جامعة الزيتونة الأردنية
Al-Zaytoonah University of Jordan
كلية العلوم وتكنولوجيا المعلومات
Faculty of Science and Information Technology

" عراقة وجودة"
"Tradition and Quality"

Detailed Course Description - Course Plan Development and Updating Procedures/ Computer Information systems Department	QF01/0408-3.0E

Faculty	Faculty of Science and Information Technology	Department	Computer Information Systems
Course number	**0113455**	Course title	**Data Warehouses**
Number of credit hours	3	Pre-requisite/co-requisite	Advanced Databases

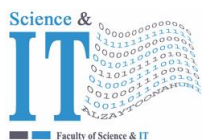| **Brief Course Description** |
|---|
| This course provides the following topics:
 Introduction to Data Warehousing, Data Warehouse Environment, Designing a Data Warehouse, Data Warehouse Granuality, Distributed Data Warehouse, Multidimensional Data Models, and Advanced Data Warehouse Topics. |

	Course Goals and Learning Outcomes
Goal 1	**To understand the concept of Data Warehousing**
Learning Outcomes	**1.1** To show a good comprehension of the basic concepts of Data Warehousing.
Goal 2	**To distinguish between data warehouse and regular database**
Learning Outcomes	**2.1** To be able to distinguish between data warehouse and regular database
Goal 3	**To know the basic components of a data warehouse**
Learning Outcomes	**3.1** To show a good acquaintance of the basic components of data warehouse.
Goal 4	**To be acquainted of various data warehouse advanced topics.**
Learning Outcomes	**4.1** To acquire the ability to design, maintenance, and the development of a simple data warehouse.
Textbook	1. Nenad Jukic. Database Systems: Introduction to Databases and Data Warehouses, 2016.
Supplementary References	1. W.H. Inmon and Dan Linstedt. Data Architecture: A Primer for the Data Scientist: Big data, data warehouse, and data vault. **2015**. 2. Ralph Kimball and Margy Ross. The Data warehouse toolkit: the complete guide to dimensional modeling. **2013**.

Course Timeline				
Week	**Number of Hours**	**Course Topics**	**Pages (Textbook)**	**Notes**
01	1 1 1	**Evolution of Decision Support Systems:** The development life cycle, Patterns of Hardware Utilization, Monitoring the data warehouse environment	**1-28**	
02	1 1 1	**The Data warehouse Environment:** Structure of Data warehouse environment, Granuality	**29-69**	

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03	1 1 1	**Design of Data Warehouse:** Data Models, Normalization and Denormalization	**71-139**	
04	1 1 1	Data warehouse granuality, Raw estimates, Input to the planning process, Levels of Granuality	**139-157**	
05	1 1 1	Data warehouse and Technology, Managing large amount of data, Managing multiple media, Indexing and Monitoring Data, various topics	**159-191**	
06	1 1 1	**First Exam 20%**		
07	1 1 1	Distributed Data Warehouse, Types of Distributed Data Warehouse, The nature of the development effort, Distributed data warehouse development, Building the data warehouse on multiple levels	**193-239**	
08	1 1 1	Executive Information Systems and the Data Warehouse.	**239-255**	
09	1 1 1	External Data and the Data Warehouse, Meta data, Storing external data, Different components of metadata.	**257-268**	
10	1 1 1	Migration to the Architected Environment. A Migration plan, The feedback loop, Strategic considerations.	**269-287**	
11	1 1 1	The Data Warehouse and the Web. Moving data from web to data warehouse, Moving data from data warehouse to web.	**289-302**	
12	1 1 1	Unstructured Data and the Data Warehouse. Integrating the two worlds.	**302-330**	
13	1 1 1	**Second Exam 20%**		
14	1 1 1	The Really Large Data Warehouse, introduction.	**331-354**	
15	1 1 1	The Relational and the Multidimensional Models as a Basis for Database Design: Relationship model, multi-dimensional model.	**357-375**	
16	1 1 1	**Final Exam 50%**		

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Theoretical Course Evaluation Methods and Weight	Participation = 10% First Exam 20% Second Exam 20% Final Exam 50%	**Practical (Clinical) Course Evaluation Methods**	Semester Students' Work = 50% (Reports, Research, Quizzes, Etc.) Final Exam = 50%

Approved by Head of Department		**Date of Approval**	

Extra information (to be updated every semester by corresponding faculty member)

Name of Teacher		Office Number	
Phone Number (Extension)		Email	_____ @zuj.edu.jo
Office Hours			