



DATABASE MANAGEMENT

BUSA 526, Section # 81840 (81E) COURSE SYLLABUS: Fall 2026

INSTRUCTOR INFORMATION

Instructor: Anil Kumar

Class Meets: 10/19/2026 through 12/11/2026

Office Location: Dallas 2065

Office Hours: Monday & Wednesday 12:30-1:45 pm (in person) and 2:00-3:15 pm (Zoom)

University Email Address: anil.kumar@etamu.edu

Preferred Form of Communication: email

Communication Response Time: within 24 hours

COURSE INFORMATION

Textbook(s) Required: None. Links to all course readings will be available on D2L.

Software Required: MySQL Workbench will be utilized as the database tool in this course.

Students will be provided with links on D2L to download the tool.

Bulletin Description

This course provides a foundation for the design, implementation, and management of database systems. Students will study both design and implementation issues with an emphasis on database management issues. SQL is used in this class.

Student Learning Outcomes

At the end of this course, students will be able to:

1. **Analyze and Evaluate Data Ecosystems:** Understand and critically evaluate the role of data within organizational data ecosystems, including the rationale for database management, the creation and analysis of data models, and the importance of data normalization.

2. **Design and Implement Relational Databases:** Design robust, efficient relational database schemas using ERDs and normalization principles, and implement them in SQL to ensure data integrity, consistency, and efficient retrieval.
3. **Optimize, Secure, and Explore Advanced Database Concepts:** Apply advanced database management techniques (including performance tuning, security, and backup/recovery) and investigate emerging database technologies (such as NoSQL and open-source intelligence databases) to address complex data challenges.
4. **Leverage AI for Database Management:** Effectively utilize AI tools as learning companions to enhance understanding, problem-solving, and practical application of database management concepts, and critically reflect on the impact of AI on database management practices.

COURSE REQUIREMENTS

Minimal Technical Skills Needed

Students are expected to be proficient in D2L and the MS-Office suite. Students are expected to submit their assignments using MS-Office tools via D2L, where all course materials will be accessible.

Instructional Methods

The course combines brief lectures with hands-on activities to enhance your understanding and application of database management concepts. We analyze data requirements for organizations using real-world events from the past five years, and peer learning as an instruction method is actively encouraged through several mini-projects.

Student Responsibilities or Tips for Success in the Course

I strongly encourage you to create a schedule for your learning in the course. Each of you has a life outside this course, and the schedule will help you manage your time without feeling overwhelmed.

Learning from peers is crucial for academic and professional success. Engaging with classmates can enhance your learning experience. Don't hesitate to ask questions and seek guidance when needed. When working in a team on the mini projects, communicate clearly and in a timely manner, to ensure that roles in your team are well defined, deadlines are set, and expectations are realistic.

Log in to D2L regularly to make sure you have the latest information about the course.

I am there to help you succeed in your learning journey. Email me when you are challenged by course materials, and I'll help you. All emails will be answered within 24 hours.

GRADING

Final grades in this course will be based on the following scale. Total points corresponding to the final letter grades.

Grade	Points	Percent	Professional role
A	180 - 200 Points	90%-100%	Data strategist
B	160 - 179 Points	80%-89%	Data administrator
C	140 - 159 Points	70%-79%	Data professional
D	120 - 139 Points	60%-69%	Data analyst/consultant
F	< 120 Points	<=59%	Needs training

Weights of the assessments in the calculation of the final letter grade.

Example:

Introduction	10 points
Professional Learning Journal	60 points
Database Solution Portfolio (DSP)	<u>130 points</u>
Total	200 points

Assessments

Professional Learning Journal

The Professional Learning Journal is a weekly reflection designed to help you become a more thoughtful data professional. Several times during the semester, you will reflect on what you learned, identify the concept or skill that challenged you the most, describe how you worked through that challenge, and explain how you could apply your learning to your current job, a future career, or a business you hope to start. The goal is not to summarize the week's content, but to connect technical knowledge with professional practice, critical thinking, and continuous learning. Each journal entry should be concise, thoughtful, and demonstrate your growth as a database professional.

Database Solution Portfolio

The Database Solution Portfolio is the signature assessment for this course and represents your work as a database consultant solving a real or realistic business problem. Rather than completing a series of unrelated assignments, you will develop a single database solution that evolves throughout the semester, with each milestone building on the previous one. You will

begin by acting as a consultant to analyze an organization's data needs and design a normalized database model. Next, you will assume the role of a junior data professional, implementing the database in MySQL, loading data, and using SQL to answer business questions. You will then take on the responsibilities of a database administrator by improving the database's integrity, performance, security, and backup strategy. Finally, you will become a data strategist, preparing a professional brief for senior management that evaluates emerging technologies such as AI and NoSQL and recommends how they could enhance the organization's data strategy. Throughout the project, you will be challenged to think critically, solve authentic business problems, and use AI responsibly as a tool to strengthen your analysis and decision-making. By the end of the course, your portfolio will demonstrate not only your technical proficiency in database management but also your ability to apply database concepts to real-world organizational challenges.

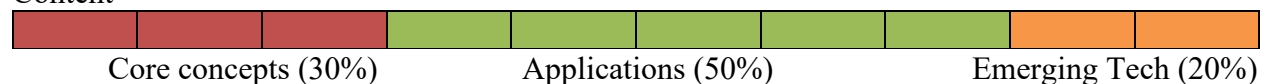
Submit all assignments and mini projects via D2L by the specified deadline. Late submissions will incur a 25% deduction for each day beyond the due date. For example, if a submission is two days late, 50% will be deducted. All submissions will be graded and posted on D2L within **10** business days.

COURSE OUTLINE / CALENDAR

This is a tentative schedule and is subject to change at the instructor's discretion. All changes will be communicated to the students.

A classroom is a place to meet and discuss ideas. As you read the assigned materials, you should ask yourself, "What does this reading tell you about Database Management? How can you relate it to what you know about how data is managed? How does it add to your professional growth? Do you agree with the author(s)? If not, why not? What do you foresee happening in the future? Discussions outside of class are very useful, and I encourage you to form study groups. While I am there to guide you through the learning process, it is one where each one of you travels on her/his own with the help of your peers.

Content



Levels



Week	Theme	Deliverable/points
1	Why Database Management matters? - From data to decisions. Design before you build: Modeling data that matters – Part I	Introduction (10 points) Journal (12 points)
2	Design before you build: Modeling data that matters – Part II Asking better questions of data: Speaking SQL	DSP Milestone #1 (40 points)
3	Turning data into information with SQL	Journal (12 points)
4	Building the solution: From design to database	Journal (12 points)
5	Protecting the asset: Security, performance & reliability	DSP Milestone 2 (50 points)
6	Improving the solution: Thinking like a Database Administrator	Journal (12 points)
7	Beyond relational databases: Preparing for the next generation of data	Journal (12 points)
8	From database professional to Data Strategist	Final Database Solution Portfolio (40 points)

TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by East Texas A&M University have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

Zoom Video Conferencing Tool

https://inside.tamuc.edu/campuslife/CampusServices/CITESupportCenter/Zoom_Account.aspx?source=universalmenu

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@etamu.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all coursework in a timely and satisfactory manner. Each student needs a backup method to handle these inevitable problems. These methods might include keeping a backup PC at home or work, temporarily using a computer at a friend's home, the local library, an office service company, Starbucks, or an ETAMU campus open computer lab.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

Interaction with Instructor Statement

All emails will be returned within 24 hours. Please make sure to include the course number and section in the email subject.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

Students are required to meet the expectations listed below.

- Professional Behavior: It is important that you always maintain a professional demeanor, including during “electronic communication.” ETAMU expects this from you, as do current and future employers. In discussing concepts and ideas, we need to respect viewpoints, even when we disagree.
- Regular and Timely Participation: You are expected to read all course materials and be prepared to engage in the learning process.
- Assignments:
 - Submitted assignments must be correctly formatted and free of grammatical and stylistic errors. Students in BUSA 526 should be proficient with software for word processing, spreadsheets, databases, graphics, and presentations, and with web browsers and search engines. Spelling and Grammatical errors will detract from the grade!
 - Assignments must be submitted on time. Assignments are due at the date and time listed. Start working on each assignment as soon as you possibly can so that you can ask questions in a timely manner if needed. If you do not submit assignments on time, you will lose 25% of the grade per day late.
 - Assignments must be complete. You must complete and submit assignments at the specified due date and time to receive credit for the assignment. Please don't submit work that is only “half-finished”.
 - Please submit all assignments in a format that is compatible with Microsoft Office. Save all documents as doc or docx files. Do not submit assignments as PDF documents.

- Back-ups are required: You are required to back up all your assignments on a disk that can be submitted to me upon my request. If work is lost due to insufficient back-up, you will not have the opportunity to recreate and submit later.
- Good communication skills are a requirement of all management professionals. Company recruiters consider these skills critical. Therefore, 10% of the grade of any submitted paper or report will be based on its quality. Quality refers to following the required format, order, and layout of the submission, the inclusion of graphs and charts where appropriate, and the use of correct grammar, spelling, and punctuation. Keep professionalism in mind. Submit your work in the same way you would go to your manager in the business world. All submissions are to be typed using Times New Roman, font size 12, and single-spaced. Plagiarism will result in an automatic fail.
- E-mail: All communication for students will be posted as an announcement (and email) on D2L. Therefore, students must routinely check the email sent to their respective ETAMU email accounts.
- Make-up or late assignments will only be accepted if you obtain university-approved documentation for your excuse. There are no make-up assignments for poor performance on a previous assignment.
- Changes to schedule: While I plan to stick to the class schedule, there may be occasions when it needs to be modified. In these cases, all changes will be posted as a D2L announcement and an e-mail to your ETAMU account. It is your responsibility to become aware of any such changes.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may necessitate the instructor's modification of the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail [here](#).

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <https://www.britannica.com/topic/netiquette>

ETAMU Attendance

For more information about the attendance policy please visit the [Attendance](#) webpage.

Academic Integrity

Students at East Texas A&M University are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty, see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)
[Undergraduate Student Academic Dishonesty Form](#)

[Graduate Academic Honesty](#)
[Graduate Student Academic Dishonesty Form](#)

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

East Texas A&M University
Velma K. Waters Library Rm 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@tamuc.edu
Website: [Office of Student Disability Resources and Services](#)

Nondiscrimination Notice

East Texas A&M University will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and ETAMU Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all ETAMU campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

ETAMU Supports Students' Mental Health

The Counseling Center at ETAMU, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connections to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit <https://www.etamu.edu/counseling-center/>

AI use policy [Draft 2, May 25, 2023]

East Texas A&M University acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty

13.99.99.R0.10 Graduate Student Academic Dishonesty

BUSA 526 AI use course policy:

As your professor, I advocate for the use of AI tools like ChatGPT, Gemini etc. to enrich your learning journey, boost productivity, and advance your career. AI can be an invaluable asset for idea generation, research, and honing analytical skills. However, it's essential to use these tools

responsibly and ethically to preserve the integrity of your work and adhere to academic standards.

Acceptable Use of AI:

1. **Research and Idea Generation:** Use AI to help brainstorm topics, generate ideas, and gather preliminary information.
2. **Improving Writing:** Use AI for proofreading to enhance the clarity, grammar, and structure of your writing.
3. **Personalized Learning:** Engage with AI to improve your understanding of course material and develop relevant skills, such as prompt engineering and queries etc.

Unacceptable Use of AI:

1. **Plagiarism:** Presenting AI-generated content as your own without appropriate attribution is strictly forbidden. All submissions must be original and demonstrate your personal understanding and effort.
2. **Cheating:** Using AI to complete assignments, quizzes, or exams, undermining the learning process, is not allowed.
3. **Fabrication of Data:** Generating or altering data using AI tools to misrepresent research findings or results is unacceptable.
4. **Misrepresentation:** Presenting AI-generated content or ideas your own is prohibited.

Guidelines for Responsible Use:

1. **Cite AI Sources:** If you use AI tools to gather information or generate content, provide appropriate citations and acknowledge the use of these tools in your work.
2. **Maintain Academic Integrity:** Ensure that your submissions reflect your own understanding, analysis, and synthesis of the material. Use AI as a supplement, not a substitute, for your learning and effort.
3. **Transparency:** Be honest about the extent to which AI has assisted you in your work. When in doubt, consult with the instructor on how to appropriately integrate AI into your assignments.
4. **Learn and Grow:** Use AI as a learning tool to enhance your knowledge and skills. Strive to understand and internalize the concepts rather than relying solely on AI outputs.

Consequences of Misuse: Violations of this AI policy will be treated as academic misconduct and will be subject to the university's academic integrity procedures. Penalties may include failing the assignment, failing the course, or further disciplinary action as outlined in the university's academic integrity policy.

By adhering to these guidelines, you can effectively harness the power of AI to support your educational journey while maintaining the highest standards of academic integrity and professionalism.

The course AI Policy developed by Dr. Greg Lubiani was adapted for this course.

Department or Accrediting Agency Required Content