combination of lectures and computer labs; assignments require the use of statistical software (JMP).

Objectives
- To correctly utilize and interpret continuous, binary, and categorical predictor variables in linear regression
- To assess a covariate as either a predictor or as a confounder or effect modifier of another variable’s association with the outcome
- To describe and verify the assumptions underlying linear regression
- To correctly interpret continuous, binary, and categorical predictor variables in logistic and Cox regression

Evaluation
The final grade for this course will be based on student participation during lecture discussion and computer lab sessions, homework assignments based on the computer lab sessions, a midterm exam, and a comprehensive final exam.

Students are expected spend approximately six to eight hours per week on this 3-credit course.

Additional online modules related to this topic are available on the Continuous Professional Development website.

For specific dates and times this course is provided, please see the quarterly detailed course schedule.