Office of Academic Affairs

WKU Course Syllabus

Course Information

Course Title: Database Management Systems

Course Number and Section: CPS 3740 W01, W02

Semester: Fall 2021

Course Meeting Days/Times: Tues. 10:00AM - 11:15AM Thur. 1:00PM - 2:15PM

Course Meeting Location: GEH B503-B503

Instructor Name:	Dr. Hemn Barzan Abdalla
Office Location:	*GHK-C211*
Office Hours:	Mon./Wed. 10:30 - 12:00 AM Tues./Thur. 11:30 - 12:00 AM | 2:30 - 3:00 PM
WKU Email:	*habdalla*@wku.edu.cn (or habdalla@kean.edu)
Pre-requisite/program:	CPS 2232 Data Structures and Algorithms

Course Description: Introduction to the design and implementation of database systems for enterprise applications. Fundamental concepts of database system architectures, data models, data definition language, data manipulation language, database design principles, integrity constraints, disk, and file systems, indexes, and transactions are discussed. Specifically, the relational-database database management system is the focus. To help students digest the materials learned in the class, MySQL database system, MySQL, JDBC will be introduced in classroom demonstrations, lab assignments, and projects.

Instructional Methods

Methods:

This course focuses on the theory and practice of database systems to help students understand how to apply database technology and develop database systems. Part one of this course explains the basic concepts of database technology, such as databases and data models; Part two discusses the relational database model and entities relationship modeling; Part three covers structure

query language; Part four introduces some new developments in databases, such as web database and business intelligence. To summarize, the following will be covered:

1. *Database concepts;*
2. *Entity-relationship modeling in database design;*
3. *Structure query language;*
4. *New developments in a database and related fields.*

This course is a formal introduction to the modern relational database's principle, modeling theory, normalization. The course also includes practical training in SQL language and modern database management system graphical user interface. The course's assessment consists of an entire case study separated into five steps and a final examination.

The relationship between this course and other courses

This course is the prerequisite course of "Advanced Database". This course lays a theoretical foundation and plays a supporting role in its subsequent courses.

Teaching Goal

(A) Knowledge Goal

1. *Understand the basic concepts of database technology.*
2. *Apply main database theories and develop simple database systems.*
3. *Aware of the new developments in databases.*

(B) Ability Goal

1. *Possess the ability to analyze data models.*
2. *Possess the ability to design and develop the Entity-Relationship Model.*
3. *Possess the ability to use structured query language to manipulate data.*

(C) Quality Goal

1. *Train a good teamwork spirit.*
2. *Train standardized programming habits.*
3. *Train good communication ability.*
4. *Train the abilities of self-learning and summarizing.*

Textbook & Materials:

Textbook Title: 1. Textbook, "Database Systems: Design, Implementation, and Management, 9ed". Author: Coronel C, Morris S, and Rob. P. Course Technology, 2011.
ISBN: 978-0-46968-5 (ISBN-13) **Publisher**: Joe Sabatino
Textbook Title: 2. Textbook, "Database Systems: Design, Implementation, and Management, 13ed". Author: Coronel C, Morris S, and Rob. P. Course Technology, 2015.
ISBN: 978-1-337-62790-0 (ISBN-13) **Publisher**: Coronel C, Morris S, and Rob. P. Course Technology

Assessment:

Final numeric score will be weighted as follows:

1	Attendance	5%
2	Class Activates	5%
3	Homework	20%
4	Quizzes	10%
5	Project	20%
6	Final Exam	40%

Final grade will follow Kean University grading conventions, e.g. A, A-, B+, etc.

Grading Scale:

A	>=94
A-	90-93
B+	87-89
B	84-86
B-	80-83
C+	75-79
C	70-74
D	60-69
F	<60

Academic Early Alert/Mid-Term Progress information will be provided to students by the instructor via Kean Wise. Please see the 2019-2020 Undergraduate or Graduate Catalog for more details.

Topics and Assignments

Week	Covered Topics	Reading	Remarks
1	-Course Introduction -DATABASE CONCEPTS	Ch01	
2	Data Modeling	Ch02	
3	The Relational Database Model	Ch03	
4	Entity Relationship (ER) Modeling	Ch04	Homework1
5	Database Design using ER Model	Ch04	Quiz 1
6	Normalization of Database Tables	Ch06	

7	-Introduction to SQL -Setup MYSQL Workbench -MYSQL: Data Definition Commands	Ch07	
8	-Data Manipulation Commands -SELECT Queries -Additional Data Definition Commands -Joining Database Tables	Ch07	Quiz 2
9	Advanced SQL	Ch08	
10	JDBC connection to the MS- Access database	Reading Online	
11	-Relational Model Relational Algebra -Trigger	Reading Online	Homework2
12	Create a database for student information management system1		Class exercise
13	Create a database for student information management system2		Class exercise
14	**Project Presentation**		Project Presentation
15	Big Data NoSQL	Reading Online	
16	**Final Exam**		Final Exam

**Topics and Assignments* are tentative. May change accordingly based on overall class performance and progress.

Class Policies

1. Academic Integrity Policy is strictly enforced. https://www.kean.edu/media/academic-integrity-policy

2. Attendance is mandatory for this course. Lack of attendance will be equated with a lack of interest in the class and your grade. For legitimate excuses, other than illness, notify the instructor at least 7 working days in advance. Students have the responsibility to make up the absent classwork.
3. Late homework policy is -20% within 1 late day, -40% within 2 late days and not accepted after 2 late days.
4. It is allowed to discuss assignments with other students. However, if you copied someone
5. Else's work, you and the person you copied from will both receive a Zero!
6. You would not pass the course if you failed two or more exams.
7. There is no make-up exam unless the legitimate reason with written evidence.

Important Dates:

See http://www.wku.edu.cn/en/academics/academic-calendar/ for other important dates(e.g., last day to withdraw), or inquire with the Registrar's Office.

Important University Policies and Information:

Students are responsible for reviewing and understanding the University Academic Integrity Policy (see http://www.kean.edu/admin/uploads/pdf/AcademicIntegrityPolicy.pdf)

Students should review the Student Code of Conduct, as it discusses expectations of appropriate conduct in the classroom: http://www.wku.edu.cn/en/campus-life/code-of-conduct.

All students must have and use a valid WKU email account. For those who do not already have one, please get in touch with the Registrar's Office.

Disabilities Statement & Non-Discrimination Statement:

Wenzhou-Kean University is an affirmative action, equal opportunity institution. Students with documented disabilities who may need special instructional accommodations or who may need special arrangements in the event of an evacuation should notify the instructor as soon as possible, no later than the second week of the term.

Students may contact Ms. Lin TENG at the Office of the Vice-Chancellor for Student Affairs, General Education Bldg., A215, Email: vcsa@wku.edu.cn

Title IX:

Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination based on sex in education programs or activities. Sexual harassment in any form will not be tolerated at Kean University. Sexual harassment by students should be reported to the Office of Affirmative Action
Programs, Office of the Vice President for Student Affairs or the Office of Community Standards and Student Conduct immediately. Information about the University's Sexual Misconduct Policy may be found at the following: https://www.kean.edu/offices/policies/sexual-misconduct-policy.

The student may contact Dr. Shuli XU (shulix@wku.edu.cn), the Title IX contact person at WKU.

KU Non-Discrimination Policy:

Kean University is an affirmative action, equal opportunity institution.