

ADVANCED DATA ANALYTICS (IAA)

IAA 621 Statistical Computing 3

Statistical methods requiring significant computing or specialized software. Simulation, randomization, bootstrap, Monte Carlo techniques; numerical optimization. Extensive computer programming involved. This course does not cover the use of statistical software packages.

IAA 622 Complex Data Analysis 3

Methods for modeling and understanding complex data. Topics include linear regression models for sparse and high dimensional data sets, nonlinear models, tree-based methods, and clustering methods.

Prerequisites: Permission of instructor.

Notes: Same as STA 622.

IAA 623 Categorical Data Analysis 3

Methods for analyzing dichotomous, multinomial and ordinal responses. Measures of association; inference for proportions and contingency tables; generalized linear models including logistic regression and loglinear models.

Prerequisites: STA 602 or permission of instructor.

IAA 689 Capstone Project in Advanced Data Analytics 3

Capstone course. Students work with local industries and nonprofit organizations to solve important data science problems under the supervision of a mentor.