COURSE DESCRIPTIONS

STATISTICS

STAT 5113: Categorical Data Analysis

Offered: Fall

Statistical tools to analyze univariate and multivariate categorical responses. Emphasis is given to Generalized Linear Models, including logistic regression and loglinear models.

STAT 5153: Experimental Design Analysis

This course introduces students to both design and analysis of experiments as well as statistical computing. Emphasis is given to develop an understanding of experimental methods and major experimental designs. Students will be required to design and carry out an experiment, use a current statistical software package to analyze the data, and make inferences based upon the analysis.

STAT 5383: Machine Learning

Offered: Fall

The focus of the course is an accessible overview of the field of machine learning and provide the students with valuable hands-on experience by illustrating how to implement each of the machine learning methods using Python. Topics covered include Decision Tree, Support Vector Machines, and the kernel methods, AdaBoost and GBDT method, Logistic regression, and neural network, and more.

STAT 5393: Statistical Learning

Offered: Spring

This course is directed towards advanced undergraduates or master's students in statistical or related quantitative fields. The focus of the course is an accessible overview of the field of statistical learning and provide the students with valuable hands-on experience by illustrating how to implement each of the statistical learning methods using R or other statistical programming language. Topics covered include: regression techniques, classification methods, linear model selection and regularization, unsupervised learning, and more.