



## Course Outline

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Management, Information and Supply Chain  
School of Business & Economics MIST  
3630 - **3.00** - Academic

Data and Knowledge Management

## Rationale

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## Calendar Description

Students develop a theoretical and practical understanding of how to manage two of the most important assets of an organization: data and knowledge. Students examine issues related to the analysis, development, maintenance, and retention of information required for various organizational needs, and learn the fundamentals of how to implement solid knowledge management practices. Topics include an overview of data and knowledge management, modeling data in the organization, logical database design and the relational model, physical database design, data processing for business intelligence, data analysis and reporting, and managing organization data and knowledge.

## Credits/Hours

**Course Has Variable Hours:** No

**Credits:** 3.00

**Lecture Hours:** 3.00

**Seminar Hours:** 0

**Lab Hours:** 0

**Other Hours:** 0

*Clarify:*

**Total Hours:** 3.00

**Delivery Methods:** (Face to Face)

**Impact on Courses/Programs/Departments:** .

**Repeat Types:** -

**Grading Methods:** (S - Academic, Career Tech, UPrep)

## Educational Objectives/Outcomes

1. Understand the key role of data management in business operations and strategic decision making.
2. Describe enterprise-wide data models.
3. Develop logical database models.
4. Use data warehousing and mining techniques to support decision making.

5. 5. Represent data and knowledge using a variety of reporting tools.
6. 6. Identify organizational knowledge management goals and needs.
7. 7. Manage different sources of organizational knowledge.

## **Prerequisites**

CMNS 1290-Introduction to Professional Writing  
MIST 2610-Management Information Systems

## **Co-Requisites**

## **Recommended Requisites**

## **Exclusion Requisites**

## **Texts/Materials**

### **Other**

1. **Required** Hoffer, Jeffrey, Ramesh, V., Topic, Heikki, Modern Database Management, 4rd Edition, Prentice Hall.
2. **Required** Pasher, Edna, Ronen, Tuvya, The Complete Guide to Knowledge Management: A Strategic Plan to Leverage Your Company's Intellectual Capital, 1st Edition, Wiley.
3. **Required** CuBoughzala, Imed, Duzdert, Aurelie, Knowledge Management 2.0: Organizational Models and Enterprise Strategies, 1st Edition, IGI Global.

## **Student Evaluation**

The Course grade is based on the following course evaluations.

Participation 0%-10% Tests/Quizzes 20%-30% Case Studies/Research Projects/Assignments 20%-30% Final Exam 30%-45% Students must pass the final exam to pass the course. (100.00%)

## **Course Topics**

## 1. An Overview of Data and Knowledge Management

- What is Data Management?
- What is Knowledge Management?
- What is Data Modeling?
- Traditional File Processing Systems
- Evolution of Database Systems
- Data Definition and Naming Conventions

## 2. Modeling Data in the Business

- Overview of the Entity-Relationship Model (E-R Model)
- Modeling the Business Rules of the Organization
- Data Names and Definitions
- Modeling Entities and Attributes
- Modeling Relationships
  - Degree of a Relationship
  - Cardinality Constraints
- Overview of the Object-Oriented Data Model

## 3. The Logical Database Design and the Relational Model

1. Transforming E-R Diagrams into Relations
2. Functional Dependencies and Normalization
3. Merging Relations

#### 1. Data Processing for Business Intelligence

- Data Warehousing
- Data Mining
- Managing Data Exchange

#### 1. Data Analysis and Reporting

- Reporting Systems
- Data Visualization
- Big Data Analysis

#### 1. Managing Business Data and Knowledge

- Determining Organizational Knowledge Management Goals and Needs
  - Transaction Management
  - Maintaining Data Quality
  - Data Integration and Protection
  - Cloud Data Storage

#### 1. Business and Data and Knowledge Management

- The Impact of Web on Knowledge Management
- Social Networks and Knowledge Management
- Locating Information Sources in the Organization
- Compiling and Circulating the Knowledge
- Knowledge Creation and Sharing
- Knowledge Management Resources and Tools

## **Methods for Prior Learning Assessment and Recognition**

As per TRU Policy

Current Date: 29-Oct-20