

Sisi Virasak
CS275 – Database Systems
Spring 2022 Syllabus

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Office: MKH-108	Class Day/Time: Online Discord: https://discord.gg/XbUZYKw8ar
Phone: 541-917-4617	Office Hours: By Appt.

Course Description and Objectives:

This course introduces the design, purpose and maintenance of a database system. Topics covered include the entity-relationship (ER) model, relational systems, data definition, data manipulation, query language and database management environments. Prerequisites: CS 161 Introduction to Computer Science I with a grade of "C" or better.

Learning resources:

1. Database Design – 2nd Edition by Adrienne Watt (For Reference)
2. (strongly recommended) A desire to learn and experiment, to design, test, and problem solve with code (both on and off of a computer).

Learner Outcomes:

1. Upon successful completion of this course, students will be able to:
2. Describe and explain a select list of common database management system terms.
3. Design and produce relational database models using entity relationship diagrams, integrity rules and normalization.
4. Write structure query language (SQL) statements to select, update and delete records.
Write SQL statements to create, modify and drop tables.
5. Write SQL statements that use joins and set operators with multiple tables.

Assignment:

The Assignment is to provide you an opportunity to apply the concepts and techniques you will learn in each chapter.

Discussion Forums:

This subject is growing rapidly as we move away from a file system to database. In this course we are covering a small portion of this subject and there are many important relevant concepts. I will post a question regarding data/database questions each week and the expectation is to post professional responses. The responses should be spelling and grammar error free. Each student

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is required to provide a **paragraph (min. 5 sentences)** response to the question and respond to 2 student responses.

Grades Table:

Assignments/Exams	Weight
Assignments	35%
Discussion Forms	25%
Final Project	40%
Total	100%

LBCC Center for Accessibility Resources:

Students who may need accommodations due to documented disabilities, or who have medical information which the instructor should know, or who need special arrangements in an emergency, should speak with the instructor during the first week of class. If you believe you may need accommodations, but are not yet registered with CFAR, please go to <http://linnbenton.edu/cfar> for steps on how to apply for services or call 541-917-4789.

LBCC Comprehensive Statement of Nondiscrimination:

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws.

LBCC Statement of Inclusion:

The LBCC community is enriched by diversity. Each individual has worth and makes contributions to create that diversity at the college. Everyone has the right to think, learn, and work together in an environment of respect, tolerance, and goodwill (related to Board Policy #1015).

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* As the course progresses, Assignments and due dates may be subject to change.

<u>Week</u>	<u>Activity</u>	<u>Due Dates</u>
Week 1 March 28	Welcome, Introduction, Syllabus, Moodle Database Fundamentals: <ul style="list-style-type: none"> • What is a Database? • What is SQL? • MySQL Workbench 	Assignment #1 Discussion Forum #1 April 3 @ 11:59 PM
Week 2 April 4	Database Design: <ul style="list-style-type: none"> • Data Modeling • Normalization • Entity Relationship (ER) Modeling 	Assignment #2 Discussion Forum #2 April 10 @ 11:59 PM
Week 3 April 11	SQL Basics Part I: <ul style="list-style-type: none"> • MySQL Create Table • MySQL SELECT statement • MySQL WHERE Clause 	Assignment #3 Discussion Forum #3 April 17 @ 11:59 PM
Week 4 April 18	SQL Basics Part II: <ul style="list-style-type: none"> • MySQL INSERT INTO Query • MySQL DELETE Query • MySQL UPDATE Query 	Assignment #4 Discussion Forum #4 April 24 @ 11:59 PM
Week 5 April 25	Data Sorting: <ul style="list-style-type: none"> • ORDER BY in MySQL • SQL GROUP BY and HAVING Clause • MySQL Wildcards • MySQL Regular Expressions (REGEXP) 	Assignment #5 Discussion Forum #5 May 1 @ 11:59 PM
Week 6 May 2	Functions: <ul style="list-style-type: none"> • MySQL Functions • MySQL Aggregate Functions 	Assignment #6 Discussion Forum #6 May 8 @ 11:59 PM
Week 7 May 9	MySQL IS NULL & IS NOT NULL MySQL AUTO_INCREMENT	Assignment #7 Discussion Forum #7 May 15 @ 11:59 PM

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Week 8 May 16	MySQL – ALTER, DROP, RENAME, MODIFY MySQL LIMIT & OFFSET	Assignment #8 Discussion Forum #8 May 22 @ 11:59 PM
Week 9 May 23	MySQL SubQuery MySQL Joins	Assignment #9 Discussion Forum #9 May 29 @ 11:59 PM
Week 10 May 30	MySQL Views MySQL Index	Assignment #10 Discussion Forum #10 June 5 @ 11:59 PM
	Final Project Due: Wednesday June 8 @ 11:59 PM	

Important Dates:

First Day of Spring Term	March 28
College Closed Until Noon for Faculty/Staff Spring Inservice	April 1
Last Day to Add/Drop	April 4
Last Day to Withdraw with “W”	May 15
College Closed for Memorial Day	May 30
Balance Due in Full to Avoid Late Fees and Registration Hold	May 30
Last Day of Term	June 10