

Study programmes: Bachelor studies - Informatics				
Course name: R273 - Database Design				
Lecturers: Gordana Pavlović-Lažetić and other lecturers at Department of computer Science				
Status: Compulsory				
ECTS: 6				
Attendance prerequisites: P100, P101, R270, M106				
Course aims: Master the the complete process of database design and train for the application of various database design methods.				
Course outcome: After completion of the course, the student mastered the process of database designing, from conceptual, through logical and physical model, to the design of database security. Student gained experience in applying the techniques of normal forms and semantic modeling and the knowledge to assess the significance and the applicability of different physical models.				
Course content: Entity-relationship model and its application in database design. Theory of functional dependencies and normal forms. Applications in designing relational databases. Database physical organization - files, indexes, memory. Workload and physical model. Construction, updating and searching of B, B+, B* trees. Database design tools. Introduction to the NoSQL databases.				
Literature: 1. Ramakrishnan Raghuram, Gehrke Johannes, Database Management Systems, McGraw-Hill Companies, 2003 2. G. Pavlović-Lažetić: Relational Databases, Faculty of Mathematics, Belgrade, 1999. (The lecturer can choose another relevant current literature)				
Number of hours: 5	Lectures: 2	Tutorials: 3	Laboratory: -	Research: -
Teaching and learning methods: Frontal lectures, group and individual tutorials and exercises.				
Assessment (maximal 100 points)				
Course assignments	points	Final exam	points	
Lectures	-	Written exam	-	
Exercises / Tutorials	-	Oral exam	-	
Colloquia	40	Written-oral exam	60	
Essay / Project	-			