



KINGDOM OF SAUDI ARABIA  
 IMAM MOHAMMAD IBN SAUD ISLAMIC UNIVERSITY  
 COLLEGE OF COMPUTER AND INFORMATION SCIENCES  
 INFORMATION SYSTEMS DEPARTMENT  
 BACHELOR IN INFORMATION SYSTEMS

المملكة العربية السعودية  
 جامعة الإمام محمد بن سعود الإسلامية  
 كلية علوم الحاسب والمعلومات  
 قسم نظم المعلومات  
 بكالوريوس نظم المعلومات

## SYLLABUS

### IS1358: Decision Support Systems

<b>CREDIT HOURS</b>	3 credit hours	<b>PREREQUISITE</b>	STAT1011 – Introduction to Probability and Statistics
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<b>Instructor:</b>
<b>Contact information and office hours</b>
<b>Office No:</b> To be announced (TBA)
<b>Office Hours:</b> TBA
<b>E-mail:</b> _____@imamu.edu.sa

<b>COURSE DESCRIPTION</b>
Upon completion of this course, students will be able to identify decision support models, methods, architecture, and technologies. They will also apply the concepts of decision making and modeling to model real problems. Some tools of operation research will be used to solve problems. Students will be asked to design and develop decision support systems for specific applications.

COURSE LEARNING OUTCOMES (CLOs)		Aligned SOs
1	<b>Knowledge and Understanding</b>	
1.1	Define the concepts of decision making as a problem solving approach	1(I)
1.2	Outline decision support models, methods, and technologies	1(I)
1.3		
1.4		
1.5		
2	<b>Skills :</b>	



2.1	Design and model systems for supporting specific business decisions	2(P)
2.2	Apply business intelligence tools and algorithm to optimize and solve problems	1(P)
2.3	Develop a system to support business decision in a specific field	2(P)
2.4		
2.5		
<b>3</b>	<b>Values:</b>	
3.1		
3.2		
3.3		
3.4		
3.5		

TEACHING Strategies
Lectures Self-Learning

No	List of Topics	Contact Hours	Self-Learning
1	Overview of BI, Analytics, and Decision Support (Chapter 1)	3	
2	Nature of Data, Statistical Modelling and Visualization (Chapter 3) – Classroom teaching ----- Data Preprocessing Tasks and Methods and Examples – self-learning	6	
3	Predictive Analytics: Data Mining Process, Methods, and Algorithms (Chapter 4) - Classroom teaching	6	
4	Text Mining, Sentiment Analysis, and Social Analytics (Chapter 7) - Classroom teaching ----- Web mining and Web analytics – Self-learning	6	3
5	Prescriptive Analytics: Optimization and Simulation (Chapter 8) - Classroom teaching ----- Examples – Self-learning	6	3
6	Big Data, Cloud Computing, and Location Analytics (Chapter 9) - Classroom teaching	6	
7	Project Presentation and Discussion	3	
8			
9			
10			
11			
12			



<b>Total</b>	<b>36</b>	<b>6</b>
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**TEXT BOOK**

Analytics, Data Science and A I: Systems for Decision Support, (11th Edition), Dursun Delen, Efraim Turban, and Ramesh Sharda, Pearson Publications .

**REFERENCES**

Operations Research: An Introduction, 10th edition, by Hamdy A. Taha, published by Prentice-Hall, 2017, ISBN:978-8120330436.

<b>Course Assessment Methods</b>			
<b>No</b>	<b>Assessment Method</b>	<b>Due Week</b>	<b>% of Total Assessment</b>
1	<b>Quiz</b>	4	10
2	<b>Assignment</b>	9	10
3	<b>Midterm</b>	7	20
4	<b>Project / Lab Exam</b>	11	20
5	<b>Final Exam</b>	13	40