INTERNATIONAL UNIVERSITY OF SARAJEVO
FACULTY OF ENGINEERING AND NATURAL SCIENCES
CS306 - Database Management
AY 2019-2020

Course Code	Course Title		Weekly Hours* T	A	L	ECTS	Weekly Class Schedule
CS306	Database Management		3	0	2	6	Tue: 15:00-16:00 Thur: 12:00-14:00
Prerequisite	CS105	It is a prerequisite to	CS421				

Lecturer	Assist. Prof. Dr. Emine Yaman	Office Hours Schedule	Tue: 13:00-15:00, Wed:11:00-13:00, Thur:14:00-16:00
E-mail	eyaman@ius.edu.ba		
Phone	205	Office / Room No	BF2.7C
Assistant	Haris Hodzic, Haris Cengic.		
E-mail			

Course Objectives	This course introduce basic concepts and fields of database management systems. Main goal is to develop knowledge of the students about data integrity, security, relational model, relational algebra and make them familiar with Entity-Relationship (E-R) and class diagram which used in design of database. They will also learn how to create databases using MSQL and complex Structured Query Language (SQL) queries of relational databases.
Textbook	**First book:** Database Systems, T.Connolly & C.Begg, 5.Edition, Addison Wesley. **Second book:** Database Systems, R.Elmasri, S.B. Navathe, 6. edition, Pearson. **Third book:** SQL for MySQL Developers, R. F. Lans, 1.Edition, Addison Wesley.

Learning Outcomes		After successful completion of the course, the student will be able to:
	1	Describe, define and apply the main components of the relational database model.
	2	Draw E-R and class diagram for databases.
	3	Discuss the physical database design process of producing an efficient and tuned database;
	4	Develop commands to create database schemas, insert and manipulate data records and extract information from stored data.
	5	Learn and apply the SQL for database definition and manipulation.

Teaching Methods	Class discussions with examples. Active lab sessions for engaged learning and continuous feedback on progress. Lab exercises and practical assignments.

WEEK	TOPIC	REFERENCE
Week 1	Introduction to Course	Chapter 1
Week 2	Introduction to Databases	Chapter 1
Week 3	Database Environment	Chapter 2
Week 4	The Relational Model +Quiz 1	Chapter 4
Week 5	ER Diagram	Chapter 12
Week 6	EER Diagram	Chapter 13
Week 7	Midterm preparation and MIDTERM EXAM	
Week 8	Mapping	Chapter 8
Week 9	Normalization	Chapter 14
Week 10	Relational Algebra	Chapter 5
Week 11	SQL:Data Manipulation +Quiz 2	Chapter 6
Week 12	SQL:Data Definition	Chapter 7
Week 13	Advanced SQL	Chapter 8
Week 14	Query By Example	Chapter 9
Week 15	Review	

Assessment Methods and Criteria	Evaluation Tool	Quantity	Weight	Alignment with LOs
	Final Exam	**1**	**35**	1,2,3,4,5
	Semester Evaluation Components		**65**	
	Midterm Exam	**1**	**30**	1,2,3
	Quiz	**2**	**15**	1,2,3,4,5
	Assignments	**5**	**10**	1,2,3,4,5
	Project	**1**	**10**	1,2,3,4,5

*** ECTS Credit Calculation ***

Activity	Hours	Weeks	Student Workload Hours	Activity	Hours	Weeks	Student Workload Hours
Lecture Hours	3	15	45	Midterm exam study	9	1	9
Assignments	3	5	15	Final Exam study	15	1	15
Active Tutorials	2	8	16	Home study	2	15	30
Quizzes study	5	2	10	**Total Workload Hours =**			150
Project	10	1	10	**ECTS Credit =**			6