



UNIVERSITY OF PRIZREN
FACULTY OF COMPUTER SCIENCE

PROGRAM: Master

Curriculum -- SYLLABUS							
<i>Level of studies</i>	Master	<i>Program</i>	Master	<i>Academic year</i>	2017/2018		
<i>SUBJECT</i>	Advanced data modelling and databases						
<i>Year</i>	III	<i>Status Of the subject</i>	Obligatory	<i>Code</i>	M103	<i>ECTS credits</i>	6
<i>Semester</i>	V						
<i>Teaching weeks</i>	15		<i>Hours teaching</i>	30	<i>Lectures</i>	<i>Exercises</i>	
					15	15	
<i>Teaching Methodology</i>	The subject will be organised with lecture and exercises in laboratory						
<i>Consultation</i>	Every week						
<i>The teacher</i>	Prof.Asoc.Dr.Samedin Krrabaj	<i>E-mail:</i>	Samedin.krrabaj@uni-prizren.com				
		<i>Tel.:</i>					
<i>Assistant</i>	MSc.Ass. Ziriye Hasani PhD.c.	<i>E-mail:</i>	ziriye.hasani@uni-prizren.com				
		<i>Tel.:</i>					

Study goal and table of content	Benefits of student
Databases according to domain and time. Concepts of database modelling and database design as a part of information system life cycle. Advanced database modelling. Advanced SQL. Transaction Systems. Database management systems and tuning. Organizational memory technologies. Data management and administration. Coordination of stakeholders, requirements and planning. Master data and master data management. Latest IT and databases.	Will be able to model advanced database, will have exercises with PostgreSQL etc.

<i>Methodology for the implementation of educational topics:</i>		
Lectures will be presented with Powerpoint and exercises will be held in laboratory.		
<i>Conditions for realization of educational topics:</i>		
To present lectures is needed projector. NAd for exercises is needed Microsoft SQL server, PostgreSQL and MangoDB.		
<i>Ways of assessing of the student (in %) :</i>	<i>Evaluation in%</i>	<i>Final grade</i>
<i>Obligations of student:</i>		
Presents	5%	0-50% 5 51-60% 6 61-70% 7
Homework	10%	71-80% 8 81-90% 9
Individual Project	15%	91-100% 10

Final Project	20%			
Final test	50%			
TOTAL	100%			
Lectures		Exercises		
Activities	Hour/ weeks	Days/Weeks		
Homeworks	3	3 weeks	9	
Final Project	3	15 weeks	45	
Test 1	2.5	7 weeks	17.5	
Test 2	2.5	7 weeks	17.5	
Lecture	2	15 weeks	30	
Exercise	2	15 weeks	30	
Final project presentation	1	1 day	1	
Time spent in the assessment (tests, final exam, etc.)				
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	
	Topic		Topic	
1	Introduction	2	Introduction	2
3	Advanced data modeling and phases for modeling database	2	Exercise	2
5	Integration of ER diagrams	2	Exercise	2
7	Normalization	2	Exercise	2
9	Organization of memory and index	2	Exercise	2
11	B+ tree index	2	Exercise	2
13	Advanced SQL	2	Exercise	2
15	NoSQL	2	Exercise	2
	Stored procedurat, triggers etc.	2	Exercise	2
	TemporalDB	2	Exercise	2

	XML Dinamic database	2	Exercise	2
	XML Relationar algebra	2	Exercise	2
	Real time big data analytic	2	Exercise	2
	Final Test	2	Exercise	2
	Project presentation	2	Project presentation	2

LITERATURE:
<p><i>1. Data Modeling and Database Design by Richard W. Scamell and Narayan S. Umanath</i></p> <p><i>Database Modeling and Design, Fifth Edition: Logical Design (The Morgan Kaufmann Series in Data Management Systems... by Toby J. Teorey, Sam S. Lightstone, Tom Nadeau and H.V. Jagadish (Feb 24, 2011)</i></p>
NOTICE:
<ul style="list-style-type: none"> • 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:
<p>The students are required to be regular in the lectures and exercises.</p> <p>The contribution of the students in the form of conversation with the students will be evaluated.</p> <p>Arrival time at lectures and exercises is mandatory.</p> <p>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.</p>

Signature:

Zirije Hasani
