UNIVERSITY OF MITROVICA "ISA BOLETINI"

Course Curriculum Model (Syllabus)		
Faculty:	Faculty of Mechanical and Computer Engineering	
Department:	Computer Science and Engineering	
Level:	VI	
Code of the course:	303-CSE	
Course:	Database Management	
Course Status:	Obligatory	(mandatory)
Semester:	V	(winter)
Number of hours per week:	2+2	
ECTS:	6	
Time / location:		
Year of studies:	III	
Lecturer:	Ass. Besmir Sejdiu, PhD Cand.	
Assistant:		
Contact details:	Lecturer	Assistant
Email:	besmir.sejdiu@umib.net	
Tel:		

Content	This course exposes the students to the design and implementation of database systems. Topics covered include definition of a database and benefits of database systems, architecture for database systems, implications of file organization and storage structures, hierarchical and network data models, relational data model, data structures and integrity rules, database design, relational algebra and relational calculus. In the lab session student will write sql statements to practice DDL and DML.
Purpose	Focuses on concepts and structures necessary to design and implement a database management system. Various modern data models, data security and integrity, and concurrency are discussed. An SQL database system is designed and implemented as a group project.
Accessibility	• Explain the different models of database, • Design models from specifications and interpret them into relational tables, • Write statements for data creation and manipulation purposes, • Optimize databases to the most efficient form, • Distinguish and use relational model and relational algebra, • Identify and fix the possible problems that may occur in securing data • Use sql statement to create and manipulate database and its relations

Program	weeks	Lecture
	First week:	Introduction to Databases
	Second week:	The Relational Model and Languages
	***Third week*:**	Relationale Algebra and Relational Calculus
	Fourth week:	SQL: Data Manipulation
	Fifth week:	Database Planning, Design, and Administration
	***Sixth week*:**	Data Administration and Database Administration
	Seventh week:	Entity-Relationship Modeling
	Eighth week:	Enhanced Entity-Relationship Modeling
	***Ninth week**:*	Normalization
	***Tenth week**:*	More on Functional Dependecies
	***Eleventh week**:*	Methodology-Conceptual Database Design
	Twelfth week:	Database Security
	Thirteenth week:	Transaction Managment
	Fourteenth week:	Overview of Query Procesing
	Fifteenth week :	Distributed DBMSs – Concpets and Design

Literature	**Principal literature:** 1. Abraham Silberschatz, Henry F. Korth, S. Sudarshan. 2005. Database System Concepts (5th ed). **Recommended Literature:** 2. Ramez Elmasri, Shamkant B. Navathe. 2006. Fundamentals of Database Systems (5th ed). ISBN-10 0321369574. 3. Connolly T.M. and Carolyn E. Begg. 2015. Database Systems: A Practical Approach to Design, Implementation and Management, 5e. 4. Database Processing. Fundamentals, Design and Implementation by David M. Kroenke 5. Ronald R. P. & Ryan K.S., Teach Yourself SQL in 24 Hours, 2nd Ed., Sams Publushing, 2000 6. Peter Rob & Carlos Coronel, Database Systems: Design Implementation and Management, 3rd Ed., Thomson Course Tech. 1997 7. Richard T. Watson, Data Management: Database and Organizations, 4th Ed., Jhon Wiley & Sons, 2004
Teaching methodology	Lecture, Tutorials, Assignments, Lab Experiments, Lab Report and presentation.

Contribution to student workload (which should correspond to student learning outcomes - 1 ECTS credit = 25 hours)

Activity	Hours	Days/weeks	Total
Lectures	2	15	30
Exercise sessions (with TA)	2	15	30
Practical work	0	0	0
Office hours	1	15	15
Fieldwork	0	0	0
Midterms, seminars	2	2	4
Homework	2	2	4
Self-study	1	20	20
Final exam preparation	2	9	18
Time spent in exams	2	1	2
Projects, presentations, etc	2	1	2
Total			**125**

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<tr><td>Evaluation</td><td>
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<tr><td colspan="2">Teaching methodology:
(according to the Statute and Regulation for studies of UMIB)</td></tr>
<tr><td>Tests / Colloquia</td><td></td></tr>
<tr><td>Practical test during exercises</td><td>40%</td></tr>
<tr><td>Seminary work</td><td>20%</td></tr>
<tr><td>Interpretation and presentation of artistic creativity and other works</td><td>-</td></tr>
<tr><td>Assignments and other courses during the semester</td><td></td></tr>
<tr><td>Professional activities</td><td>-</td></tr>
<tr><td>Others (specify) -</td><td>-</td></tr>
<tr><td>Final exam</td><td>40%</td></tr>
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Mitrovica

Course provider:

Ass. Besmir Sejdiu, PhD Cand.

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(Signature)