



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

IS1356: Data Mining

CREDIT HOURS	3 credit hours (Lectures: 3)	PREREQUISITE	IS1340
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Instructor:
Contact information and office hours
Office No: To be announced (TBA)
Office Hours: TBA
E-mail: _____@imamu.edu.sa

COURSE DESCRIPTION
The aim of the course is to introduce students the knowledge of the importance, and benefits of data mining and its application. They will also gain a good understanding of the different data mining algorithms and the commonly used tools and techniques.

COURSE LEARNING OUTCOMES (CLOs)		Aligned SOs
1	Knowledge and Understanding	
1.1	Recognize data mining importance, problems, and their solutions.	1(I)
1.2	Outline data mining algorithms and its application	1(I)
1.3		
1.4		
1.5		
2	Skills :	
2.1	Create models using commonly used tools and techniques of data mining.	2(I)
2.2	Prepare data after pre-processing before application of data mining algorithms.	2(I)



2.3	Analyze the results obtained from the data mining algorithms.	2(I)
2.4		
2.5		
3	Values:	
3.1	Function effectively on teams to accomplish a common goal.	5(I)
3.2	Present a topic in a compelling manner.	3(I)
3.3		
3.4		
3.5		

TEACHING Strategies
Lectures Self-Learning

No	List of Topics	Contact Hours	Self-Learning
1	Topic 01- Introduction to Data Mining	3	
2	Topic 02 - Data Pre-processing	3	
3	Topic 03 - Classification - Nearest Neighbor	3	
4	Topic 04 - Classification - Naive Bayesian	3	
5	Topic 04 - Classification - Naive Bayesian Examples	3	2
6	Topic 05 - Classification - Decision Trees	3	
7	Topic 05 - Classification - Decision Tree Examples	3	1
8	Topic 06 - Classifier Performance	3	
9	Topic 06 - Classifier Performance Examples	3	1
10	Topic 07 –Data Mining Tools: Weka	3	
11	Topic 08 - ARM - Apriori Algorithm	3	
12	Topic 08 - ARM - Apriori Algorithm Examples	3	2
Total		36	6

TEXT BOOK
M. Bramer, Principles of Data Mining,3rd edition, Springer Verlag, 2016 ISBN: 978-1-4471-7307-6

REFERENCES



H. Witten, F. Eibe, and M. A. Hall, *Data Mining: Practical Machine Learning Tools and Techniques*, 3rd ed. Morgan Kaufman, 2011, ISBN: 978-0123748560
J. Han, M. Kamber and J. Pei, *Data Mining: Concepts and Techniques*, 3rd ed. Morgan Kaufman, Elsevier, 2012, ISBN: 978-0123814791
Pang-Ning Tan, Michael Steinbach, Vipin Kumar. *Introduction to Data Mining*, 1st ed. Pearson, 2005, ISBN: 978-0321321367

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