MASTER SYLLABUS

CITA/MINS 315 – DECISION SUPPORT SYSTEMS

Created by: Charles Fenner
Updated by: Eric Cheng
A. **TITLE**: Decision Support Systems

B. **COURSE NUMBER**: CITA/MINS 315

C. **CREDIT HOURS**: (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity)

   # Credit Hours: 3
   # Lecture Hours: 3 per week
   # Lab Hours: per week
   Other: per week

   Course Length: 15 Weeks

D. **WRITING INTENSIVE COURSE**: No

E. **GER CATEGORY**: No

F. **SEMESTER(S) OFFERED**: Fall/Spring

G. **COURSE DESCRIPTION**: The course provides insights into customer life-cycle management, customer lifetime value, and measuring customer profitability. This course enables the student to turn raw data into information to help an organization’s managers make decisions. Students will develop decision making analytical models to provide organizational leaders with potential outcomes and their effects. Students will study the network's role in distributed systems, distributed systems development tools, and distributed systems issues. Students will apply data mining techniques supporting knowledge management decisions.

H. **PRE-REQUISITES/CO-REQUISITES**:

   a. Pre-requisite(s): CITA/MINS 300 Management Information Systems
   b. Co-requisite(s): None

I. **STUDENT LEARNING OUTCOMES**:

<table>
<thead>
<tr>
<th>Course Student Learning</th>
<th>PSLO</th>
<th>GER</th>
<th>ISLO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome [SLO]</strong></td>
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<tr>
<td>a. Describe the foundations and key issues of managerial decision making</td>
<td>5. Explain the role of management as it applies to business practices in IT</td>
<td>2 [CA]</td>
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<td>systems and business intelligence</td>
<td>3. Demonstrate a solid understanding of the methodologies and foundations of IT</td>
<td>2 [CA] 5</td>
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<tr>
<td>e. Compare and evaluate different decision support systems</td>
<td>3. Demonstrate a solid understanding of the methodologies and foundations of IT</td>
<td>2 [CA] 5</td>
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<tr>
<td>f. Evaluate the different structures, components, and process of business intelligence</td>
<td>3. Demonstrate a solid understanding of the methodologies and foundations of IT</td>
<td>2 [CA]</td>
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<td>g. Analyze the processes and capabilities of effective group support systems and group decision support systems.</td>
<td>3. Demonstrate a solid understanding of the methodologies and foundations of IT</td>
<td>2 [CA]</td>
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<td>h. Evaluate the tools necessary to develop a knowledge management system</td>
<td>3. Demonstrate a solid understanding of the methodologies and foundations of IT</td>
<td>2 [CA] 5</td>
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<thead>
<tr>
<th>KEY</th>
<th>Institutional Student Learning Outcomes [ISLO 1 – 5]</th>
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<tbody>
<tr>
<td>ISLO #</td>
<td>ISLO &amp; Subsets</td>
</tr>
<tr>
<td>1</td>
<td>Communication Skills</td>
</tr>
<tr>
<td></td>
<td>Oral [O], Written [W]</td>
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<tr>
<td>2</td>
<td>Critical Thinking</td>
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<tr>
<td></td>
<td>Critical Analysis [CA], Inquiry &amp; Analysis [IA], Problem Solving [PS]</td>
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<tr>
<td>3</td>
<td>Foundational Skills</td>
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<td></td>
<td>Information Management [IM], Quantitative Lit./Reasoning [QTR]</td>
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<td>4</td>
<td>Social Responsibility</td>
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<td></td>
<td>Ethical Reasoning [ER], Global Learning [GL], Intercultural Knowledge [IK], Teamwork [T]</td>
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<tr>
<td>5</td>
<td>Industry, Professional, Discipline Specific Knowledge and Skills</td>
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</tbody>
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J. **APPLIED LEARNING COMPONENT:** Yes______ No____X______

K. **TEXTS:**

L. **REFERENCES:** None

M. **EQUIPMENT:** Technology Enhanced Classroom

N. **GRADING METHOD:** Standard A-F grading

O. **SUGGESTED MEASUREMENT CRITERIA/METHODS:**
Essays, quizzes, tests.

P. **DETAILED COURSE OUTLINE:**

I. Overview of Decision Support Systems and Business Intelligence

A. Managerial Decision Making
   1. Components
   2. Business Environment

B. Business Intelligence and Computers
   1. Tools and Techniques
   2. Early computer Models in Developing Business Intelligence

II. Computers and Managerial Decision Making

A. The Decision Making Process
   1. Defining the Problem
   2. Assessing the Alternatives
   3. Making the Decision
   4. Implementing the Decision

B. Computers in the Decision Support System
   1. Data Management
   2. Information Generation
   3. User Interface
   4. Using Computers to Manage Knowledge

C. Computers and Modeling
   1. Risk and Uncertainty
   2. Analytical Models
   3. Decision Trees
   4. Mathematical Modeling

III. Computers and Intelligence

A. Building the Data Warehouse
   1. Definitions and Concepts
   2. Architectures
   3. Warehouse Development and Security

B. Building the Analysis and Visualization
   1. Building Reports
   2. Visualizing the Decision

C. Computers and Mining
   1. Data
   2. Text
   3. Web
   4. Neural Networks and Strategy Building

IV. Groups and Knowledge Management

A. Groups and Group Support Systems
   2. Collaboration and Project Management
   3. Collaboration Tools

B. Knowledge Management
   1. Tacit and Explicit Information
   2. Knowledge Management and Motivation
   3. Computer Systems and Knowledge Management
V. Building the Intelligence System

A. Artificial Intelligence and the Intelligence System
   1. Concepts
   2. Architecture
   3. Development
B. The Internet and the Intelligence System
   I. Intelligence Agents
   2. Internet Software Based Agents
   3. Web Based System Management

VI. Building the Decision Support System

A. System Development
   1. Concepts
   2. Architecture
   3. Implementation
B. System Integration
   1. System Integration into the Organizational Technology Network
   2. System Integration into the Organizational Structure

Q. LABORATORY OUTLINE: Not applicable