UNIVERSITI TEKNOLOGI MARA

INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS (ITS232)

Week	Topic	Hours	Remarks
1-2	**1.0 DATABASE CONCEPTS** 1.1 Introducing The Database 1.2 The Historical Roots Of Database 1.3 Files And File Systems 1.4 A File System Critique 1.5 Database Systems 1.6 Database Models	4	**Peter Rob:** Chapter 1 **Mini Project:** Briefing Forming Group Proposal due week 5
	Lab: • Getting Started with IBM DB2: Installation and Using a Database	4	**Lab Exercise:** DB2 Installation
3-4	**2.0 DATA MODELS** 2.1 The Importance of Data Models 2.2 Data Model Basic Building Blocks 2.3 Business Rules 2.4 The Evolution of Data Models 2.5 Degrees of Data Abstraction	4	**Peter Rob:** Chapter 2
	Lab: • Lab Objectives • Introduction to SQL	4	
5-6	**3.0 THE RELATIONAL MODEL** 3.1 A Logical View Of Data 3.2 Keys 3.3 Integrity Rules Revisited 3.4 The Data Dictionary And The System Catalogue 3.5 Relationship Within The Relational Database 3.6 Data Redundancy Revisited 3.7 Indexes	4	**Peter Rob:** Chapter 3 **Tutorial 1:** Database Concepts/Relational Model **Lab Exercise:** Simple SQL Queries
	Lab: • Simple SQL Queries	4	
7-9	**4.0 ENTITY RELATIONSHIP (E-R) MODELING** 4.1 Entity Relationship (E-R) Modelling 4.2 Basic Modelling Concepts 4.3 Data Models 4.4 The E-R Model 4.5 Developing An E-R Diagram 4.6 A Comparison Of E-R Modelling Symbols 4.7 The Challenge Of Database Design 4.8 Conflicting Goals 4.9 Extended Entity-Relationship Modeling	6	**Peter Rob:** Chapter 4 **Tutorial 2:** E-R Modelling **Lab Exercise:** Retrieving data from Multiple Tables Scalar Functions and Arithmetic
	Lab: • Retrieving data from Multiple Tables • Scalar Functions and Arithmetic	6	**Due:** Project Proposal

Week	Topic	Hours	Remarks
10-12	**5.0 NORMALIZATION OF DATABASE TABLES** 5.1 Database Tables And Normalization 5.2 The Need for Normalization 5.3 The Normalization Process up to 3NF 5.4 Normalization And Database Design 5.5 Denormalization	6	**Peter Rob:** Chapter 5 **Tutorial 3:** Normalization **Test 1** **Lab Exercise:** Column Functions and Grouping UNION
	Lab: • Column Functions and Grouping • UNION	6	
13	**6.0 DATABASE DESIGN** 6.1 The Information System 6.2 The Systems Development Life Cycle (SDLC) 6.3 The Database Life Cycle (DBLC) 6.4 Database Design Strategies 6.5 Centralized Versus Decentralized Design	2	**Peter Rob:** Chapter 9 **Lab Exercise:** Using Subqueries Maintaining Data
	Lab: • Using Subqueries • Data Definition Commands • Maintaining Data	2	
14	**7.0 MINI PROJECT WORK** Project Demonstration	2 2	**Peter Rob:** Chapter 7 **Tutorial 4**: SQL **Test 2** **Mini Project:** Report Submissions and Presentations

ASSESSMENT :

Test 1	:	10%
Test 2	:	10%
Quizzes/Assignments/Attendance	:	10%
Mini Project		
• Proposal	:	5%
○ Company Background		
○ Problem Statements		
○ Proposed Db Objectives		
○ Initial Proposed ERD		
• Relational Schema (3rd Normal Form)		2%
• Report		8%
○ Inclusion of Proposal		
○ Data Definition Language		
○ 10 Queries: Questions, SQL, Output		
• Project Demo		5%
○ Db Demo		
○ Pop Up Questions)		
Final Examination	:	50%

Passing grade is C (50%)

RECOMMENDED TEXT

Carlos Coronel, Steven Morris and Peter Rob, **Database Principles: Fundamentals of Design, Implementation, and Management**, International Thomson Publishing (ITP), Ninth Edition, 2011.

REFERENCES

1. David M.Kroenke and David J. Auer, **Database Concepts**, 4th Edition, Pearson International Edition, 2010.

2. Saadiah, Fauzi, Norehan, Wan Nor Amalina, **Introduction to Database**, McGraw Hill, 2006.