Faculty of Computers and Information Technology

Data Warehousing

Information :

Course Code :	IS442	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours
Department :	Department of Information Systems				

Instructor Information :

Title	Name	Office hours
Lecturer	Mohamed Attia Mohamed	2
Assistant Lecturer	Mohamed Mahmoud Hasan Hamada	

Area Of Study :

Gather requirements for data warehousing.
Explain data warehouse architecture.
Design a dimensional model for data warehousing.
Design a physical model for data warehousing.
Discuss extract, transform and load strategies.
Identify Online Analytical Processing (OLAP) databases.
Design and develop business intelligence applications.
Expand and support a data warehouse.
Use effectively communication skills.

Description :

Introduction to Data Warehousing, Evolution of DSS, DW General Topics, Data Warehouse Structure: Granularity, Data Warehouse Design, Building Dimensional DW, OLAP tools, Aggregates, ELT Extraction/Transformation/ Load processes and tools, Issues of DW Architecture, Enterprise DW vs. Data Marts, DW and Data Mining

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Discuss the concepts of data warehousing and data mining.
2 -	Explain data warehouse architectures, OLAP and the project planning aspects in building a data warehouse
3 -	Discuss extract, transform and load strategies
4 -	Explain the role played by knowledge in a diverse range of intelligent systems
b.Intellectual Skills: :	
1 -	Develop a data warehouse architecture
2 -	Apply the dimensional modeling technique for designing a data warehouse
c.Professional and Practical Skills: :	
1 -	Design and develop business intelligence applications.
2 -	Identify Online Analytical Processing (OLAP) databases

d.General and Transferable Skills: :	
1 -	Apply communication skills and techniques in presentations and report writing for range of audiences using various methods and tools
2 -	Work in a team effectively and efficiently considering time and stress management

ABET Course outcomes :	
1 -	Demonstrate adequate understanding of basic architecture and techniques for storage and provision of enterprise data
2 -	Develop queries and essential business intelligence reporting
3 -	Demonstrate adequate understanding of data modeling, including dimensional modeling
4 -	Develop steps of an enterprise data warehousing solution
5 -	Use Business Intelligence tools from end-to-end perspective

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Data Warehouse Concepts	4	2	2
Data Warehouse Design Concepts	4	2	2
Data Warehouse Lifecycle	4	2	2
Dimensional Model Concepts	4	2	2
Dimensional Model Design	4	2	2
Designing the Physical Database	4	2	2
Concepts of Extract, Transform	4	2	2
Concepts of Load (ETL)	4	2	2
Mid-Term Exam	2		
Concepts of Business Intelligence Applications	4	2	2
Concepts of Business Intelligence Applications	4	2	2
Designing and Developing Business Intelligence Applications	4	2	2
Presentation/Discussion of Case Studies	4	2	2
Final Exam	2		

Teaching And Learning Methodologies :
Interactive Lectures including discussion
Practical Lab Sessions
Self-Study (Project / Reading Materials / Online Material / Presentations)
Case Studies
Problem Solving

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignments	5.00	4	
Final Exam	40.00	14	

Midterm Exam (s)	20.00	9	
Others (Participation)	5.00		
Presentations	5.00	10	
Quizzes	10.00	5	
Team Work Projects	15.00	12	

Course Notes :

An Electronic form of the Course Notes and all the slides of the Lectures is available on the Students Learning Management System (Moodle)

Web Sites :

www.ekb.eg