



UNIVERSITY OF PRIZREN
FACULTY OF COMPUTER SCIENCE

PROGRAM: Software Design

| Curriculum - – SYLLABUS | | | | | | | |
|--------------------------------|----------|--|----------------|-----------------------|-------------------------------|---------------------|------------------|
| <i>Level of studies</i> | | BACHELOR | <i>Program</i> | SD | <i>Academic year</i> | 2017/18 | |
| <i>SUBJECT</i> | | Database system | | | | | |
| <i>Year</i> | II-nd | <i>Status Of the subject</i> | Obligatory | <i>Code</i> | 302 | <i>ECTS credits</i> | 6 |
| <i>Semester</i> | III - rd | | | | | | |
| <i>Teaching weeks</i> | | 15 | | <i>Hours teaching</i> | | 60 | |
| | | | | | | <i>Lectures</i> | <i>Exercises</i> |
| | | | | | | 2 | 2 |
| <i>Teaching Methodology</i> | | Lectures, exercises, seminar papers, consultations, tests. | | | | | |
| <i>Consultation</i> | | One hour / week | | | | | |
| <i>The teacher</i> | | MSc.Ass. Ziriye Hasani PhD.c. | | <i>E-mail:</i> | ziriye.hasani@uni-prizren.com | | |
| | | | | <i>Tel.:</i> | | | |
| <i>Assistant</i> | | | | <i>E-mail:</i> | | | |
| | | | | <i>Tel.:</i> | | | |

| Study goal and table of content | Benefits of student |
|--|---|
| <p>The aim of the course is to intraduce students to the basic concepts of databases, structured data, data models, architectural levels, relations databases, relational algebra, data integrity, normalization, processing transactions , distributed databases.</p> | <p>After completing the course the student is expected to be able to: Practice and theory uses basic knowledge in data, to understand the purpose and practical benefits of using databases, to understand what they are structured data and patterns data, relational databases, normalization, processing transactions.</p> <p>As a final work of all accumulated knowledge should realize a practical project that is building a database.</p> |

| Methodology for the implementation of educational topics: | | |
|--|-----------------------|--------------------|
| Topics teaching will be accomplished through hours of lectures and exercises where the exercises will practice all theoretical knowledge database built on SQL Server. | | |
| Conditions for realization of educational topics: | | |
| In practice hours must have computer and install the Microsoft SQL Server | | |
| Ways of assessing of the student (in %) : | Evaluation in% | Final grade |
| Table with details of the manner of evaluation: | 0-50% | 5 |
| | 51-60% | 6 |
| | 61-70% | 7 |
| | 71-80% | 8 |
| | 81-90% | 9 |
| | 91-100% | 10 |

| Activity | Percentage |
|---------------|------------|
| Final project | 20% |
| Homework | 20% |
| Attendance | 5% |
| Colloquia 1 | 25% |
| Colloquia 2 | 30% |
| Total | 100% |
| Total | |

| Obligations of student: | |
|---|---|
| Lectures | Exercises |
| Must be active during the lectures with questions and comments. | Be active during exercises performed tasks. It will also have two tasks at home? That includes 15% of the evaluation and one final project that includes 20% of the assessment. |

| Student workload for Subject | | | |
|---|-------------|--------------------|------------|
| Activities | Hour/ weeks | Days/Weeks | Total |
| Lectures | 3 | 15 | 45 |
| Laboratory exercises | 2 | 15 | 30 |
| Contacts with teachers / consultations | 1 | 5 | 5 |
| Practical work | 1 | 2 | 2 |
| Projects, presentations, etc. | 1 | 2 | 2 |
| Own study time | 3 | 15 | 45 |
| Preparation for final exam | 3 | 5 | 15 |
| Time spent in the assessment (tests, final exam, etc.) | 2 | 3 | 6 |
| Notice: 1 ECTS credits= 25 hour commitment, e.g. if the subject has 6 ECTS credits student must have 150 hours during the semester commitment. | | Total load: | 150 |

| Week | Lectures | Hour | Exercises | Hour |
|------|---|------|--|------|
| | Topic | | Topic | |
| 1 | Introduction to the basics about data-review of systems databases | 2 | Introduction to the basics about data- review of systems databases | 2 |
| 2 | Introduction to database design - Design of ER-Diagrams | 2 | Introduction to database design - Design of ER-Diagrams | 2 |
| 3 | Introduction to database design - Design of ER-Diagrams - part 2 | 2 | Introduction to database design - Design of ER-Diagrams - part 2 | 2 |
| 4 | Related entity ER Model - Model (Obligations in participation) | 2 | Related entity ER Model - Model (Obligations in participation) | 2 |
| 5 | Relational model | 2 | Relational model | 2 |
| 6 | Transformation of E-R model in Relational Model | 2 | Transformation of E-R model in Relational Model Submission of exercise 1 before Colloquia | 2 |

| | | | | |
|----|--|---|--|---|
| | | | 1 | |
| 7 | Colloquia 2 | 2 | Colloquia 2 | 2 |
| 8 | Refining the schema and normal forms | 2 | Refining the schema and normal forms | 2 |
| 9 | Refining the schema and normal forms - part 2 | 2 | Refining the schema and normal forms - part 2 | 2 |
| 10 | Transfer of conceptual model in SQL | 2 | Transfer of conceptual model in SQL | 2 |
| 11 | Maintain dependencies during decomposition | 2 | Maintain dependencies during decomposition | 2 |
| 12 | Relational algebra | 2 | Relational algebra | 2 |
| 13 | Language SQL- physical implementations databazēs- Establish database (insert, update, delete) Submission of duty 2 before kollokfimit 2 | 2 | Language SQL- physical implementations databazēs- Establish database (insert, update, delete) Submission of exercise 2 before Colloquia 2 | 2 |
| 14 | Colloquia 2 | 2 | Consultation | 2 |
| 15 | Project presentation | 2 | Project presentation | 2 |

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| LITERATURE: |
| <p>Basic Literatur :</p> <ol style="list-style-type: none"> 1. Raghu Ramakrishnan and Johannes Gehrke. <i>Database Management System</i>. McGraw-Hill Companies 3-th edition. 2. Toby Tecrey, Sam Lightstone and Tom Nadeau. Database Modeling and Design - Logical Design (4th ed). <p>Additional Literature:</p> <ol style="list-style-type: none"> 1. Ramez Elmasri and Sham Navathe. <i>Fundamentals of database Systems</i> (6th Edition) 2. Codd E.F. The Relational Model for Database Management Version 2 3. S. Sumathi and S. Esakkirajan. Fundamentals Of Relational Database Management Systems. Springer , 2007. |
| NOTICE: |

- In general presentations of lectures will be made through Power Point system, table, use of materials and computer software and the Internet.
- Also, the professor will be provided additional materials (papers, publications, national bulletins and sound research findings and final).
- During each session, will be organized conversations with students.

Notice for the student:

The students are required to be regular in the lectures and exercises.

The contribution of the students in the form of conversation with the students will be evaluated.

Arrival time at lectures and exercises is mandatory.

Students are expected to behave in a professional and courteous. Students can discuss the laboratory tasks in general with other students, but the solution must be done individually. Method of grading should be same residence for all students. Students do not need to replicate a solution to another person, by any other book or other source (eg web pages), but the solution must be the original of his own. The same rules are for homework and projects or seminary. Copying someone else's work will not be tolerated. Professors will report every violation of the rules of Commission for plagiarism.