

Course Name : Databases							
Course Code	Course Type	Regular Semester	Lecture (hours/week)	Seminar (hours/week)	Lab. (hours/week)	Credits	ECTS
CMP 217	B	Fall	3.00	0.00	1.00	3.50	5.00
Lecturer		Klevis Topi, Msc					
Assistant							
Course language		Albanian					
Course level		Bachelor					
Description		This course provides the necessary theoretical and practical foundations for relational database management systems. It also covers data analysis and modeling using entity-relationship techniques, relational theory and normalization, and the SQL language.					
Objectives		Get ready to acquire some seriously marketable programming skills! You can't consider yourself a complete end to end developer until you can code in SQL. Today, data has become the hottest topic in technology and a company's biggest asset is their data. All databases require the language SQL to store and retrieve data. The great thing is, for this course, you do not need any prior experience in programming what so ever. SQL is a different animal and we're going to demystify the language from scratch and prepare you with plenty of progressively challenging assignments so that by the time you've completed the course, you can call your self an Oracle SQL Master! Oracle is the most popular relational database in the world!					
Core Concepts		Basics of Tables SELECT and WHERE Clause WHERE, AND & OR with Operators BETWEEN, IN and NULL Single Table Queries Single Row Functions Grouping Functions GROUP BY and HAVING Clause Joins Inner and Outer Joins EXISTS & NOT EXIST Operators Creating Your Own Tables Using ALTER Creating Tables with SELECT & UPDATE Data DELETE, TRUNCATE, and DROP Commands					
Course Outline							
Week	Topic						
1	Introduction to Database Systems, Database System Concepts						
2	Entity-Relationship Model						
3	Enhanced Entity Relationship Model						
4	Relational Data Model						
5	Relational Algebra I						
6	Relational Algebra II						
7	Normalizing a database						
8	Midterm						
9	Introduction to SQL						
10	DML data manipulation instructions						
11	More DML instructions, DDL table creation instructions						
12	Introduction to MySQL, database design in MySQL						
13	Tables in MYSQL						
14	Retrive data from tables using MySQL statements						

15	Database Programming			
16	Final Exam			
Prerequisites		The student must attend the course at a minimum rate of 75%.		
Literature		• Ch. FEHILY, SQL – Third Edition, 2008 • Jay Greenspan and Brad Bulger, ‘MySQL/PHP Database application’, 2001, Published by M&T Books • Emasri, Navathe, “Fundamentals of Database Systems”, 2011 sixth edition, Addison Wesley.		
References		• Alba Como, Xheni Melo, Menaxhimi bazë të dhënash, 2018, EneaS, Tiranë.		
Course Outcome				
1	The student manages to create a simple database			
2	The student manages to make simple queries in the database			
3	The student is introduced to the basic components of an RDBMS			
Course Evaluation				
In-term Studies		Quantity	Percentage	
Midterms		1	15	
Quizzes		2	20	
Projects		0	0	
Term Projects		0	0	
Laboratory		0	0	
Class Participation		1	5	
Total in-term evaluation percent			40	
Final exam percent			60	
Total			100	
ECTS Workload (Based on Student Workload)				
Activities		Quantity	Duration (hours)	Total (hours)
Course duration (Including the exam week: 16x Total hours of the course)		16	4	64
Study hours outside the classroom (Preparation, Practice, etc.)		14	4	56
Duties		0	0	0
Midterms		1	2	2
Final Exam		1	2	2
Other		0	0	0
Total Work Load				124
Total Work Load / 25 (hours)				4.96
ECTS				5.00