A. Course Description

Credits: 4

Prerequisites: STAT 201 Statistics I or equivalent. Familiar with statistical software.

Lab Hours/ Weeks: Corequisites: None

Lecture Hours/ Week:

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning, Goal LS - Upper Division Liberal Studies

This course covers fundamental to intermediate regression analysis. The course builds on the ideas of hypothesis testing learned in STAT201 (Statistics I). The focus is on learning new statistical skills and concepts for real-world applications. Students will use statistical software to do the analyses. Topics include simple and bivariate linear regression, residual analysis, multiple linear model building, logistic regression, the general linear model, analysis of covariance, and analysis of time series data. Completion of STAT201 (Statistics I) is a prerequisite.

B. Course Effective Dates: 05/04/2011 - Present

C. Outline of Major Content Areas:

See Course Description for major content areas.

D. Learning Outcomes (General)

1. Communicate understanding of analysis results through clearly written conclusions summarizing the results of the statistical models when applied to specified data sets.
2. Demonstrate the ability to appropriately select among different regression models for hypothesis testing, including data production design, in the context of answering questions about representative real-world problems.
3. Understand and learn to interpret a more advanced set of statistical models and hypothesis testing techniques (than covered in STAT 201) such as simple and multiple linear regression models, residual analysis, and time series analysis.

E. Learning Outcomes (MN Transfer Curriculum)

Goal 04 - Mathematical/Logical Reasoning
1. Apply higher-order problem-solving and/or modeling strategies.
2. Clearly express mathematical/logical ideas in writing.
3. Illustrate historical and contemporary applications of mathematical/logical systems.
4. Explain what constitutes a valid mathematical/logical argument (proof).

Goal LS - Upper Division Liberal Studies
None

G. Special Information

None