Lake-Sumter State College Course Syllabus

Course Information:

Course Prefix/Number: CGS 2545

Course Title: Database Concepts

CRN: 20276

Credit Hours: 3

Semester: Spring 2021

Class Days, Location, Time:

This is a synchronous online course, which means that we will occasionally meet via Zoom according to the schedule below. Meeting dates listed below are mandatory and attendance will account for 10% of your course grade (see the syllabus for grade breakdown). Random graded pop-up quizzes and surveys will be administered throughout each class meeting to verify that students are focused and present.

This course meets Wednesdays 3:00pm-5:45pm on the following dates (Mandatory Attendance):

January 13
January 27
February 10
February 17
March 10
March 24
April 21

Course Description: The focus of the term will be the application of database design techniques. There is an emphasis on database structures and relations, table normalization, and Structured Query Language (SQL). The student gains hands-on practice in database design through exercises in creating tables and queries using Database Design Language (DBDL), SQL statements, and Data Flow Diagrams. Database security, administration, and management approaches are also discussed.

Instructor Information:

Name: Dr. Christopher Sargent

E-Mail: Use Canvas Inbox to contact the instructor

Office Location: Leesburg Campus, Lake Hall Room 105

Phone: 352-323-3635 (Canvas Inbox is the fastest way to reach me)

Office Hours: Tuesdays and Thursdays 9am-2pm**

Office hours are virtual only. No face-to-face office hours will be possible in Spring 2021 due to the ongoing pandemic.

Your instructor will actively monitor Canvas Inbox during the times posted above and will respond quickly. If a student wishes to meet via Zoom or phone, they must make the request via Canvas Inbox at least 24 hours in advance. Zoom / phone requests will be scheduled Monday – Friday between 9:00 AM and 7:00 PM only, as my schedule permits. No weekend, holiday, or immediately on-demand Zoom / phone meetings will be scheduled.

Vital Communication Information:

For course communications, please note that all students are required to use CANVAS INBOX. Messages become part of the course archive for auditing purposes and conform to FERPA privacy rules.

Sending a private message using the INBOX tool in Canvas is always the most secure method of contacting your Instructor. **Please do not use LakeHawk email to discuss anything course-specific with your instructor.

Prerequisites/Co-requisites:

Prerequisites: C or higher in CGS 1100.

Co-requisites: None

Textbook & Other Course Materials:

MindTap for Concepts of Database Management, 9th Edition by Joy L. Starks, Philip J. Pratt, Mary Z. Last. ISBN: 9781337620079 (REQUIRED) https://www.cengage.com/c/concepts-of-database-management-9estarks/9781337093422PF/?filterBy=Student

Notepad ++ Freeware located at https://notepad-plus-plus.org/downloads/ (REQUIRED)

Visual Paradigm CE freeware located at https://www.visual-paradigm.com/download/community.jsp (REQUIRED)

Technology Requirements:

Canvas is a required component of this course. Students unfamiliar with Canvas are expected to complete the Canvas Orientation within the first week of classes.

Major writing assignments need to be created and saved in a file format that is compatible with Microsoft Word. If using a word processing program other than Word, it is the student's responsibility to adhere to all formatting and submission requirements. Please ask for help if you are unsure how to save a file in a Word-compatible format.

Please see the LSSC Student Technology Help Desk Page for information on how to obtain a free version of Microsoft Office 365 as an LSSC Student.

Any device with the ability to access a Zoom meeting and has at least a microphone is required for class meetings. Students must be able to interact with the instructor, view lectures, and participate in frequent Zoom polls to indicate attendance and attention.

Course Student Learning Outcomes:

The following outcomes will be assessed in this course. An "outcome" is defined as something students take with them beyond this course. After successful completion of this course, the student will:

CGS2545.1 - Build databases
CGS2545.2 - Join and index databases
CGS2545.3 - Perform queries using SQL

CGS2545.4 - Perform basic data normalization and maintenance CGS2545.5
- Generate reports
CGS2545.6 - Perform database modeling and design
CGS2545.7 - Utilize ODBC to connect to data sources CGS2545.8
- Build a database driven web page

Course Objectives:

Objectives are defined as what the course will do and/or what the students will do as part of the course.

- Learning what constitutes a database and why they are used
- Understanding relational concepts and use of keys
- Learning structured query language
- Learning database modeling and the Entity Relationship Model
- Learning how to transform a data model into a database design
- Learning about database administration
- Learning how data processing works and web databases
- Understanding Big Data, Data Warehousing and Business Intelligence Systems

Institutional Policies & Procedures:

Academic Integrity:

The successful functioning of the academic community demands honesty, which is the basis of respect for both ideas and persons. In the academic community, there is an ongoing assumption of academic integrity at all levels. There is the expectation that work will be independently thoughtful and responsible as to its sources of information and inspiration. Honesty is an appropriate consideration in other ways as well, including but not limited to the responsible use of library resources, responsible conduct in examinations, and the responsible use of the Internet. See the college catalog for complete statement.

Important Information for Students with Disabilities:

Any student with a documented disability who requires assistance or academic accommodations should contact Student Accessibility Services immediately to discuss eligibility. Student Accessibility Services (SAS) is located on the Leesburg Campus, but arrangements can be made to meet with a student on any campus. An appointment can be made by calling 352-365-3589 and specific information about SAS and potential services can be found at Student Accessibility Services.

Privacy Policy (FERPA):

The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part99) is a Federal law that protects the privacy of a student's education records. In order for your information to be released, a form must be signed and, in your records, located in the Admissions/Registrar's Office.

Zero-Tolerance for Violence Statement:

Lake-Sumter State College has a policy of zero tolerance for violence as stated in College Board Rule 2.17. Appropriate disciplinary action will be taken in accordance with Board Rule 2.17.

LSSC Safety Statement:

Lake-Sumter State College values the safety of all campus community members. **If you have an emergency, call 911**. Otherwise, to report a concern, suspicious activity, or to request a courtesy escort, call Campus Safety:

(352) 516-3795 Leesburg

(352) 536-2143 South Lake

(352) 303-7296 Sumter

LSSC also has a free safety app, **Lake-Sumter Safe** that is available for download. You will receive important emergency alerts and safety messages regarding campus safety via LSSC Alert. You are opted into this system when you become an LSSC student. For more information regarding safety and to view available resources, visit the Campus Safety web page.

Attendance/Withdrawal Policies:

Initial Attendance:

Initial attendance will be entered at the end of the second week of the semester/mini-mester. A student who has not met initial attendance requirements will be marked as "not-attending" and administratively withdrawn from the class. The withdrawn student is still financially responsible for the class. See the college catalog for more details.

Withdrawal:

Once the Add/Drop period passes, students deciding to discontinue class attendance and/or online participation have the responsibility for formal withdrawal by the withdrawal deadline.

Withdrawal Deadline:

March 29, 2021 by 4:30 PM

Instructor Policies:

Cheating is a violation of the Academic Integrity policy of Lake-Sumter State College. Cheating includes:

- any attempt to deceive or mislead the instructor in arriving at an accurate and fair grade assessment.
- Plagiarism (see below) is a form of cheating wherein ideas or the work of another is presented as one's own (copying the work of someone else without properly citing and paraphrasing),
- using prohibited resources. This includes, but is not limited to, publisher-provided instructor manuals or solutions manuals. If you search the internet using the homework question and you find an answer, chances are good that it is from the Instructor manual, and it is considered cheating. I have these materials and use them during the grading process. Any similarities will be investigated and may lead to a cheating accusation.
- giving unauthorized assistance to another student (sharing your work with another so they can put their name on it and hand it in as their own), or

- using one's own (or someone else's) previously graded work constitutes cheating.

If you cheat, some or all of the following actions will be taken:

- The first instance will result in a zero on the grade involved and may result in a failing grade for the course.
- The second instance will result in a failing grade for the course.
- A report will be forwarded to the Dean of Student Affairs for all instances of cheating. The Dean will file the report in your permanent record and/or take further disciplinary action. You will also be required to attend a seminar on Cheating and Plagiarism conducted by Student Affairs.

Warning: sharing a friend's personal computer and/or files can cause integrity violations. Sharing your files with another student will also result in the actions listed above.

Refer to the college catalog for full statement on Academic Integrity.

Plagiarism Policy:

APA formatted citations and reference pages are required for all work that contains research materials outside of the student's own work. This includes, but is not limited to, team projects, exercises, discussions, and research papers. For APA formatting guidelines, please check out the LSSC Library. Other resources include the following sites:

http://www.noodletools.com https://owl.english.purdue.edu/owl/resource/560/01/

When writing any assignment, it must be in your own words. Be sure to paraphrase properly, and if you must use quotes, be sure to cite them properly.

When grading student assignments, I will randomly check sources. Any materials not properly cited or that appear to be plagiarized will be subject to the Cheating policy shown above.

Research papers will be submitted to Grammarly for validation. Please see specific assignments in the course for details.

Refer to the College catalog for the full statement on Academic Integrity.

Late Work/Extensions:

Homework: All homework items must be completed and properly submitted by the published due dates and times posted on the Course Calendar. **All late or incomplete homework will receive a zero (0)**.

- Work schedules and "I forgot" are not valid excuses for late work.
- Do not wait until the last minute to complete assignments. Starting early will allow students to get timely assistance from their instructor and still meet deadlines.
- It is the student's responsibility to have an alternate plan if their main computer system fails (i.e. – complete work on-site at a campus library or learning center, have a secondary computer available, etc.).

- Computer hardware, software and/or Internet problems are not acceptable excuses for incomplete assignments.

- Completing homework assignments in a timely manner is an important part of the learning process. Students are expected to complete and submit all assignments by the due date and time listed on the course calendar.

- Instructors are not required to accept nor grade any assignment submitted late. Extensions are not possible.

Tests/Quizzes/Exams: There is no make up for quizzes, exams, or tests, except under documented circumstances such as hospital stay, doctor's excuse, police report, or military assignment.

- Students are expected to contact their instructor prior to any test/exam/quiz due date if they cannot meet the deadline. **Each situation will be analyzed on a case-by-case basis by your instructor**.

- Instructors are not required to accept nor grade any quiz, test, or exam submitted late or incomplete.

- Failure to submit timed tests/exams/quizzes before the timer runs out will result in a failing grade for that assessment and no extension or late submission will be possible.

- Failure to attach files before submitting an assessment will result in a zero for that assignment and no redo will be allowed.

Classroom Etiquette:

Be respectful of your instructor and fellow classmates at all times.

Food and beverages are forbidden in on-campus computer labs. Please respect the college's rules in this regard if you use one of the computer labs.

Grading Information:

Grading Scale: 90-100% A, 80-89% B, 70-79% C, 60-69% D, 59% and below F

Methods of Evaluation:

Each project will be graded electronically using a rubric provided when the assignment is given. Your work will be judged against accepted academic standards for writing and documentation.

Assignment Overview & Grade Breakdown:

Category	Description	Percentage
Assignments	Hands-on Assignments (Canvas)	35 Percent
Quizzes	Module Review Questions (MindTap)	25 Percent
Projects	Access, SQL, and MySQL projects	20 Percent

Exams	Two-part Final Exam	10 Percent
Attendance	Zoom mandatory meetings	10 Percent
	Total Percentage	100 Percent

Course Calendar:

All work is due by Sunday at 11:59 PM unless otherwise posted.

Week and Topic	Begins	Ends	Reading and Materials Assignments	Items Due
1 – Housekeeping and Introductions **Class Meets in Zoom 1/13**	1 /11	1/17	• Course Syllabus • Canvas Course Shell • MindTap Linkage How-to	• Introduce Yourself Discussion • Student Orientation Quiz • MindTap Setup
2 – Introduction to Database Management	1 /18	1/24	• Chapter 1 (MindTap) • Big Data video (MindTap)	• Module 1 Review Questions (MindTap) • Chapter 1 Hands-on Assignment (Canvas)
3 – Microsoft Access **Class Meets in Zoom 1/27**	1/25	1/31	• Microsoft Access Training Modules (Links in Canvas)	• Microsoft Access Hands-on Assignment (Canvas)
4 – Microsoft Access Project	2/1	2/7	• N/A	• Microsoft Access Project (Canvas)
5 – The Relational Model 1: Introduction, QBE, and	2 /8	2/14	• Chapter 2 (MindTap)	• Module 2 Review Questions (MindTap) • Chapter 2 Hands-on Assignment (Canvas)

Week and Topic	Begins	Ends	Reading and Materials Assignments	Items Due
Relational Algebra **Class Meets in Zoom 2/10**				
6 – The Relational Model 2: SQL **Class Meets in Zoom 2/17**	2/15	2/21	• Chapter 3 (MindTap)	• Module 3 Review Questions (MindTap) • Chapter 3 Hands-on Assignment (Canvas)
7 – The Relational Model 3: Advanced Topics	2/22	2/28	• Chapter 4 (MindTap) • Relational Database Model video (MindTap)	• Module 4 Review Questions (MindTap) • Chapter 4 Hands-on Assignment (Canvas)
8 – SQL Project	3 /1	3/7	• Appendix B: SQL Reference (MindTap) • Appendix C: "How Do I" Reference (MindTap)	• SQL Project (Canvas)

9 – Database Design 1: Normalization **Class Meets in Zoom 3/10**	3/8	3/14	• Chapter 5 (MindTap)	• Module 5 Review Questions (MindTap) • Chapter 5 Hands-on Assignment (Canvas)
Week and Topic	**Begins**	**Ends**	**Reading and Materials Assignments**	**Items Due**
Spring Break	3/15	3/21	N/A	• **No work due this week**
10 – Database Design 2: Design Method **Class Meets in Zoom 3/24**	3/22	3/28	• Chapter 6 (MindTap) • Appendix E: A Systems Analysis Approach to Information-Level Requirements • Analysis video (MindTap)	• Module 6 Review Questions (MindTap) • Chapter 6 Hands-on Assignment (Canvas)
11 – DBMS Functions	3/29	4/4	• Chapter 7 (MindTap)	• Module 7 Review Questions (MindTap) • Chapter 7 Hands-on Assignment (Canvas)
12 – Database Administration	4/5	4/11	• Chapter 8 (MindTap)	• Module 8 Review Questions (MindTap)
13 – Database Management Approaches	4/12	4/18	• Chapter 9 (MindTap) • Data Mining video (MindTap)	• Module 9 Review Questions (MindTap)

14 – MySQL Class Meets in Zoom 4/21	4/19	4/25	• Appendix D: Introduction to MySQL (MindTap)	• MySQL project (Canvas)
Final Exams	4/26	5/1	• N/A	• Final Exam (Canvas) is due Tuesday, April 27 by 11:59 PM

Basic Needs Statement:

Any student who faces challenges securing basic needs such as food or housing and believes this may affect their performance in the course is encouraged to contact a campus dean at deanofstudents@lssc.edu. The deans will then be able to share any resources at their disposal.

Syllabus Disclaimer:

Information contained in this syllabus is, to the best knowledge of this instructor, considered correct and complete when distributed to students. The instructor reserves the right, acting within policies and procedures of Lake-Sumter State College, to make necessary changes in course content or instructional techniques with notification to students.