Syllabus

EGR325 – Database Systems (3 units)

Instructor Contact Information

Professor Larry Clement, M.S.
lclement@calbaptist.edu OR 951-343-4471
For emails, put "EGR 325" in the subject line
Office: TEGR 336
Office hours:
MWF 9:30 AM – 11:30 AM
MW 1:30 PM – 2:30 PM
OR by arrangement!

Course Meeting Times and Locations:

- Section "A" Lecture: TR 2:00 PM – 3:30 PM Location: TEGR 107
- Section "B" Lecture: TR 3:45 PM – 5:15 PM Location: TEGR 107

Course Description

Overview of current database technologies with an emphasis on relational database technology. Introduction to database design, entity relationship diagramming, structured query language, and stored procedures.

Prerequisites

No required prerequisites.

Recommended prerequisite: EGR 222 – Software Engineering (3 units, Fall, Spring, Summer)

Texts and Resources

Required Text and Resource

1. Paul Winsberg, Frank McCown, Database Systems with SQL, Zybooks, February 2025
   - Purchase a license at the CBU bookstore (or directly from zybooks.com after accepting the first zyBook-related assignment).
   - Sign in or create an account at http://learn.zybooks.com
   - Enter license and zyBook code **CALBAPTISTEGR325ClementFall2025** (see instructions from bookstore purchase)
     - Specify CBUID
     - Specify Section (A or B)
2. Learning Catalytics License
   - Must be purchased through http://www.learningcatalytics.com
   - Cost ($12 for 6 months; $20 for 12 months)

3. Point Solutions (by Echo 360) application and annual subscription.

Point Solutions

This course requires an ACTIVE subscription to Point Solutions. Students will need to create an account (must use their full name and **CBU** email address) and purchase either a 5-month subscription ($24.99), a one-year subscription ($34.99), or a five-year subscription ($49.99) for that account. Registration instructions can be found on Blackboard.

NOTE: Students are **NOT** required to purchase a "clicker" device. Once registered, students can join any session using either the Point Solutions app on their mobile device OR the URL https://participant.turningtechnologies.com/en/join in any web browser.

*After registering, it is IMPORTANT to use the registration link in the EGR325 Blackboard page (BB page → Tools → TurningPoint Registration OR Course Materials → Point Solutions Resources → Point Solutions Registration) to **link** your Blackboard account to your Point Solutions account.*

Optional Text

1. Lynn Beighley, Head First SQL: Your Brain on SQL, O'Reilly Media, 2007 (ISBN10: 0596526849, ISBN13: 978- 0596526849)

Other Resources

Each student should bring an 8GB (or greater) removable storage drive (USB flash drive) OR have ready access to online storage in order to ensure work done in class is available outside of class.

The homework, labs, and projects for this course will require a **computer**. There will also be classroom activities requiring a computer. Students should bring a laptop with them to every class session. If you do not have access to a laptop computer that can be used in class, then please arrange to meet with the instructor to discuss alternatives.

This course will be managed using Blackboard (http://calbaptist.blackboard.com/). Assignments and grades will be posted there. Check in frequently for announcements, assignments, and discussions.

Course Goals & Student Learning Outcomes (SLOs)

Upon successful completion of this course, students should be able to do the following:

1. Given a set of requirements, generate an appropriate entity relationship diagram for a 3rd normal form relational database.
2. Use appropriate software tools and diagrams to design, implement, and query a relational database.
3. Use SQL Data Definition Language, Data Manipulation Language, and Data Control Language to manage a relational database.
4. Identify and apply transaction control statements to database modifications via SQL statements.
5. Define and apply indexes and constraints to relational database tables.
6. Create appropriate SQL Triggers to implement business logic.
7. Articulate and apply current topics in database systems outside the realm of relational database systems.

Grading

Course Point Distribution

Graded assignments will be weighted as follows:

Attendance	**5%**
Participation (In Class / zyBooks Participation / Learning Catalytics Quizzes)	**15%**
Homework (Assigned Problems / zyLabs)	**20%**
Integration Project	**20%**
Exams	**40%**

Final Grades

The following scale will be used when calculating final grades:

A	93%-100%	**A-**	90%-92.9%	**B+**	87%-89.9%
B	83%-86.9%	**B-**	80%-82.9%	**C+**	77%-79.9%
C	73%-76.9%	**C-**	70%-72.9%	**D+**	67%-69.9%
D	63%-66.9%	**D-**	60%-62.9%	**F**	< 59.95%

Attendance

All students start with a 100% class attendance grade.

Attendance will be taken at the beginning of every class (this is a university requirement). If you are not present when attendance is taken at the beginning of class, you must sign the sign-in sheet to be marked as tardy. If you are not present for attendance at the beginning of class and do not sign the attendance sheet, you will be marked absent. **Absences are assumed to be unexcused unless the student has made arrangements with the professor ahead of time or notifies the instructor of unanticipated emergencies within 24 hours of missing class. It is the responsibility of the student to submit information requesting that an absence be marked as excused. The instructor reserves the right to determine whether or not the information submitted justifies the absence being marked as excused.**

Every **unexcused absence** will lead to a 20% deduction in the attendance portion of your class participation grade. Three **TARDIES** will count as ONE UNEXCUSED absence and lead to a 20% deduction in the attendance portion of your class participation grade.

If a student misses nine or more hours of class (the equivalent of three weeks), they will receive an “F” as their final grade.

If a student decides to drop the course, it is their responsibility to do so by submitting a Drop Form to the registrar’s office (the instructor does not have the ability to drop a student from a class). If a student stops attending without formally dropping the course, that student will receive an "F" as their final grade.

Participation

Your participation grade is composed of THREE parts. In-class participation (in-class activities and Point Solution polling) will make up 20% of your participation grade. Learning Catalytics quizzes will make up 30% of your participation grade. The zyBooks participation/challenge activities will make up 50% of your participation grade.

In-Class

In-Class Activities

There will be a variety of classroom activities, discussions, and application/terminology quizzes for which students will be expected to fully participate in a professional manner. Students who are absent from class during these activities, refuse to participate, or engage in unprofessional conduct ***may*** have points deducted for their lack of participation. Students will all start with a 100% grade for this portion. Feedback will be provided if any deductions are made to this score. **No make-up will be allowed for missed class participation-related activities.**

Students are expected to avoid causing distractions for the other students. Working on material NOT related to the course, sleeping, and not following expectations are all ways to have the grade for this portion of the course reduced.

Point Solutions In-Class Polling

Point Solutions will be employed to ask questions related to reading assignments, participation activities, labs, assigned videos, and lecture content. Participation in polls is considered part of in-class participation. To get full credit for the Point Solutions portion of the in-class participation grade, a student must participate in 90% of in-class polls and obtain correct answers to questions that have a correct answer at least 50% of the time. IF a student provides correct answers to 50% or more of the Point Solution slides having a correct answer, THEN they will receive FULL CREDIT (100%) for the Point Solutions portion of the in-class participation grade.

Reading Assignments

There will be one or more reading assignments to complete prior to every class period. These will primarily be from the assigned zyBook, but there may be other outside readings. Students are responsible for the content in the reading, and there may be unannounced quizzes over the reading at any time.

zyBooks Participation/Challenge Activities

The zyBooks content incorporates participation and challenge activities to promote learning. These activities are graded and will be due when the zyBooks reading assignments are due. These participation/challenge activity grades will contribute to two different course grades that will be combined to form your overall zyBooks participation grade. The first grade will be when the zyBooks reading assignment is initially due. The second grade will be a total zyBooks participation/challenge activity grade at the end of the semester. **Finishing the participation/challenge activity assignments on time means they will essentially count twice.** If the participation/challenge activity assignments are not completed by the original due date, then they should still be completed so that the final participation/challenge activity grade does not suffer.

Learning Catalytics Quizzes

There will be periodic quizzes given using the Learning Catalytics tool. The Learning Catalytics grade for the course will make up 30% of the Quizzes will typically be given during the class period after completing a chapter or major section. The quizzes will all have two components: an individual component and a team component.

The individual component will make up 30% of the quiz grade, and the team component will make up the remaining 70% of the quiz grade.

At the end of the course any student receiving 80% or total for all of their learning catalytics quizzes will get full credit for the Learning Catalytics portion of their participation grade.

Homework

Problems

Homework problems will be assigned and collected regularly (typically at the end of each chapter). Unless otherwise specified, students should work **individually** to complete assignments at home and/or during class time. Using homework from previous classes, answer keys, and problem solutions that are not your own is not allowed. The weights of individual assignments may vary.

All homework will be submitted using the http://calbaptist.blackboard.com portal. To submit assignments…

1. Log in to the Blackboard portal with your ID and password.
2. Once inside the portal, locate and left mouse click the EGR 325 course.
3. Locate the 'Content' link on the left side of the page and left mouse click.
4. Locate and left mouse click the applicable assignment folder, e.g., Homework.
5. Locate the correct Homework-'Assignment' link and left mouse click.
6. Use the dialogue screen that appears; select the Attach File 'Browse My Computer' button, find the homework file. Click 'Submit' to upload the file.

Schedule

A homework schedule at the end of the syllabus specifies required reading, problems to be completed, and due dates. The schedule provided at the end of the syllabus is subject to change. All assignments will be posted on Blackboard. Assignment details (i.e., problems, due dates, etc.) posted in Blackboard precede the tentative schedule provided at the end of this syllabus.

Labs

Multiple lab assignments will be given near the end of various course sections. Each lab will utilize the skills learned from that application section and the student's critical thinking to derive a solution. Lab grades will be incorporated into the overall homework grade.

Integration Project

The final project will be introduced in the 8th week of the course. Students will have dedicated time in class to work on and complete the project starting in the 9th week of the course. The final integration project deliverable is a presentation given during finals week. The integration project is worth 20% of the total grade.

Late Policy

Late assignments **WILL NOT BE ACCEPTED**. This is a computer technology course, and assignments are submitted to Blackboard using any terminal connected to the Internet. Please note that each assignment's due date and time are posted later in the syllabus; review them. Students are encouraged to submit assignments early and not wait until the last possible moment to submit them. There are no acceptable excuses for the assignments being late. **DO NOT E-MAIL ANY ASSIGNMENTS.**

Exams

There will be two exams: one midterm and a final exam. The mid-term exam will cover the portion of class material covered up to that point (the exact content will be communicated to students prior to the exam), and the final exam will be comprehensive.

Make-up Policy (Exams)

Makeups for missed exams will be allowed in the event of an illness or emergency. Still, the instructor **must** be notified and subsequently provide approval **before** the exam (in the case of an emergency,

notify the instructor within 24 hours after the exam takes place). In all cases, the student must show evidence from a doctor, police, or other relevant agencies as proof of illness or emergency. **There will be no makeups for unexcused absences or absences notified after 24 hours of the exam time.**

If a student needs to miss an exam for an official, unavoidable university event (e.g., athletic competition or choir performance), the instructor needs to be notified by a *university official* **before** the event. The student is responsible for contacting the instructor and making arrangements for a make-up at least one week before the exam. **There will be no makeups if the student does not communicate with the instructor and make arrangements at least one week before the exam.**

Checking Grades

All grade components will be posted in the *Blackboard* grade book. Please check Blackboard regularly.

Grading Exceptions

Since grades are tools for assessing your work and progress, not a reward, students with a low grade prior to the final integration project and final exam who show significant progress on those two assessments will be eligible for a "favorable adjustment." A "favorable adjustment" requires consistently solid performance on the homework. Also, students who receive a score below 50 for either the final integration project assignment or the final exam will be subject to significant grade reduction or failure for the course, depending on performance in the rest of the course.

Tutor Assistance

Tutors are available in the Office of Student Success.

Expectations

Class Preparation / Participation

Students are expected to complete reading assignments per the published schedule so that they can come to class ready to be active participants. Students should plan to spend about six hours each week working outside of class (i.e., reading, reviewing, homework, lab assignments, integration project, etc.) to obtain a grade of "C" in this course.

Students are expected to be present, work on in-class exercises, and actively participate by **asking and answering** questions.

Course Policies

Communication via Discord

All course announcements will be made, and all **non-sensitive** questions should be asked through the course category on the official CSDS Discord Server.
NOTE: Sensitive matters should be discussed via CBU e-mail (e.g., grading questions, classmate issues, etc.) due to FERPA.

Digital Participation

In an effort to streamline and speed up coding issues, all debugging questions should be asked on Discord. **Do NOT e-mail the instructor for debugging/coding questions.** Instead, questions and tips should be posted to the appropriate Discord channel (on the official CSDS Discord Server) where the instructor, tutor, and/or fellow student can answer, providing you with the quickest solution.

Academic Integrity

Academic dishonesty, as explained in the student handbook HONOR CODE policy, **WILL NOT BE TOLERATED**. Each student should become familiar with those offenses identified in the student

handbook. A failing grade in the course will result from offenses identified as "cheating," especially the misrepresentation of assignments. **All coursework is the sole responsibility of the student.** Work performed by a student other than the name appearing on the assignment turned in will be considered misrepresentation for **both** students for the assignment. At a minimum, a failing grade for the assignment and potentially the course will result from any incident of academic dishonesty.

Cheating

Students are expected to uphold the school's standard of conduct relating to academic honesty. Students assume full responsibility for the content and integrity of the academic work they submit. The guiding principle of academic integrity shall be that a student's submitted work, examinations, reports, and projects must be that of the student's own work. Students shall be guilty of violating the honor code if they:

1. Represent the work of others as their own.
2. Use or obtain unauthorized assistance in any academic work.
3. Give unauthorized assistance to other students.
4. Modify, without instructor approval, an examination, paper, record, or report for the purpose of obtaining additional credit.
5. Misrepresent the content of submitted work.

The penalty for violating the honor code is severe. Any student violating the honor code is subject to receiving a failing grade for the course and will be reported to the Office of Student Affairs and Provost. If a student is unclear about whether a particular situation may constitute an honor code violation, the student should meet with the instructor to discuss the situation.

For this class, assisting classmates in general discussions of computing techniques is permissible. General advice and interaction is encouraged. Each person, however, must develop his or her own solutions to the assigned projects, assignments, and tasks. In other words, students may not "share solutions" on graded assignments. Such collaboration constitutes cheating. A student may not use or copy (by any means) another's work (or portions of it) and represent it as his / her own. If help on an assignment is needed, contact the instructor; do not seek solutions from other classmates.

Electronic Devices in Class

Cellular phones and other electronic devices are distractions. The device's audible signals **MUST** be turned **OFF** during class time. CD players, iPods, and similar devices also **MUST** be turned **OFF** in the classroom while class is in session. Earphones are not allowed during any class sessions. Do not record the lecture without permission.

Classroom Behavior

Professionalism

Students are expected to treat one another with professional respect and courtesy (even kindness).

Recording Class Sessions

Recording of class sessions without the prior express written permission of the instructor is prohibited. Any permission granted shall include the requirements that a recording may only be used for content study purposes only and sharing a recording with anyone outside of the course and/or posting on social media are strictly prohibited. This course policy is in alignment with Student Handbook and the Standard of Student Conduct. Refer to Student Handbook policies 15.6, 15.7, and 15.8 for more information.

Disruptions

Any acts of classroom disruption, that go beyond the normal rights of students to: question and discuss the instructor's educational process or outside relative subject content, ingress and egress the classroom

on time, or conduct normal communication will not be tolerated; all of which apply in accordance with the Student Life Policy described in the Student Handbook.

Children in class

The University does not provide childcare for the dependents of students, faculty, or staff. Students are not permitted to be accompanied by children / dependents during class sessions. (NOTE THE CHILDCARE (BABY-SITTING) POLICY IN YOUR STUDENT HANDBOOK.)

Appeals Policy

To appeal a grade, send e-mail to your instructor's e-mail address within two weeks of the grade having been received. Overdue appeals will not be considered. For final course grade the use the normal CBU appeals process.

Incomplete Policy

Students will not be given an incomplete grade in the course without sound reason and documented evidence as described in the Student Handbook. In any case, for a student to receive an incomplete, he or she must be passing and must have completed a significant portion of the course.

Disabilities Policy

In compliance with the Americans with Disabilities Act (ADA), all qualified students enrolled in this course are entitled to "reasonable accommodations." Please notify the instructor during the first week of class of any accommodations needed for the course.

SEXUAL HARASSMENT & TITLE IX POLICY

Review the Sex Discrimination, Sexual Violence & Sexual Harassment section of the Student Handbook. All offences will be reported.

Student Handbook: http://www.calbaptist.edu/explore-cbu/offices/office-registrar/academic-catalogs/undergraduate/

Academic Catalog: http://www.calbaptist.edu/explore-cbu/offices/office-registrar/academic-catalogs/undergraduate/

Calendar: https://insidecbu.calbaptist.edu/ICS/Academics/Academic_Calendars.jnz

Generative Artificial Intelligence (AI)

Generative AI (ChatGPT, GitHub Copilot, etc.) is a valuable set of tools within our industry and, as such, is something that students should become comfortable using in an ethical and responsible way. That said, there are certain scenarios and assignments in which GenAI tools may or may not be allowed in this or any class. **The following table specifically lays out the GenAI policy for each assignment or assignment group in THIS CLASS ONLY**:

Assignment	GenAI Policy
zyBooks Readings	GenAI chatbots (e.g., ChatGPT, Gemini, etc.) may be used to aid in understanding content BUT should not be used to complete zyBooks participation or challenge activities (i.e., you should not copy/paste participation/challenge problem prompts directly into chatbots to receive answers).
Learning Catalytics Quizzes	GenAI chatbots are discouraged but not banned. LC quizzes will be short in duration, and there will not be time to look up the answer to every question. Students are encouraged to lean on personal knowledge and the zyBooks content rather than prompting GenAI chatbots.
Homework (zyLabs)	GenAI chatbots are discouraged but not banned. The more you lean on chatbots to aid in your understanding of labs and/or other HW problems, the poorer your performance on exams will likely be.
Integration Project	GenAI chatbots (e.g., ChatGPT, Gemini, etc.) may be used to aid in general strategy (e.g., "What are a few strategies for managing/organizing restaurant orders within a relational database as they are taken, prepared, and then billed?", "What is a good approach to designing a data system to handle an employee payroll?"). GenAI code completion tools like GitHub CoPilot MAY be used **only while in their in-line mode** that turns "comments" into small-to-medium-sized blocks of SQL code, or that automatically comments code when you type "// ", for instance. However, tools like Cline or GitHub Co-Pilot in Agent Mode may NOT be used; to be clear, the distinction that makes these tools (and any others like them) unacceptable is in their ability to create and modify entire files and implement features across multiple files within a project with a single prompt or side-chat built into your IDE. Whenever GenAI code completion tools are used (according to the policy), you should be sure to read the code to ensure you understand it, AND because these tools are OFTEN wrong. Students will ultimately give a presentation describing their final design. Students that are unable to explain the reasoning behind design choices will have a significant deduction to their overall grade for the project. NOTE: There is a time and place for these more advanced agentic tools, but it is imperative that you first learn the foundations of database design before leveraging the more advanced tools.
Midterm Exam & Final Exam	GenAI chatbots (e.g., ChatGPT, Gemini, etc.) may be used, BUT note that exams will be in-person, handwritten, LONG (i.e., you will NOT have time to look up the answers to every question), and there will be substantial portions where GenAI chatbots will probably not be helpful because of the iterative nature of the problem and need to show progress through the problem. Students who are reliant upon GenAI tools for answers will probably fail to complete a significant portion of the exam.

NOTE: If you feel there would be an appropriate use of AI on an assignment that is not permitted by the above policy, please **ask the instructor in writing, BEFORE utilizing AI in a different way, so the instructor can consider changing the policy; **if the instructor decides to change the policy, a modification will be provided in writing to the entire class**. Utilizing AI outside of the bounds of the*

above limitations or any written modifications from the instructor (to the entire class) will be considered an academic integrity violation.

When permitted (see table above), the use of generative AI should be treated the same as collaboration with another student and, as such, whenever generative AI is consulted there should be acknowledgement of that input listed in a prominent location at the top of the first page of your assignment or in the comments at the top of your code.

As we, as a society, grapple with the ethical use of Generative AI, it is best to ask if its use is appropriate until more formalized standards are in place. Also, it is important for students to understand several things about generative AI:

1. It is often incorrect, and this may or may not improve over time. The code/answers recommended by a generative AI tool should ALWAYS be checked against authoritative sources (just like anything that comes from an external source).
2. Any code submitted to a generative AI site becomes PUBLIC DOMAIN. Students should NEVER willingly paste anything (code, documents, etc.) that is proprietary and/or subject to copyright.

In general, students are responsible for the work they submit. All final submissions should be a student's own work with proper credit given to all collaborators (whether the source is humans or a generative AI).

Finally, while the instructor may permit and/or encourage Generative AI tools for some assignments, the instructor also holds the right to ban Generative AI tools for other assignments (see table above). Thus, it is imperative that, while Generative AI tools can be an amazing tool for learning, the student is still expected to be able to demonstrate proficiency in all course material WITHOUT the use of Generative AI.

Schedule

See Blackboard to get the latest version of the course schedule.

Change History

Version	Date	Description
1.00	2025-08-28	• Initial Release