

Vocational School / Computer Programming

2024 - 2025 Academic Year

DATABASE PROGRAMMING I

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
DATABASE PROGRAMMING I	BPR1114984	Fall Semester	4+0	4	7
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	Turkish				
Course Level	Short Cycle (Associate's Degree)				
Course Type	Required				
Course Coordinator	Lect. Nada A. M. MISK				
Name of Lecturer(s)	Lect. Hamit BİÇER				
Assistant(s)	Microsoft SQL Server				
Aim	Students should understand the concept of a database and that a database is the basic element of a software. To teach SQL language effectively to students and to teach the platforms that will use this language to students to introduce them to the world is one of the objectives of the course.				
Course Content	This course contains; General information about database systems. Database types and usage areas, Entity Relational Model, Relational Model, Object Oriented Database Design Concepts. Types of Relationships between Entities One to One, One to Many, Many to One, Many to One, Many to Many relationships., Database schema design Primary key, attribute, record concepts. Design and importance of auxiliary tables. Entity tables, Relationship tables. . Schema design for concurrent access., Normalization, Prevention of Data Repetition , Applied database design, Applied Database Design, SQL: Select, union, distinct, where, having, group by concepts and sample queries., Stored Procedure, Functions, Cursor ,Tigers, User and role definitions, General Review.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
Learns the concept of database and file systems. Understands the advantages of VTYS.			17, 9	A, E, F, G	
Schematically builds the entity relational model for any software			14, 17, 9	A, E, F, G	
Makes queries on the database with SQL language			12, 14, 17, 6, 9	A, E, F, G	
C# uses SQL language embedded in languages such as VB			11, 12, 16, 17, 6, 9	A, E, F, G	
Designs web-based database applications			10, 16, 17, 8, 9	A, E, F, G	
Analyzes the whole by looking at the software from the database point of view			10, 11, 17, 9	A, E, F	
Teaching Methods	10: Discussion Method, 11: Demonstration Method, 12: Problem Solving Method, 14: Self Study Method, 16: Question - Answer Technique, 17: Experimental Technique, 6: Experiential Learning, 8: Flipped Classroom Learning, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, E: Homework, F: Project Task, G: Quiz				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	General information about database systems. Database types and usage areas				
2	Entity Relational Model, Relational Model, Object Oriented Database Design Concepts. Types of Relationships between Entities One to One, One to Many, Many to One, Many to One, Many to Many relationships.				
3	Database schema design Primary key, attribute, record concepts. Design and importance of auxiliary tables. Entity tables, Relationship tables. . Schema design for concurrent access.				
4	Normalization, Prevention of Data Repetition				
5	Applied database design				
6	Applied Database Design				
7	SQL: Select, union, distinct, where, having, group by concepts and sample queries.				
8	Stored Procedure				
9	Functions				
10	Cursor				
11	Tigers				
12	User and role definitions				
13	General Review				
Evaluation Methods		Weight(%)			
Midterm Exam		40			
General Exam		60			

Resources

[1] Database Management Systems, R. Ramakrishnan, J.Gehrke, Second Edition – Mc Graw Hill.

[2] Database System Concepts, A. Silberschatz