MATH 4430/8436:
Applied Linear Models

TR 4:00 PM – 5:15 PM | On-Campus | Dr. Steven From

Topic description: A basic introduction to linear models. Linear modeling is concerned with making inferences about a response variable based upon knowledge of the values of other variables called predictor variables.

Software: R software will be used for 90% of the class, and is freely downloadable. SAS or Minitab will be used for 10% of the class, and is freely available on campus.

Pre-requisites: MATH 4750/8756 with a C- or better or STAT 3800/8806 with a C- or better, or instructor permission based on students having taken a basic statistics course with a grade of C- or better and having at least a basic knowledge of calculus.

Textbook: *Applied Linear Statistical Models,* McGraw Hill Create Books

Official course content description: This is an introduction to linear statistical models which will include: simple linear regression models, multiple linear regression models, ANOVA models including one-way ANOVA, randomized block design and other designs. Also, logistic regression models, Poisson regression models. Some necessary linear algebra and mathematical statistics ideas will be covered in the course also. If time allows, some mixed models and/or survival models. Much use of computer software will be made.

Grading: Students will be graded based on homework, a midterm, and a final exam.
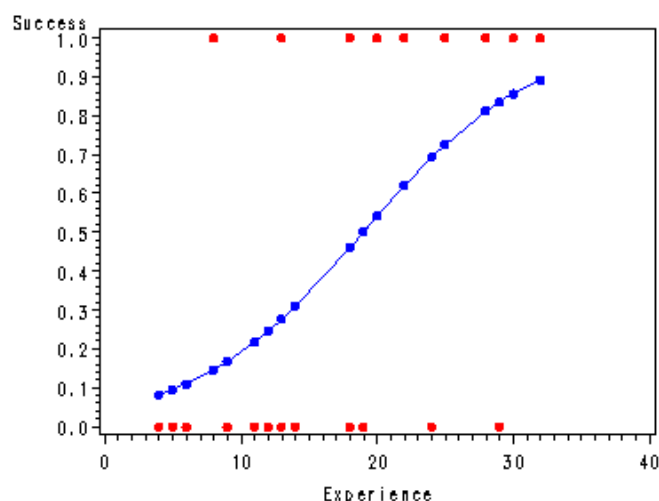
Topics will include:

- Simple Linear Regression

- Multiple Linear Regression

- Logistic Regression

- ANOVA Models

- Poisson Regression

For More Information:

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