Faculty of Computers and Information Technology

Decisions Support Systems

Information :

Course Code :	IS433	**Level** :	Undergraduate	**Course Hours :**	3.00- Hours

Department : Department of Information Systems

Instructor Information :

Title	Name	Office hours
Associate Professor	Yasser kamal Ali Aboumandour	
Teaching Assistant	Salma Ahmed Elsayed Ahmad	
Teaching Assistant	Salma Essam Eldin Ali Mohamed Mohamed Yassin	

Area Of Study :

Explain different kinds of decision support systems and their functions.
Explain how decision support systems can be used in different kinds of organizations.
Analyze a typical decision situation to evaluate different alternatives.
Use effectively communication skills.
Explain how decision support systems can be used in different kinds of organizations and how computing is utilized as a management tool which is an integral part of the management decision making process.
Implement and evaluate information technology-based systems that support managerial and business functions, data-driven DSS and model-driven DSS.
Illustrate the operational, strategic and practical issues in decision support systems.

Description :

This course covers the following topics: Introduction to decision support systems; DSS components; Decision making and DSS; DSS software and hardware; developing DSS; DSS models; types of DSS; group DSS; executive information systems; data mining; artificial intelligence and expert systems. It is devoted to introduce decision support systems; show their relationship to other computer-based information systems, demonstrate DSS development approaches, and show students how to utilize DSS capacities to support different types of decisions.

Course outcomes :

a.Knowledge and Understanding: :

1 -	Illustrate the basic components, types and methods of computer-based Decision Support Systems (DSS)
2 -	Operate and develop appropriate context and applications of DSS tools and techniques
3 -	Identify different computer-aided data management and modeling tools for DSS, and explain basic features and applications of two DSS model Building Languages.
4 -	Describe decision support techniques.

b.Intellectual Skills: :

1 -	Demonstrate the role of DSS in different fields
2 -	Analyze different examples of decision support systems to alternative decision situations, and apply DSS tools and methods to different decision problems.
3 -	Select appropriate DSS tools for application in specific situation.

4 -	Evaluate and verify the productivity and efficiency of alternative DSS modeling Languages.

c.Professional and Practical Skills: :

1 -	Apply data retrieval techniques.
2 -	Analyze decision problems and select appropriate analytical tools.
3 -	Execute different systems in terms of general quality attributes and possible tradeoffs presented within the given problem.

d.General and Transferable Skills: :

1 -	Work in a team effectively and obtain problem solving skills.
2 -	Apply oral communication skills and techniques in report writing.

ABET Course outcomes :

1 -	Implement and evaluate information technology-based systems that support managerial and business functions, data-driven DSS and model-driven DSS
2 -	Demonstrate general architecture of the decision support systems and their functions
3 -	Discuss the theories of the human decision-making process, methodologies to develop decision support systems
4 -	Analyze a typical decision situation to evaluate different alternatives
5 -	Discuss the processes, and knowledge-based systems augmenting human knowledge and expertise to increase productivity and enhance outcomes
6 -	Illustrate the operational, strategic and practical issues in decision support systems

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Decision making, Systems, Modeling and Computer Support, Decision Support Systems (DSS) - An Overview	4	2	2
Application, experience and Impact of DSS	4	2	2
Data-centered Decision Support Systems	4	2	2
Data preprocessing and Extraction	4	2	
Quiz	2		
Data Analysis and Visualization	4	2	2
Model-centered Decision Support Systems	4	2	2
Optimization Models	4	2	2
Mid-Term Exam	2	2	2
Predictive Models	4	2	2
Descriptive Models	4	2	2
Developing DSS using visual Decision Support Language (VDSS)	4	2	2
Developing DSS using General Algebraic Modeling System (GAMS)	4	2	2
Final Exam	2		

Teaching And Learning Methodologies :

Interactive Lectures including Discussions
Practical Lab Sessions

Self-Study (Project / Reading Materials / Online Material / Presentations)
Case Studies

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignments	10.00	4	
Final Exam	40.00	14	
Midterm Exam (s)	20.00	9	
Practical Exam	15.00	10	
Presentations	5.00	12	
Quizzes	10.00	5	

Course Notes :

An Electronic form of the Course Notes and all the slides of the Lectures is available on the Students Learning Management System (Moodle)

Web Sites :

www.ekb.eg