Department: Business Administration		**Program: MBA**	
Course Name	Decision Support Systems	**Course Code**	MIS 624
Pre-requisite	Not Applicable	Credit Hours	3

Brief Description

- This course presents basic knowledge, competences and practical experience in computer-aided decision support systems, either model-, data- or knowledge-based decision support systems.

Course Objectives

After this course the student is expected to be able to:

- Recognize basic components, types and methods of computer-based Decision Support Systems (DSS).
- Outline the differences between DSS and other computer support systems.
- Recognize appropriate context and applications of DSS tools and techniques.
- Locate and classify different computer-aided data management and modelling tools for DSS.
- Outline basic features and applications of two DSS model building languages.
- Use DSS tools and methods to different decision problems.
- Analyze and test the impact of using computer-based DSS.
- Establish DSS tools for application in specific situations.
- Evaluate decision problems and select appropriate analytical tools.
- Assess the productivity and efficiency of alternative DSS modelling languages.

Course Learning Outcomes

- Distinguish between concepts, principles, and theories of DSS
- Apply the concepts, principles, and theories in different situations
- Demonstrate written communication skills
- Have oral communication skills
- Have skills of using DSS applications in business administration
- Have scientific research skills in the field of DSS
- Have the skills of critical thinking and analysis in DSS
- Have the skills in strategic thinking and finding solutions in DSS
- Believe, and practice sustainability in DSS
- Have the skills of leadership, teamwork, and decision making in DSS
- Have the ability to distinguish between ethical issues in DSS
- Have the competence of social responsibility in the fields of DSS
- Have the competence to deal with cultural diversity in DSS

Course Topics

- Decision Making, Systems, Modeling and Computer Support.

- Decision Support Systems (DSS) - An Overview
- Application, experience and Impact of DSS
- Data-centered Decision Support Systems
- Data preprocessing and Extraction
- Data Analysis and Visualization
- Model-centered Decision Support Systems
- Optimization Models
- Predictive Models
- Descriptive Models
- Computational Models
- Developing DSS using visual Decision Support Language (VDSS) and General Algebraic Modeling System (GAMS)

Text Book

- Turban, E., Aronson J. and Liang, T-P. (2005). *Decision Support Systems and Intelligent Systems*. 7th Edition. Prentice Hall.

Additional References

- Turban, E., Sharda, R. and Delen, D. (2014). *Business Intelligence and Analytics: Systems for Decision Support, Global Edition.* 10th edition. Pearson Education Limited. UK

Online Resources

- **None**

Course Outline

Week	Hours	Topics	Remarks
1	3	Decision Making, Systems, Modeling and Computer Support.	
2	3	Decision Support Systems (DSS) - An Overview	
3	3	Application, experience and Impact of DSS	
4	3	Data-centered Decision Support Systems	
5	3	Data preprocessing and Extraction	
6	3	Data Analysis and Visualization	
7	3	Model-centered Decision Support Systems	
8	3	Midterm Exam	
9	3	Optimization Models; Predictive Models	
10	3	Descriptive Models	
11	3	Descriptive Models	
12	3	Computational Models	
13	3	Developing DSS using visual Decision Support Language (VDSS) and General Algebraic Modeling System (GAMS)	
14	3	Developing DSS using visual Decision Support Language (VDSS) and General Algebraic Modeling System (GAMS)	
15	3	Presentations	

Measurement and Assessment Tools														
Assessment Tools	Grades	Week	**Knowledge**	**Skills**						Values				
			Identify and apply	Written	Oral	Information Technology	Research	Critical thinking	Strategic thinking	Sustainability	Leadership	Ethics	Corporate Social responsibility	Cultural diversity
Midterm Exam	20	9	X											
Case Study	10	12		X				X	X	X	X	X	X	X
Project	20	15		X		X	X	X	X	X	X	X	X	X
Presentation	10	15			X	X								
Final Exam	40	TBD	X											
Total	100													

Approved by Department Chair	Date of Approval

Additional Information: Updated every Semester by Course Instructor	
Course Instructor	
Department	
Phone No.	
Extension No	
Email	