STAT 4120: Applied Experimental Design

3 Credit Hours

Prerequisite: STAT 3130

Methods for constructing and analyzing designed experiments are the focus of this course. The concepts of experimental unit, randomization, blocking, replication, error reduction, and treatment structure are introduced. The design and analysis of completely randomized, randomized complete block, incomplete block, Latin square, split-plot, repeated measures, factorial, and fractional factorial designs will be covered. Statistical software will be utilized.

STAT 4125: Analysis of Human Studies

3 Credit Hours

Prerequisite: STAT 3130

Real-world human-subject data will be used as students conduct official clinical research in a secure computer lab. Students will complete required institutionally approved training for research on human subjects and information privacy and security. Using statistical software, students will apply statistical analysis and modeling techniques to answer questions posed by clinicians. Students will document research for reproducibility and potential publication, as well as present results in various forms.

STAT 4210: Applied Regression Analysis

3 Credit Hours

Prerequisite: STAT 3130

This course is designed to provide students with various regression procedural methods, including simple linear and multiple regression models. Students will diagnose multicollinearity, identify outliers and influential observations, and assess assumptions to create and validate models. Other topics will include parameters inferences, variable transformations, and qualitative predictors.

SA 2290: Lower-division Study Abroad

0-9 Credit Hours

Prerequisite: Varies with discipline and subject.

Lower division study abroad course denoting freshman, sophomore level work.