Course title :

Course Basic Information	
Academic Unit:	Faculty of Civil Engineering
Course title:	Database technology
Level:	Bachelor
Course Status:	Mandatory
Year of Study:	Year 1, Semester 2
Number of Classes per Week:	2+2
ECTS Credits:	6
Time /Location:	According to the Timetable
Teacher:	Prof.Asoc.Dr. Bashkim Idrizi
Contact Details:	Bashkim.idrizi@uni-pr.edu + 377 45 341 098

Course Description:	Database definition. The data, information, information systems, organizational system. Data models, management system database. The design of the database: conceptual, design implementation and physical. The hierarchical network, relational, object orientation. Entities and relations. Integrity of data. Interrogative SQL language. SQL data types, definition of SQL. Manipulation of data in SQL.
Course Goals:	Fundamentals of modern databases and geospatial data. The basic benefit of using individual software packages (software) free and commercial databases (relational model, ER model). Achieved basic knowledge of the concepts of databases that will become industry standard at the start of his professional career (object-relation of the database.
Expected Learning Outcomes:	1. After completion of this course the student should have knowledge about theory of databases; 2. To understand the characteristics of databases; Examine some interesting; 3. Define the term database management system (DBMS) as well and explains the functions of the DBMS; 4. Understands SQL database.

Student Workload (should be in compliance with student's Learning Outcomes)			
Activity	**Hours**	**Day/ Week**	**Total**
Lectures	2	15	30
Theory/ Lab Work/Exercises	2	15	30
Practical Work			
Study for intermediate test	1	13	13
Consultations with the teacher	1	15	15
Field Work			
Test, seminar paper	4	2	8
Homework	1	13	13

Self-study (library or home)	1	13	13
Preparation for final exam	1	15	15
Assessment time (test, quiz, final exam)			
Projects, presentations, etc.	1	15	15
Total			**152**

Teaching Methods:	Lecture with Power Point presentations, discussions, exercises, workshops, seminar semester with concrete tasks, discussions during lectures, essays semester with the topic, testing etc.
Assessment Methods:	Participation in lectures and exercises: 10% Working seminar: 10% First colloquium: 15% Second Colloquium: 15% Final exam: 60% Total: 100%

Primary Literature:	1. Geodateninfrastruktur: Grundlagen und Anwendungen / Bernard; Fitzke ; Wagner (Hrsg.). - Heidelberg: Wichmann, 2005. - XIV, 311 S. . - ISBN 3-87907-395-3
Additional Literature:	1. Kabashi, I. (2010): Baza e të dhënave, PP-Prezentim. 2. Kroenke, David M.: Database processing: fundamentals, design, implementation / David M. Kroenke. - 4. ed. . - New York, NY: Macmillan, 1992. - XXVIII, 659 S

Designed teaching plan	
Week	**Title of the Lecture**
Week 1:	Introduction to database (BDH), the content and purpose of the course, basic concepts and definition, BDH model. Creating a new database
Week 2:	Types of Data BDH-s motivation and definition, data model
Week 3:	Searching data, indexing data
Week 4:	Entity and attribute, primary key
Week 5:	ER-shame: Model of the entity and relationships
Week 6:	Data model: hierarchical, relational, of the net. Normal forms, relational algebra
Week 7:	SQL structural interrogative: History, basic data types in SQL, DDL, DML.
Week 8:	The system for managing databases. First evaluation The qualifying first colloquium
Week 9:	Relational algebra
Week 10:	Transactions, consistency and security
Week 11:	The object database, relational model deficiencies
Week 12:	Internal navigation database
Week 13:	Object-relation of databases, spatial data
Week 14:	UML hierarchy, geometric data types.
Week 15:	Basics inferential data Second evaluation

	The qualifying second colloquium
Academic Policies and Code of Conduct	

- The teacher sets the criteria for regular attendance at lectures and exercises and rules of etiquette as: quieting in the lesson, disconnection of mobile phone, entrance in lesson in time, mutual respect, and application of the principle one speaks everyone listens etc.

Note | If a student has more than 3 class assignements evaluated below 50% he/she loses the right on taking the final exam. Evaluation is done from 0-100 %.