Course Unit Descriptor

Study Programme: Information Systems Engineering
Course Unit Title: Database Design
Course Unit Code: IZOO20
Name of Lecturer(s): Ristić Sonja
Type and Level of Studies: bachelor
Course Status (compulsory/elective): compulsory
Semester (winter/ summer): winter
Language of instruction: english
Mode of course unit delivery (face-to-face/distance learning): face-to-face
Number of ECTS Allocated: 5
Prerequisites: none
Course Aims:. Acquiring in-depth knowledge in the field of contemporary data base systems, data base design techniques and involvement into real data base design project.
Learning Outcomes: By the end of the course, students should be able to: demonstrate understanding of the principles of database systems generally and the Entity-relational and the relational database models specifically; explain the basic principles and common trade-offs in designing a relational database, and to design it; set up, query, and update a relational database using interactive SQL.
Syllabus. Development of procedures for data management and data base concept. Fundamental concepts and characteristics of data models. Entity Relationship (ER) data model. Relational data model. Classification and types of constraints in relational data model. Functional dependencies and equivalent keys of relation scheme. Update anomalies. Normal forms. Techniques for relational data base schema design. Structured Query Language (SQL) for data definition and data manipulation.
Required Reading: Relevant literature in English, tbd

Weekly Contact Hours:2	**Lectures: 3**	**Practical work: 0**

Teaching Methods: Lectures; laboratory exercises; individual consultations; team work on the design of conceptual data base schema; individual work (assignments). Students are encouraged to communicate, to reason critically, to work independently and to contribute actively to teaching process.
Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Attendance			
Computer exercises			
Tests (4x)			