

# Minnesota State University Moorhead

## MGMT 433: Business Intelligence Using Data Mining

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: \*.\*

Prerequisites:

This course requires the following prerequisite

MATH 234 - Introduction to Probability and Statistics

Corequisites: None

MnTC Goals: None

Businesses are collecting and storing vast amount of data. Business intelligence (data mining) techniques are used to turn business data into valuable information and generate business intelligence, helping organizations to make effective decisions. This course will provide an understanding of various data mining techniques such as association rules, clustering, classification techniques, etc. and how to use data mining techniques to transform large and complex data into actionable information. The data mining techniques will be examined in the context of business applications such as marketing, e-commerce, finance, and retailing. (Same as MKTG 433)

**B. COURSE EFFECTIVE DATES:** 08/23/2010 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Introduction of Business Intelligence and Data Mining
2. Accessing and Assaying Prepared Data
3. Variable Selection and Transformation
4. Decision Tree Models
5. Regression Models
6. Artificial Neural Network Models
7. Model Comparison
8. Model Implementation
9. Cluster Analysis/Segmentation

#### **D. LEARNING OUTCOMES (General)**

1. Describe business intelligence, data mining and business decision making context for data mining techniques.
2. Access and assay prepared data
3. Select and transform variables
4. Describe the theoretical foundation and practical application of various key data mining techniques such as decision trees, classification, regression, neural network, etc.
5. Build, analyze and interpret decision tree models
6. Build, analyze and interpret linear regression and logistic regression models
7. Build, analyze and interpret artificial neural network models.
8. Build, analyze and interpret cluster analysis/segmentation models
9. Compare the performance of different predictive models
10. Implement the selected model to score a new data set
11. Make strategic recommendations for managerial actions based on data mining results
12. Utilize advanced data mining software such as SAS enterprise miner to analyze business data

#### **E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

None

#### **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

#### **G. SPECIAL INFORMATION**

None noted