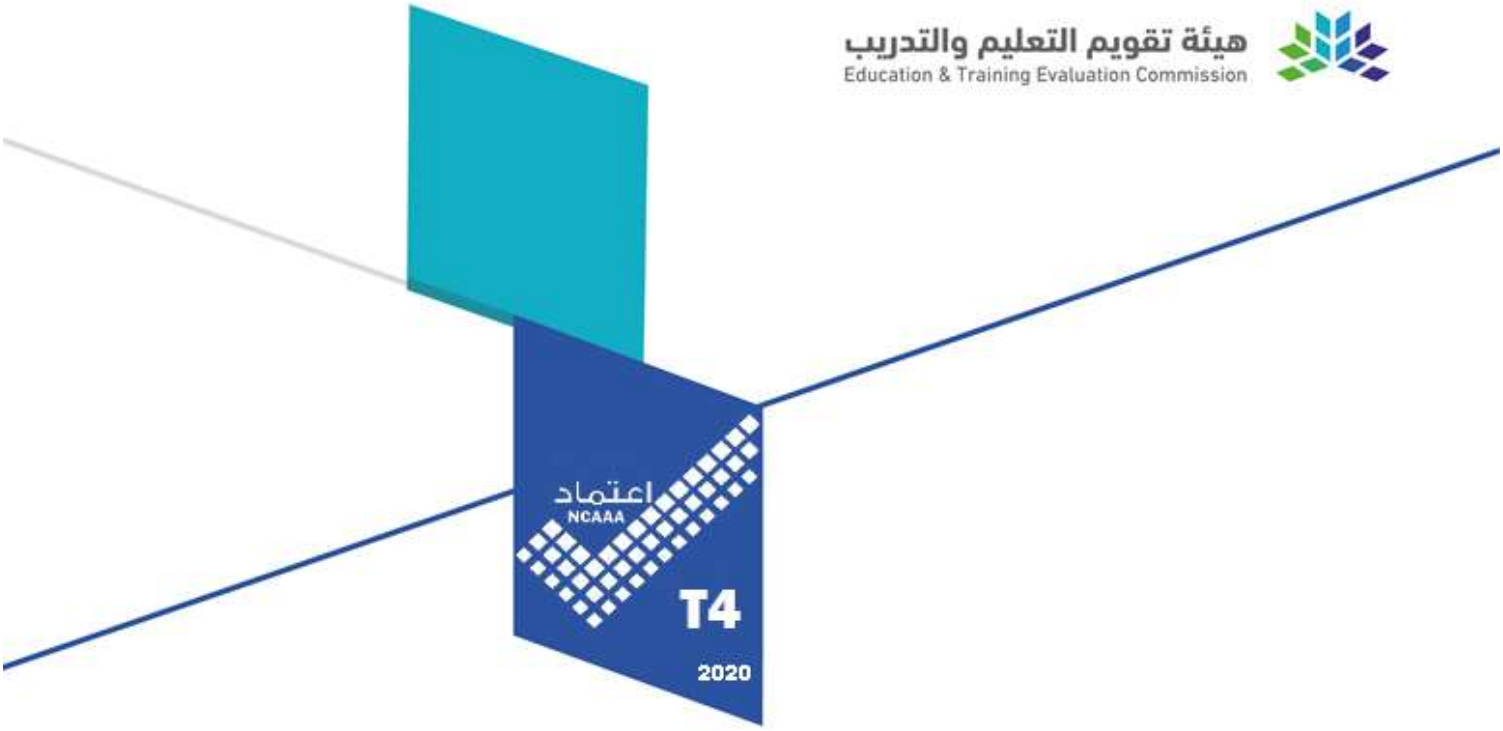
هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission



Course Specifications

Course Title:	**Data Mining**
Course Code:	**MIS10706**
Program:	**Management Information Systems**
Department:	**Management Information Systems**
College:	**Business Administration**
Institution:	**Albaha University**

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A. Course Identification

1. Credit hours:	**3 Hrs.**
2. Course type	
a.	University ☐ College ☐ Department ☒ Others ☐
b.	Required ☐ Elective ☒
3. Level/year at which this course is offered:	Level 5/Year 3
4. Pre-requisites for this course (if any)**:**	
5. Co-requisites for this course (if any)**:**	

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	30	%67
2	**Blended**		
3	**E-learning**	15	%33
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	30
2	**Laboratory/Studio**	-
3	**Tutorial**	15
4	**Others** (specify)	-
	Total	45

B. Course Objectives and Learning Outcomes

1. Course Description

In this course we explore how this interdisciplinary field brings together techniques from databases, statistics, machine learning, and information retrieval. the themes of discussion include data mining methods currently used, including data cleaning and preparation, classification, clustering, and association rule mining, and possibly anomaly detection. Designing algorithms for these tasks is difficult because the input data sets are very large, and the tasks may be very complex.

2. Course Main Objective

Develop students' ability to analyze and construct knowledge from data.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Recall concepts, instances, and attributes; data reparation.	K1
1.2	Describe knowledge representation; decision tables and trees.	K2
1.3	Recognize classification rules, association rules.	K1
1...		
2	**Skills :**	
2.1	Appraise rules involving relations, trees for numeric prediction, instance-based classification	S1
2.2	Design rules for numeric prediction, instance-based representation clusters data.	S3
2.3	Summarize classification algorithms for prediction unknown clusters	S2
2.4	Demonstrate effectiveness in working in a group	S5
3	**Values:**	
3.1	Develop time management skills	V1
3.3	Develop research and Web search skills	V2

C. Course Content

No	List of Topics	Contact Hours
1	General introduction to Data Mining	6
2	Data preparation	9
3	Classification	9
4	Association Analysis	9
5	Clustering	6
...	Anomaly detection	3
Total		45

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Recall concepts, instances, and attributes; data reparation.	Lectures Teamwork Lab exercises	Assignments Group Discussion Presentation Mid & Final Exams
1.2	Describe knowledge representation; decision tables and trees.		
…	Recognize classification rules, association rules.		
2.0	**Skills**		
2.1	Appraise rules involving relations, trees for numeric prediction, instance-based classification	Problem solving Class discussion Presentation Individual meeting with the instructor	Problem solving Class discussion Presentation Individual meeting with the instructor
2.2	Design rules for numeric prediction, instance-based representation clusters data.		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
…	Summarize classification algorithms for prediction unknown clusters		
3.0	**Values**		
3.1	Demonstrate effectiveness in working in a group	Group Work & Group Discussions	Observation Class Participation Group Assignments
3.2	Develop time management skills	Promote research & Use of Rafid LMS	Rafid Participation Online Assignments and/or quizzes
…	Develop research and Web search skills	Promote research & Use of Rafid LMS	Rafid Participation Online Assignments and/or quizzes

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quizzes	1-14	16%
2	Assignments	1-14	4%
3	Mid Term Examination	8-9	30%
4	Final Examination	15-16	50%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

Faculty is available for student consultation and academic advice on weekdays during office hours (9 hours a week).

- Students can seek advice and consultation from teaching staff through electronic means (email and Rafid LMS).
- For any additional assistance an appointment can be arranged between the student and teaching staff.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Title: Introduction to Data Mining Pang-Ning Tan, *Michigan State University* Michael Steinbach, *University of Minnesota* Vipin Kumar, *University of Minnesota* ISBN-10: 0321321367 ISBN-13: 9780321321367 Publisher: Addison-Wesley Copyright: 2006 Format: Cloth; 769 pp Published: 05/02/2005 URL: http://www.pearsonhighered.com/educator/product/Introduction-to-Data-Mining/9780321321367.page
Essential References Materials	

Electronic Materials	
Other Learning Materials	

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Lecture rooms are well equipped with: Air conditioned with at least 20 adequate seats. Interactive/smart Board. Up-to-date projector. An Auditorium is well equipped with: Air conditioned with at least 100 adequate seats. Interactive/smart Board. Up-to-date projector.
Technology Resources (AV, data show, Smart Board, software, etc.)	• Personal computer with necessary up-to-date software. • DBS Smart Systems. • Interactive Board. • Laptop
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	1. Colored Printer (needed). 2. Central laser-Printer, and Scanner. 3. Wall Boards (are essentially needed.). 4. Internet connection ***should be*** available in the classroom. 5. Library: Up to date scientific books, in the library. Wi-Fi and internet connections are available inside the teaching staff rooms, and the seminar room.

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of Teaching	Students	Indirect
Evaluation of Teaching	staff members teaching the course	Direct
Verifying Standards of Student Achievement	independent teaching staff from within the department and/or other departments within the college	Indirect
effectiveness and planning for improvement.	staff members teaching the course	Direct

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Minutes of the Council of Management Information Systems Department
Reference No.	3
Date	8.12.2021