



National Computing Education Accreditation Council
NCEAC



NCEAC.DOC.001-E

COURSE DESCRIPTION

NAME OF INSTITUTION	Lahore Garrison University
PROGRAM (S) TO BE EVALUATED	Computer Science , Spring 2022

Course Description :

Course Code	CSC352																				
Course Title	Database Systems																				
Credit Hours	3+1																				
Prerequisites by Course(s) and Topics	None																				
Assessment Instruments with Weights (homework, quizzes, midterms, final, programming assignments, lab work, etc.)	SESSIONAL (Quizzes, Assignments, Presentations) =25 % Midterm Exam =25 % Final Exam = 50%																				
Course Coordinator	Sajid Farooq																				
URL (if any)																					
Current Catalog Description																					
Textbook (or Laboratory Manual for Laboratory Courses)	Database Systems: A Practical Approach to Design, Implementation, and Management, 6th Edition by Thomas Connolly and Carolyn Begg																				
Reference Material	2. Database Systems: The Complete Book, 2nd Edition by Hector Garcia-Molina, Jeffrey D. Ullman, Jennifer Widom 3. Database System Concepts, 6th Edition by Avi Silberschatz, Henry F. Korth and S. Sudarshan. 4. Database Management Systems, 3rd Edition by Raghu Ramakrishnan, Johannes Gehrke																				
Course Goals																					
Course Learning Outcomes (CLOs):	<table><tr><td>At the end of the course the students will be able to:</td><td>Domain</td><td>BT Level*</td></tr><tr><td>Explain fundamental database concepts</td><td>C</td><td>2</td></tr><tr><td>Design conceptual, logical and physical database schemas using different data models.</td><td>C</td><td>5</td></tr><tr><td>Identify functional dependencies and resolve database anomalies by normalizing database tables.</td><td>C</td><td>2</td></tr><tr><td>Use Structured Query Language (SQL) for database definition and manipulation in any DBMS</td><td>C</td><td>4</td></tr><tr><td>* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain</td><td></td><td></td></tr></table>			At the end of the course the students will be able to:	Domain	BT Level*	Explain fundamental database concepts	C	2	Design conceptual, logical and physical database schemas using different data models.	C	5	Identify functional dependencies and resolve database anomalies by normalizing database tables.	C	2	Use Structured Query Language (SQL) for database definition and manipulation in any DBMS	C	4	* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain		
At the end of the course the students will be able to:	Domain	BT Level*																			
Explain fundamental database concepts	C	2																			
Design conceptual, logical and physical database schemas using different data models.	C	5																			
Identify functional dependencies and resolve database anomalies by normalizing database tables.	C	2																			
Use Structured Query Language (SQL) for database definition and manipulation in any DBMS	C	4																			
* BT= Bloom's Taxonomy, C=Cognitive domain, P=Psychomotor domain, A= Affective domain																					

Topics Covered in the Course, with Number of Lectures on Each Topic (assume 15-week instruction and one-hour lectures)	Week	Lecture	Topics Covered
	Week 1	1	Introduction of Database Systems its Practical Use, Course Contents.
		2	Introduction to SQL Server Sql Serve Installation, Data Types Identifier
	Week 2	3	DDL, DML DCL commands Create Database Query Create Table in SQL Queries,
		4	Primary keys Foreign keys Concept and implementation using Ecommerce database, Select statement Queries,
	Week 3	5	Ecommerce Database Example Activity, From statement Queries,
		6	Data Insert Into Table queries , Where all related Queries in SQL, Assignment#1.
	Week 4	7	Like In Between queries, Distinct Quiz#1.
		8	Skip, Take, Top, Aliases, In SQL queries implementation using Ecommerce database,
	Week 5	9	Alter Table, Add Drop, Rename, Modify a Column Statements queries.
		10	Operators in SQL Arithmetic Operators Logical Operators Comparison Operators Special Operators Set Operators
	Week 6	11	Constraints in SQL Not null, Unique, Default And check
		12	Complex queries Class task to run different queries.
	Week 7	13	Truncate, Drop, Delete database and table Difference b/w truncate drop and delete. QUIZ 2
		14	Practice complex queries
	Week 8	1 hours	Mid Term
	Week 9	15	SQL Alias
		16	Practice Queries Task
	Week 10	17	Group By , having& Order By queries, Assignment#2
		18	Introduction to Sub Queries Single Row subqueries
	Week 11	19	Multiple row subqueries All And Any Operators, Exist And Not Exist
		20	All Joins and their use. Simple Inner join Quiz#3
	Week 12	21	Outer join Left outer join Right outer join Self-Join.
		22	Functions in SQL Number Functions Aggregate Functions Character Functions Conversion Functions Date Functions
	Week 13	23	Store Procedures
		24	Triggers
	Week 14	25	Views
		26	Indexing
	Week 15	27	Backup and Recovery COMMIT ROLLBACK SAVEPOINT
		28	Xampp server installation Introduction to xampp
	Week 16	29	Database Connectivity Introduction to php and html
		30	Database connectivity using php
	Week 17	2 hours	Final Term
Laboratory Projects/Experiments Done in the Course			
Programming Assignments Done in the Course			

Instructor Name	Sajid Farooq
Instructor Signature	
Date	