

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
DATABASES	EEE3249650	Spring Semester	3+2	4	8
Prerequisites Courses	VERİ YAPILARI				
Recommended Elective Courses	Object Oriented Programming and Algorithm Analysis				
Language of Instruction	English				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Elective				
Course Coordinator	Prof.Dr. Reda ALHAJJ				
Name of Lecturer(s)	Prof.Dr. Reda ALHAJJ				
Assistant(s)					
Aim	Understanding the concepts underlying the design and implementation of database systems. Establishing a solid background in data management, with a focus on relational database management systems and practicing actual database design, implementation, and query formulation through a term project.				
Course Content	This course contains; Database Management Systems, Relational Data Model ,Entity/Relationship Model, Relational Algebra, Structured Query Language, SQL ,Database Application Development, Relational Database Design, File Organization ,Tree-Structured Indexing ,Hash-Based Indexing, Query Processing, Query Optimization, Concurrency, Overview of Transaction Management.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
At the end of this course the student would have a solid background on database management systems and their underlying data structures and algorithms			12, 16, 2, 6, 9	A, E, F	
At the end of this course the student would be able to design databases using relational database methods and apply this knowledge to the real life applications.			12, 14, 2, 6, 9	A, E, F	
At the end of this course the student would learn the data structures underlying the database management systems and the access methods as well as the query processing that use them.			12, 14, 16, 9	A, E	
During this course students are going to learn the SQL language for interacting with the database management systems.			12, 14, 16, 9	A, E, F	
Teaching Methods	12: Problem Solving Method, 14: Self Study Method, 16: Question - Answer Technique, 2: Project Based Learning Model, 6: Experiential Learning, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, E: Homework, F: Project Task				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
0	Database Management Systems				
1	Relational Data Model				
2	Entity/Relationship Model				
3	Relational Algebra				
4	Structured Query Language, SQL				
5	Database Application Development				
6	Relational Database Design				
7	File Organization				
9	Tree-Structured Indexing				
9	Hash-Based Indexing				
10	Query Processing				
11	Query Optimization				
12	Concurrency				
13	Overview of Transaction Management				
Evaluation Methods		Weight(%)			
Midterm Exam		30			
General Exam		70			

Resources	
Database Management Systems, 3rd Edition, R. Ramakrishnan, J. Gehrke McGraw- Hill, 2003 The notes and the presentations will be delivered during the lectures.	