

Master Syllabus

CIS 2269 - Data Analytics Theory & Solutions

Division: Business and Public Services

Department: Computer Information Systems

Credit Hour Total: 3.0

Lecture Hrs: 3.0

Prerequisite(s): CIS 2165 AND MAT 2170

Date Revised: February 2014

Course Description:

An introduction to business intelligence, data analysis, data warehousing, data mining theory and tools, and how to structure the data and prepare reports in a way that is meaningful to business users. Emphasis is placed upon understanding business intelligence techniques to construct and use business intelligence solutions for decision support.

General Education Outcomes:

- ▣ Critical Thinking/Problem Solving Competency
- ▣ Oral Communication Competency

Course Outcomes:

Business intelligence concepts and architecture

Describe the business intelligence methodology and concepts and relate them to decision support. Define and describe the components and architecture of business analytics, the benefits and application.

Assessment Method: Locally developed exams

Performance Criteria: 70% or higher on a standard rubric

Data mining & Online Analytical Processing (OLAP) tools

Describe data mining and develop a data mining project. Describe how online analytical processing, data visualization, and multidimensionality can improve decisions.

Assessment Method: Performance appraisals

Performance Criteria: 70% or higher on project rubric

Data warehousing

Explain data warehousing architectures, processes and operations.

Assessment Method: Performance appraisals

Performance Criteria: 70% or higher on project rubric

Business performance management

Define and describe business performance management including scorecards, Six Sigma and dashboards.

Assessment Method: Locally developed exams

Performance Criteria: 70% or higher on standard rubric

Statistical modeling

Develop a software statistical modeling project and present the solution.

Assessment Method: Performance appraisals

Performance Criteria: 70% or higher on project rubric

Outline:

Business intelligence concepts and methodology
Business intelligence architecture and components
Data analytics benefits and application
Data warehousing operations
Data analytics, data mining and Online Analytical Processing (OLAP) tools
Business Performance Management
Software statistical modeling and presentation