General Information about the Instructor

Uğur Koç, kocugur@sabanciuniv.edu

Course Schedule

Saturday 13:00 - 16:00

Thursday 19:00 - 22:00

Course Objective

At the end of the course the learner is expected to be able to transform end user business requirements into E-R diagrams, hence be able to complete the conceptual design from requirements specifications. The logical design and physical design phases are also expected to be successfully done by the learner, moreover s/he is expected to be able to manage and administer an Oracle Database at the fundamental level.

Course Materials

Fundamentals of Database Management (Elmasri & Navathe)

Modern Database Management (Jeffrey A. Hoffer)

Oracle Online Documentation Library (https://docs.oracle.com/en/database/oracle/oracle-database/19/admin/index.html)

MySQL Online Documentation (https://dev.mysql.com/doc/refman/8.0/en)

PostgreSQL Online Documentation (https://www.postgresql.org/docs/13)

Course Outline

This course gives students hands-on practice and experience in database design and administration along with the fundamental concepts and techniques involved. Topics covered include the entity-relationship model, relational database theory, file structure, indexing and hashing, query processing, crash recovery, concurrency control/transaction processing security and integrity. Creation of tables, views, synonyms and indexes are examined in detail. The use of SQL is considered and highlighted with the help of examples, and used to build the underlying database of an application. Topics include Introduction to RDBMS, Database Creation and Modification, SQL, Event Programming; Database Architecture, Hardware Configuration and Consideration, Database Management, Managing Rollback Segments, Database Tuning, Database Security and Auditing, Backup and Recovery Procedures.

Grading

1 Midterm (30%)

1 Final (30%)

1 Project (40%)