Syllabus
STAT656 - APPLIED ANALYTICS

Prerequisites: 641 or 651

COURSE DESCRIPTION/OVERVIEW
This course is an introduction to the general concepts and methodologies associated with Data Mining and Analytics Modeling. Data Mining is the modeling and analysis of data, usually very large datasets, for decision making. Although several software packages used for Data Mining will be reviewed and compared, the primary concepts will be illustrated using SAS Enterprise Miner. Models discussed include neural networks; multiple and logistic regression; decision trees; and clustering algorithms. Standards for making decisions about optimal models will also be discussed.

COURSE LEARNING OBJECTIVES
By the end of this course will students will be able to:

• Investigate data sets, identifying appropriate transformations, creating new variables, and interpolating missing values
• Identify and fit appropriate data mining models, such as multivariate regression, logistic regression, neural networks, cluster analysis and decision trees
• Interpret data mining models in context
• Distinguish between data mining problems involving forecasting and classification
• Assess data mining models for usefulness, predictive value, and financial gain