**COURSE OUTLINE**

**Course Code: CSE 216**

**Course Title: Database Sessional**

**Level/Term: 2/2 Section: A+B**

**Academic Session: 2018-2019 (January 2020)**

**Course Outline:**

Oracle SQL: Selection, Aggregation, Join, Sub-query; Oracle DML and DDL Statements; Oracle PL/SQL: Functions, Triggers, and Procedures; Design of a Database; Designing and Implementing multi-platform Database.

**Learning Outcomes/Objectives:**

After undergoing this course, students should be able to:

i. Learn basic SQL statements in Oracle like selection, projection, filtering, and aggregation, and data manipulation statements like insert, update, and delete statements.

ii. Learn complex SQL statements like join and sub-query

iii. Learn Oracle PL/SQL Statements to write functions, procedures, and triggers.

iv. Design, analyze, and implement a database for a real-world system.

**Assessment (Tentative)**

1. Participation in lab classes and practice class performance - 10 %

2. Online Assessments - 40%

3. Term Project - 30%

4. Final Quiz - 20%

**Text and Reference books:**

a. *Oracle-SQL-PL-SQL - A Brief Introduction*, by Sukarna Barua [Reference]

b. *SQL, PL/SQL the Programming Language of Oracle by Ivan Bayross* [Reference]

**Weekly Schedule:**

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| **Week No.** | **Topic Name** |  |
| 1 | Outline with grading policy, Reference books, Oracle installation, Introducing HR schema |  |
| 2 | **Project group formation**  Database Design Lecture + Practice |  |
| 3 | **ERD Online**  **Project Finalization** Basic SQL Lecture |  |
| 4 | Basic/Advanced SQL Lecture + Practice  ERD Discussion | **RESTART**  **FROM HERE** |
| 5 | **ERD Submission + Presentation of Project [Evaluation]** |  |
| 6 | **Basic SQL Online [Evaluation]**  Advanced SQL Lecture + Practice |  |
| 7 | **Online on Advanced SQL [Evaluation]**  **Assignment submission: Designing database table for the assigned project**  Class on connection establishment (JAVA, PHP can be demonstrated) |  |
| 8 | **Project Milestone 1 Evaluation [Evaluation]**  Minimum Requirement: Presentation on Corrected Database Design, UI Design, Connecting with Database |  |
| 9 | PL/SQL Lecture + Practice |  |
| 10 | **PL/SQL Online [Evaluation]**  Discussion on project progress (if needed) |  |
| 11 | **Project and Assignment Update [Evaluation]**  Minimum Requirement: One module of the project is fully implemented |  |
| 12 | **Quiz** |  |
| 13 | **Term Project Final Submission + Presentation [Evaluation]** |  |
| 14 | **Reserved** |  |