Course Outline:

Weeks	List of Topics
Lab-01	Introduction & History of Database Systems, Introduction of SQL
Lab-02	Basic SQL Schema and Statements, Arithmetic operators, Column Alias, Concatenation Operator, Where Clause, Comparison Operators & Conditions, Logical Conditions(AND, OR,NOT), Functions(count,max, min, Dates), Operators (Like, Rownum, In ,Between), Order by clause
Lab-03	DDL (create, alter, drop, truncate ,rename), Defining constraints on table, types of constraints, deferred constraint checking(chicken egg problem) and DML(Create ,insert, update ,delete)
Lab-04	Subqueries (Single Row, Multiple Rows and correlated), Groups of Data (Group by, Having
Lab-05	Joins, Types of Joins (Equality Joins, Non Equality Joins, Outer Joins and Self Joins), Set Operators (union, union all, intersection, minus).
Lab-06	Continuation of Joins (Lab-05)
Lab-07	Relational Modeling
Lab-08	MID EXAM
Lab-09	PL/SQL: Block Structure ,Variable & types, Conditional Logic ,Cursors ,Views ,Procedures &Functions)
Lab-10	Triggers
Lab-11	Connectivity: PHP with MYSQL, JAVA with MYSQL, C# with SQL Server
Lab-12	Transaction
Lab-13	MongoDB (Installation & Basics, Projections& Functions)
Lab-14	Revision
Lab-15	Final Exam

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Marks Distribution

Lab Activities	30%
Lab Mid Exam	20%
Lab Final Exam	50%
Total	**100**

<u>Deadline and Penalty</u>

- After the deadline for each lab activities, there will be a penalty of 25%. If the assignment submitted after first 48 hours, for each 48 hours it reduced to 25% hence there will be no marks after 8 days.
- Marks are only given if the submission passed plagiarism check and manual check.
- Plagiarism cases may be awarded an F grade.