TED UNIVERSITY, COURSE SYLLABUS

Faculty	Engineering	**Department**	CMPE

Course Code & Number	CMPE 232	**Course Title**	Relational Databases
Type of Course	☑ Compulsory ☐ Elective	**Semester**	☑Fall ☐ Spring ☐ Summer
Course Credit Hours	(3+0+0) 3	**Number of ECTS Credits**	5
Pre-requisite	N/A	**Co-requisite**	N/A
Mode of Delivery	☑ Face-to-face ☐ Distance learning	**Language of Instruction**	☑ English ☐ Turkish
Course Coordinator	Asst. Prof. Sinan Hanay	**Course Lecturer(s)**	Asst. Prof. Sinan Hanay
Required Reading	Fundamentals of Database Management Systems, 2nd Edition, Mark L. Gillenson	**Recommended Reading**	Fundamentals of Database Systems (6th Edition), Ramez Elmasri, Shamkant B. Navathe

Course Catalog Description	Database system concepts and architecture. Relational data model and SQL. Web database programming using PHP and MYSQL. Database normalization. Indexing.
Course Objectives	This course aims to teach fundamentals of database management systems (DBMS) with a focus on relational databases. We will cover the fundamentals of database management systems, conceptual modeling, relational model, database design principles, normalization and emerging technologies. Students will gain hands-on experience with a DBMS.
Course Learning Outcomes	1. Evaluate the differences between databases and file systems for data storage. 2. Understand functional dependencies and normalization, and their effect on performance. 3. Understand relational algebra, and write database queries in relational algebra. 4. Install and use a modern database management system. 5. Learn how to write complex SQL queries. 6. Understand how to model data using the entity-relationship model. 7. Design and implement a real-word database application.

Teaching Methods & Learning Activities	☑ Telling/Explaining ☐ Discussions/Debates ☐ Questioning ☑ Reading ☐ Peer Teaching ☐ Scaffolding/Coaching ☑ Demonstrating ☑ Problem Solving ☐ Inquiry ☐ Collaborating ☐ Think-Pair-Share ☐ Predict-Observe-Explain ☐ Microteaching ☐ Case Study/Scenario Analysis	☐ Simulations & Games ☐ Video Presentations ☑ Oral Presentations/Reports ☐ Concept Mapping ☐ Brainstorming ☐ Drama/Role Playing ☐ Seminars ☐ Field Trips ☐ Guest Speakers ☐ Hands-on Activities ☐ Service Learning ☐ Web Searching ☐ Experiments ☐ Other(s): .....
Assessment Methods (Formal & Informal)	☑ Test/Exam ☑ Quiz ☐ Oral Questioning ☐ Performance Project ☐ Written ☐ Oral	☐ Observation ☐ Self-evaluation ☐ Peer Evaluation ☐ Portfolio ☑ Presentation ☐ Other(s): .....

Student Workload (Total 154 Hrs)	☑ Lectures .....**42**.. hrs ☑ Course Readings .....**30**.. hrs ☐ Workshop ..... hrs ☐ Online Discussion ..... hrs ☐ Debate ..... hrs ☐ Work Placement ..... hrs ☐ Field Trips/Visits ..... hrs ☐ Observation ..... hrs ☐ Lab Applications ..... hrs ☐ Hands-on Work ..... hrs ☑ Quizzes .....**10** hrs ☑ Midterm I..... **15** hrs ☑ Midterm II.....**15** hrs ☑ Final.....**25** hrs	☐ Resource Review ..... hrs ☐ Research Review ..... hrs ☐ Report on a Topic ..... hrs ☐ Case Study Analysis ..... hrs ☑Oral Presentation .....**5** hrs ☐ Poster Presentation ..... hrs ☐ Demonstration ..... hrs ☐ Web Designs ..... hrs ☐ Mock Designs ..... hrs ☑ Team Meetings.....**12** hrs ☐ Other ..... hrs

COURSE POLICIES
I. Attendance
Attendance is not compulsory, but it will greatly improve your learning experience.
II. Missed Work
Make-ups for midterm and final exams will be provided if the student can provide a legal document confirming a life threatening health issue at the time of the examination.

III. Late Assignment Submission Policy

Late submissions will not be accepted.

VI. Plagiarism

All of the following are considered plagiarism

- turning in someone else's work as your own
- copying words or ideas from someone else without giving credit
- failing to put a quotation in quotation marks
- giving incorrect information about the source of a quotation
- changing words but copying the sentence structure of a source without giving credit
- copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not (www.plagiarism.org)
- asking quiz, activity or assignment questions on online places, such as stackoverflow.com.

Plagiarism is a very serious offense and will be penalized accordingly by the university disciplinary committee. The students who involve in any plagiarism activity will be forwarded to the discipline committee.

VII. Cheating

Cheating has a very broad description which can be summarized as "acting dishonestly". Some of the things that can be considered as cheating are the following:

- Copying answers on examinations, homework and laboratory works,
- Using prohibited material on examinations,
- Lying to gain any type of advantage in class
- Providing false, modified or forged data in a report
- Plagiarizing
- Modifying graded material to be re-graded.
- Causing harm to colleagues

VIII. Class Participation

Participation in class is not mandatory, though attending lectures will be helpful in your learning. Some lectures require you to attend to the lectures to earn some points.

COURSE ASSIGNMENTS

A. Mid-terms [40%]

20% for each mid-term

B. Quiz and Activities [20%]

2% for each quiz, there will be 4 quizzes throughout the semester.
2% for each activity, there will be 6 activities throughout the semester.

C. Project [15%]

D. Final Exam [25%]

TENTATIVE COURSE OUTLINE			
Week	**Topics**	**Readings**	**Assignments**
1	Introduction: Data		
2	Data Modeling		
3	Database Approach		
4	Database System Concepts		
5	SQL		
6	Midterm Exam		
7	Relational Database Model		
8	Relational Database Model (cont.)		
9	Logical Database Design		
10	Midterm Exam		
11	Database Administration		
12	The Data Warehouse		
13	Presentations		
14	Databases and Internet		
	FINAL EXAMS WEEK		