

**STATE UNIVERSITY OF NEW YORK  
COLLEGE OF TECHNOLOGY  
CANTON, NEW YORK**



**MASTER SYLLABUS**

**CITA/MINS 315 – DECISION SUPPORT SYSTEMS**

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**Canino School of Engineering Technology  
Department of Decision & Graphic Media Systems  
Fall/2018**

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:**

<b><u>Course Student Learning Outcome [SLO]</u></b>	<b><u>PSLO</u></b>	<b><u>GER</u></b>	<b><u>ISLO</u></b>
a. Describe the foundations and key issues of managerial decision making	5. Explain the role of management as it applies to business practices in IT		2 [CA]
b. Discuss the frameworks of designing a decision support system	3. Demonstrate a solid understanding of the methodologies and foundations of IT		2 [CA]
c. Explain the importance of databases and database management	3. Demonstrate a solid understanding of the methodologies and foundations of IT		2 [CA]
d. Differentiate between the foundations, definitions and capabilities of decision support	3. Demonstrate a solid understanding of the methodologies and foundations of IT		2 [CA]

systems and business intelligence			
e. Compare and evaluate different decision support systems	3. Demonstrate a solid understanding of the methodologies and foundations of IT		2 [CA] 5
f. Evaluate the different structures, components, and process of business intelligence	3. Demonstrate a solid understanding of the methodologies and foundations of IT		2 [CA] 5
g. Analyze the processes and capabilities of effective group support systems and group decision support systems.	3. Demonstrate a solid understanding of the methodologies and foundations of IT		2 [CA]
h. Evaluate the tools necessary to develop a knowledge management system	3. Demonstrate a solid understanding of the methodologies and foundations of IT		2 [CA] 5

<b>KEY</b>	<b><u>Institutional Student Learning Outcomes [ISLO 1 – 5]</u></b>
<b>ISLO #</b>	<b>ISLO &amp; Subsets</b>
<b>1</b>	<b>Communication Skills</b> Oral [O], Written [W]
<b>2</b>	<b>Critical Thinking</b> <i>Critical Analysis [CA] , Inquiry &amp; Analysis [IA] , Problem Solving [PS]</i>
<b>3</b>	<b>Foundational Skills</b> <i>Information Management [IM], Quantitative Lit./Reasoning [QTR]</i>
<b>4</b>	<b>Social Responsibility</b> <i>Ethical Reasoning [ER], Global Learning [GL], Intercultural Knowledge [IK], Teamwork [T]</i>
<b>5</b>	<b>Industry, Professional, Discipline Specific Knowledge and Skills</b>

J. **APPLIED LEARNING COMPONENT:** Yes \_\_\_\_\_ No X \_\_\_\_\_

K. **TEXTS:**  
Sharda, Ramesh, Delen, Dursun and Turban Efraim (2014), Business Intelligence and Analytics: Systems for Decision Support 10th Edition, Pearson publishing

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

1. Group Support System Concepts and Architecture
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

1. 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