Study programmes: Bachelor studies - Informatics	
Course name: R270 - Relational Databases	
Lecturers: Nenad Mitić and other lecturers at Department of computer Science	
Status: Compulsory	
ECTS: 6	
Attendance prerequisites: P100, M105	
Course aims: An introduction to database systems concepts and techniques	

Course outcome: After completion of the course, the student mastered the fundamental concepts of database systems and techniques of data modeling. Student gained experience in using interactive SQL.

Course content:
 - Database systems: history, motivations and components.
 - Database management systems; functions, architecture, data independence.
 - Relational model of data; relational algebra and relational calculus
 - Domains, relations, types. Missing data.
 - Database query languages; overview; SQL. DDL, DML, DCL.
 - Triggers, views, user defined functions. Recursive SQL.
 - Integrity and security in relational databases. Keys.
 - An introduction to relational database design; functional and multi-valued dependencies. Normal forms; normalization.
 - An introduction to Xquery and SQL/XML

Literature:
C.J.Date: SQL and Relational Theory: How to Write Accurate SQL Code (2nd edition), O'Reilly 2012
2. C.J.Date: Database Design and Relational Theory, O'Reilly 2012
3. C.J.Date: An Introduction to Database Systems, VIII ed, Addison Wesley Inc, 2004
4. Г.Павловић-Лажетић: Relational Databases, Faculty of Mathematics, Belgrade, 1999.
5. DB2 materials
(The lecturer can choose another relevant current literature)

Number of hours: 5	Lectures: 3	Tutorials: 2	Laboratory: -	Research: -

Teaching and learning methods: Frontal lectures, group and exercises

Assessment (maximal 100 points)			
Course assignments	**points**	**Final exam**	**points**
Lectures	-	Written exam	-
Exercises / Tutorials	-	Oral exam	-
Colloquia	30	Written-oral exam	70
Essay / Project	-		