Bahria University
Discovering Knowledge

**DEPARTMENT OF SOFTWARE ENGINEERING**

SPRING 2024, WEEKLY COURSE BREAKUP PLAN

## COURSE BASICS

Course Title**: Database Management Systems Lab (Lab)**
Course Code**: CSL 220**
Credit Hours**: 1**
Prerequisite**: CSL 113**
Class**: BSE - 4**
Section**: A/B/C**
Instructor**: Engr. Noor us Sabah**
Email**: noorussabah.bukc@bahria.edu.pk**

### COURSE OBJECTIVES AND DESCRIPTION:

This course is to focus on the technical aspects of database to provide a foundation in data management concepts. It includes representing information with the relational database model. Learn and apply the Structured Query Language (SQL) for database definition (DDL) and manipulation (DML). Create applications and connect them with backend (database).

### COURSE LEARNING OUTCOMES (CLO):

Upon successful completion of this course, students should be able to:

| CLO | Statement | Bloom's Taxonomy | Associated PLO |
|---|---|---|---|
| CLO 1 | Follow the instructions to implement guidelines related Structured Query Language (SQL) for database definition and manipulation in DBMS. | P3 | PLO5 |
| CLO 2 | Display project management skills and objective based approach to develop solutions in a teamwork environment. | A3 | PLO11 |
| CLO 3 | Show the ability to act upon a sequence of steps pertaining to designing databases, apply DML queries and use concepts like Stored procedures, triggers views etc in response to given scenarios. | P4 | PLO3,5 |
| CLO 4 | Display the spirit of self-reliance to complete the lab journal timely and professionally. | A3 | PLO8,9 |
| CLO 5 | Design & implement database projects according to the specific front-end and back-end requirements. | P4 | PLO5 |
| CLO 6 | Explain different concepts of Database Management System using DDL, DML queries, Stored procedures, Views, Triggers etc. | A2 | PLO10 |

**WEEKLY BREAKDOWN:**

| Week | Week Days | Tentative Course Plan |
|---|---|---|
| 1 | 12th Feb – 16th Feb | Querying Database table using select and where clause |
| 2 | 19th Feb – 23th Feb | Querying database table using order by , group by and aggregate functions |
| 3 | 26th Feb – 1st Mar | Joining queries |
| 4 | 4th Mar – 08th Mar | Self Joins and Relational set operators |
| 5 | 11th Mar – 15th Mar | Sub queries |
| 6 | 18th Mar – 22th Mar | Manipulate the structure of the table through DDL query |
| 7 | 25th Mar – 29th Mar | Constraints on Tables |
| 8 | 01st Apr – 05th Apr | **Open Ended Lab 01** |
| **9** | **8th Apr – 12th Apr** | **EID UL FITR** |
| **10** | **15th Apr – 21th Apr** | **MID TERM EXAM** |
| 11 | 22nd Apr – 26th Apr | Manipulate the data of the table through DML query and Creating indexes |
| 12 | 29th Apr – 03rd May (1st May Labour Day) | Views |
| 13 | 06th May – 10th May<br>11th Dec – 15th Dec | Stored Procedures |
| 14 | 13th May – 17th May | Control-of-flow statements in stored procedures |

| | | |
|---|---|---|
| 15 | 20th May – 24th May | Implementation of triggers in table |
| 16 | 27th May – 31th Dec | SQL connectivity and transactions , Rollup and cube |
| 17 | 3rd Jun – 7th Jun | **Open Ended Lab 02** |
| 18 | 10th Jun – 14th Jun | **Project Submission** |
| **19** | **17th Jun – 21st Jun** | **EID UL AZHA** |
| **20** | **21st Jun – 03rd Jul** | **FINAL TERM EXAM** |

***NOTE:***
**a.** This schedule is subject to revisions as conditions may warrant.
**b.** Topics will be covered in sequence no matter if city observes any planned or unplanned holidays.
**c.** The information in this course outline is subject to revision as conditions may warrant.

# LAB ASSESMENT METHOD

**METHOD OF EVALUATION AND STRUCTURE:**

A student's grade will be based on multiple measures of performance as mentioned below:

| **LAB EVALUATION** | |
|---|---|
| **EVALUATION INSTRUMENTS (EI)** | **MARKS** |
| **LAB WORK** | **70** |
| • **LAB PERFORMANCE**<br>• **OPEN ENDED LAB**<br>• **LAB JOURNAL** | **39**<br>**18**<br>**13** |
| **PROJECT** | **30** |
| • **DEMONSTRATION**<br>• **MANAGEMENT**<br>• **VIVA** | **15**<br>**10**<br>**5** |
| **Total:** | **100** |

***NOTE**: Any change in this scheme/format will be communicated well in time.*

## MAPPING OF CLOS TO PLOS (PROGRAM LEARNING OUTCOMES)

| PLOs | CLOs | | | | | |
|---|---|---|---|---|---|---|
| | CLO 1 | CLO 2 | CLO 3 | CLO 4 | CLO5 | CLO6 |
| PLO:1 (Engineering Knowledge) | | | | | | |
| PLO:2 (Engineering Problem Analysis) | | | | | | |
| PLO:3 (Designing and Development) | | | ✓ | | | |
| PLO:4 (Investigation) | | | | | | |
| PLO:5 (Modern tool usage) | ✓ | | | ✓ | | |
| PLO:6 (Engineer and Society) | | | | | | |
| PLO:7 (Environment and Sustainability) | | | | | | |
| PLO:8 (Professionalism and Ethics) | | | | | | |
| PLO:9 (Individual and Team Work) | | ✓ | | | | |
| PLO:10 (Communication) | | | | | | ✓ |
| PLO:11 (Project Management) | | | | | ✓ | |
| PLO:12 (Lifelong Learning) | | | | | | |

## MAPPING OF CLOS TO COURSE EVALUATION INSTRUMENTS (EI)

| EI | CLOs | | | | | |
|---|---|---|---|---|---|---|
| | CLO 1 | CLO 2 | CLO 3 | CLO 4 | CLO5 | CLO6 |
| Lab performance | ✓ | | | | | |
| Lab Journal | | ✓ | | | | |
| Project Management | | | | | ✓ | |
| Project Demonstration | | | ✓ | | | |
| Open Ended Labs 1 | | | | ✓ | | |
| Open Ended Labs 2 | | | | ✓ | | |
| Lab Project Viva | | | | | | ✓ |
| OEL 1 VIVA | | | | | | ✓ |

**GRADING SYSTEM:**

| Letter Grade | Grade Point | Percentage | |
|---|---|---|---|
| **A** | 4.0 | ≥ 85 | - |
| **A-** | 3.67 | ≥ 80 | < 85 |
| **B+** | 3.33 | ≥ 75 | < 80 |
| **B** | 3.00 | ≥ 71 | < 75 |
| **B-** | 2.67 | ≥ 68 | < 71 |
| **C+** | 2.33 | ≥ 64 | < 68 |
| **C** | 2.00 | ≥ 60 | < 64 |
| **C-** | 1.67 | ≥ 57 | < 60 |
| **D+** | 1.33 | ≥ 54 | < 57 |
| **D** | 1.00 | ≥ 50 | < 53 |
| **F** | 0.00 | - | < 50 |

***NOTE*****:** *The minimum consequence for submitting a plagiarized (copied) or falsified assignment, test, report, project, or any evaluated material will award zero marks on that material.*

## COURSE RESOURCES

**LAB INSTRUCTOR:**

**NAME: Eng. Noor us Sabah**

**DESIGNATION: Lab Engineer**

**EMAIL: noorussabah.bukc@bahria.edu.pk**

## COUNSELING HOURS

a. Students are encouraged to approach subject teacher beyond class hours to discuss academic or subject related problems.
b. Arrange and confirm an appointment through email at noorussabah.bukc@bahria.edu.pk for an available time slot.
c. Ensure your presence in your allocated time slot.