

**University of Arkansas – Fort Smith
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General Syllabus

MGMT 3513 Business Analytics

Credit Hours: 3 Lecture Hours: 3

Prerequisite: Admission to the College of Business or consent of instructor

Effective Catalog: 2020-21

I. Course Information

A. Catalog Description

An introduction to the concepts and tools of analytics to gain insights and improve the quality of decisions. Covers descriptive, predictive, and prescriptive analytics, and exposes students to data manipulation and modeling for managerial decision-making.

II. Student Learning Outcomes

B. Subject Matter

Upon successful completion of this course, the student will be able to:

1. Appraise the scope of management problems that can be addressed with models.
2. Identify the essential conceptual structure of a decision/planning problem.
3. Evaluate the types of modeling tools most adapted to a given situation.
4. Apply appropriate analytic tools and techniques to resolve complex business problems in various industry sectors and domains.
5. Develop competency in the visualization and analytics software.

C. University Learning Outcomes

This course enhances student abilities in the following areas:

Communication Skills (written and oral)

Students will effectively communicate the result of data analysis with the targeted audience.

Analytical Skills**Critical Thinking Skills**

Students will identify problems and apply appropriate analytical tools to develop solutions.

Analytical Skills**Quantitative Reasoning Skills**

Students will analyze data, and create models and draw scientific inferences.

III. Major Course Topics

- A. Introduction of prescriptive, predictive, and descriptive analytics.
- B. Data preparation
- C. Data visualization
- D. Linear regression
- E. Time series
- F. Qualitative analysis
- G. Spreadsheet models
- H. Linear optimization models
- I. Monte Carlo simulation
- J. Decision analysis