

Course title: Databases
Course code: 62036
ECTS credits: 8
Requirements: None
Basic information
Level of studies: Undergraduate applied studies
Year of study: 1
Trimester: 2, 3
Goal: Introduction to data models, a relational model in particular, as well as the standard (ANSI) SQL language. Basic knowledge of the logical and physical levels of databases. Simple databases design and implementation.
Outcome: Students should be able to use the standard SQL language in creating and manipulating a database, apply specific tools for working with a database, design and implement simple databases. Students should be able to participate in the design and implementation of the project, individually or in a team, with full responsibility in the process of database design and administration.
Contents of the course
Theoretical instruction
1.The concept of a database. The main functions of a database management system (DBMS), Importance of data modeling and data models - relational model
2. Basic concepts from data structure and data model. SQL Basics: Data types, syntax rules
3. SELECT Queries
4. Operators and functions
5. Data grouping
6. Joins
7. Subqueries
8. Database integrity constraints
9.Functional dependences and normal forms
10.Mapping from conceptual to physical model
Practical instruction (Problem solving sessions/Lab work)
1. The concept of a database. The main functions of a database management system (DBMS).

2. Basic concepts from data structure and data model. SQL Basics: Data types, syntax rules
3. SELECT Queries
4. Operators and functions
5. Data grouping
6. Join
7. Subqueries
8. Database integrity constraints
9. Functional dependences and normal forms
10. Mapping from conceptual to physical model
Textbooks and References
1. Chris Fehily, Visual Quickstart Guide SQL, (ISBN: 0-321-33417-5), Peachpit Press, 2005
2. V. Blagojević, Relacione Baze Podataka, Klub NT, 1998
3. B. Lazarević, Z. Marjanović, N. Aničić, S. Babarogić, Baze Podataka elek, Fakultet Organizacionih Nauka, Beograd, 2003
4. R. Ramakrishnan, J. Gehrke, Database Management Systems, McGraw-Hill Education, New York, 2003
5. Rebecca M. Riordan, Designing effective database systems, Boston : Addison-Wesley, 200
Number of active classes (weekly)
Lectures: 4
Practical classes: 4
Other types of classes:
Grading (maximum number of points: 100)
Pre-exam obligations: Points
Activities during lectures:
Activities on practical exercises:
Seminary work:
Colloquium: 70
Final exam: Points
Written exam: 30
Oral exam:
Lecturer
Danica Mamula Tartalja, PhD
Associate
Ksenija Lazić, Dimitrije Borčanin

