هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title:	**Data and Information Management**
Course Code:	**IS1503**
Program:	**Computer Information System**
Department:	**Computer Information System**
College:	**Computer Science & Information Technology**
Institution:	**Al-Baha University**
Version:	**T104-V2**
Last Revision Date:	**May 25, 2023**

Table of Contents:

A. General information about the course:

Course Identification					
1. Credit hours:	4 Credit Hours (4, 0, 0) (Lecture, Lab, Tutorial) (4 Contact Hours)				
2. Course type					
a.	University ☐	College ☐	Department☒	Track☐	Others☐
b.	Required ☒	Elective☐			
3. Level/year at which this course is offered:	7th level/ 3rd Year				
4. Course general Description: This course develops an applied understanding of industry-leading techniques and tools for managing data and information. It looks at both structured relational database systems, and unstructured "big data" techniques and tools. This course emphasizes the "information systems" techniques and technologies for understanding, structuring, storing, retrieving and otherwise managing the underlying data or information.					
5. Pre-requirements for this course (if any): IS1004- Database 1					
6. Co- requirements for this course (if any): None					
7. Course Main Objective(s) The main purpose of the course is to Define data, information, data storage and XML data, Describe NoSQL databases and the data warehousing basic concepts and models, to explain ways of storing, accessing in different data storages, then to design data warehouse schemes (conceptual and logical).					

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	40	100%
2.	E-learning		
3.	Hybrid • Traditional classroom • E-learning		
4.	Distance learning		

2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	40 hours
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	
5.	Others (specify)	
	Total	40

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Define data, information, data storage and XML data	K3	- Lectures - Class discussion	***Direct Assessment Tool*** Quiz Midterm ***Indirect Assessment Tool*** Course Exit Survey
1.2	Describe NoSQL databases and the data warehousing basic concepts and models	K3	- Lectures - Class discussion	***Direct Assessment Tool*** Midterm Final Exam ***Indirect Assessment Tool*** Course Exit Survey
2.0	Skills			
2.1	Explains ways of storing, accessing in different data storages	S2	- Lectures - Assignments - Self-learning exercice	***Direct Assessment Tool*** Homework Final exam ***Indirect Assessment Tool*** Course Exit Survey
2.2	Design data warehouse schemes (conceptual and logical)	S5	-Lectures - Self-learning exercice	***Direct Assessment Tool*** Homework Final Exam ***Indirect Assessment Tool*** Course Exit Survey
2.3	Write queries	S5	- Lectures - Class work - Assignments	***Direct Assessment Tool*** • Midterm • Quiz • Final exam • ***Indirect Assessment Tool*** Course Exit Survey
3.0	Values, autonomy, and responsibility			
3.1	Express self-efficacy through a willingness to problems, learn and take challenges independently.	V2	- Assignment	***Direct Assessment Tool*** • Homework ***Indirect Assessment Tool*** Course Exit Survey

C. Course Content

No	List of Topics	Contact Hours
1	Introduction to Data and information management	2
2	Data storage: Object, Object-Relational, XML and Nosql	3
3	XML basic concepts and Models	4
4	Querying XML data : Xpath	4
5	Querying XML data : Xquery	4
6	Key-value Data Base	3
6	Column Oriented Data Base	3
8	Document Oriented Data Base	3
9	Graph Oriented Data Base	6
10	Data warehousing	8
Total		40

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Homework	periodically	15%
2.	Midterm Exam	5	15%
3.	Quiz	8	10%
4.	Final Exam	12	60%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	- Information Management : Strategies for Gaining a Competitive Advantage with Data, McKnight, William Waltham, Morgan Kaufmann. 2014, ISBNs: 9780124080560. 9780124095267. - Bridging Relational and NoSQL Databases, Drazena Gaspar (University of Mostar, Bosnia and Herzegovina) and Ivica Coric (Hera Software Company, Bosnia and Herzegovina) Copyright: © 2018 |Pages: 338 - An Introduction to XML Query Processing and Keyword Search, Online ISBN 9783642446078, Jiaheng Lu, Springer Berlin Heidelberg 2015.
Supportive References	

Electronic Materials	• Access to the Saudi Digital Library (SDL). • Using the learning management system of the university – Rafid System (https://lms.bu.edu.sa/).
Other Learning Materials	None

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	A classroom or lecture hall with whiteboard for 25 students.
Technology equipment (projector, smart board, software)	• A digital image projection system with connection to desktop computer and laptop computer. • High speed Internet connection. • An instructor computer station.
Other equipment (depending on the nature of the specialty)	None

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	• Students • Faculty • Peer Reviewers • Program Leader • Course Coordinator	• Surveys (indirect). • Direct feedback from students. • Course evaluation by Peer Reviewers (indirect). • Comprehensive Course report (where we can find information about teaching difficulties and action plan, …)
Effectiveness of students assessment	• Students • Faculty • Peer Reviewers • Exam Evaluation Committee • Course Coordinator	• Surveys (indirect). • Direct feedback from students. • Exam evaluation by the Exam Evaluation Committee (indirect)
Quality of learning resources	• Students • Faculty • Peer Reviewers • Course Coordinator	• Surveys (indirect) • Course evaluation by Peer Reviewers (indirect). • Comprehensive Course report (where we can find information about difficulties and challenges about learning resources as well as consequences and action plan, …)
The extent to which CLOs have been achieved	• Faculty • Program Leader	• Student Results (direct)

Assessment Areas/Issues	Assessor	Assessment Methods
	• Course Coordinator	• Comprehensive Course report (where we can find the CLO assessment results)
Other	None	None

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

G. Specification Approval Data

COUNCIL /COMMITTEE	Curriculum Committee Meeting
REFERENCE NO.	
DATE	25 MAY, 2023