

## 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

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#### 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