



# MAYS BUSINESS SCHOOL

## TEXAS A & M UNIVERSITY

### DEPARTMENT OF INFORMATION AND OPERATIONS MANAGEMENT

ISTM 615 – BUSINESS DATABASE SYSTEMS

Section 201 – Summer 2019

10:00 a.m. – 11:35 a.m. MTWRF

Classroom WCBA 110

**Instructor:** Dr. Aaron Becker  
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**Office Hours:** 9:00 a.m. to 9:45 a.m. MTWRF

*“Learning is not attained by chance; it must be sought for with ardor and attended to with diligence.”*

(Abigail Adams – May 8, 1780)

### COURSE OVERVIEW AND OBJECTIVES

The primary objective of the course is to familiarize students with general database concepts, database design methodologies, and database implementation. We discuss several database models with an emphasis on the relational model. Students use MySQL to gain experience creating and manipulating databases.

At the completion of the course, successful students should be able to:

- Design databases using entity relationship modeling
- Convert entity relationship diagrams into normalized relational databases
- Formulate queries in SQL
- Understand the principles of physical design and transaction processing

### CATALOG DESCRIPTION

Information processing and management involving applications and user orientation in a business environment using commercially available database management systems

### COURSE PREREQUISITES

Knowledge of one programming language

## COURSE MATERIALS

### REQUIRED

- There are no required textbooks for this course
- Course workbooks will be made available on eCampus

### RECOMMENDED

- Hoffer, J.A., Ramesh, V., and Topi, H. *Modern Database Management (11<sup>th</sup> Edition or earlier)*. Publisher: Pearson (ISBN for 11<sup>th</sup> Edition = 9780132662253)
- Joel Murach. *Murach's MySQL (2<sup>nd</sup> Edition)*. Publisher: Murach (ISBN = 9781890774820)
- Mortimer J. Adler and Charles Van Doren. *How to Read a Book: The Classic Guide to Intelligent Reading*. Publisher: Touchstone (ISBN = 9780671212094)

## GRADING AND COURSE REQUIREMENTS

The course requirements and evaluation of each student's work in the course are based upon performance in several areas. Grade contributions and letter grade determination are shown below.

Modeling Midterm Exam*	35%
Final Exam (SQL)*	35%
Team Project	20%
Homework	10%
<b>Total</b>	<u>100%</u>

Percent	Grade
90 - 100	A
80 - 89	B
70 - 79	C
60 - 69	D
0 - 59	F

**\*Please Note:** If a student's average score across the exams is less than C quality work (i.e., 70%), the highest grade the student may earn for the course is a "D." This rule applies regardless of the student's performance in other areas of the course. If a student's average exam score is less than "C" quality work, the student will earn a final grade of "D" or "F" based on the student's average exam score.

**Modeling Midterm:** The modeling exam will assess the extent to which students can apply proper systems modeling techniques to solve a database problem.

**Final Exam:** The final exam will be an application exam to assess your knowledge of SQL.

Each exam will cover any material previously discussed in class. The exams are not necessarily comprehensive; however, they are cumulative. Knowledge is cumulative and material discussed at the end of the semester will draw from earlier course material. Therefore, examinations toward the end of the semester will draw upon, (and may even ask questions about), major concepts covered during earlier portions of the course.

The instructor retains ALL exams and does not return them to the student. Exam grades are FINAL one week after the instructor posts them on the course website. Students may review the results of an exam within one week of posting of exam grades.

The instructor will schedule make-up exams as needed for any “university excused absence.” For information about what constitutes a “university excused absence,” see Rule 7 of the Student Rules (<http://student-rules.tamu.edu>). Make-up exams for unexcused absences are at the discretion of the instructor.

**Team Project:** The team project will give you hands-on experience designing a computer-based database system. Details on the project will be provided on the course website. (I will assign teams made up of 3-5 students.)

**Homework:** We will work a number of data modeling, SQL, and other problems in the classroom. I expect students to participate in and to contribute to all classroom discussions and activities. I will assign some problems as homework problems. At times, I will ask you to complete these homework assignments outside of the classroom (we will subsequently discuss these problems in class). In other situations, you will have in class time to complete the assignment.

Some assignments will be individual work. Other homework will be team assignments. I will make it explicitly clear whether the assignment is an individual assignment or a team assignment. (For team assignments, I will assign teams made up of 3-5 students.)

I may periodically give unannounced quizzes and/or in-class assignments. These activities will be used to facilitate that day’s class discussion and/or to enable me to collect feedback on your understanding of course concepts.

The quizzes and assignments will typically cover material from prior class discussions or from the assigned reading for the current class period. Completion of the chapter review questions and review of the key terms for each chapter are strongly recommended as preparation for each class period.

Participation may also include both assigned and no-notice brief presentations of the material assigned for the current class period. These presentations may be on an individual or team basis. Presentations are expected to go beyond just summarizing or restating material and will

be used to conduct the class discussion for the day's assigned materials. Presentations often include sharing individual or group solutions to assigned homework problems.

### **LATE WORK POLICY**

Assignments are due **by the stated deadline**. Any assignments submitted after the deadline will be considered late. Late assignments **will not be accepted**. The reason for this is because we will often go over problem solutions in class immediately after they are due. In doing so, I don't want to create the possibility of students waiting until after the deadline, seeing the solution, and then turning it in as their own.

**Exception:** I will give students with excused absences adequate time and opportunities to submit work they missed due to absence. Students must provide documentation and notice to the instructor as specified in TAMU student rules. (Student Rules: Rule 7 -- <http://student-rules.tamu.edu>).

### **ATTENDANCE AND MAKE-UP POLICY (5-WEEK SUMMER COURSES)**

Students are expected to attend all classes regularly and punctually. For late arrivals and absences, it is the *student's responsibility* to obtain information from missed classes from other students (this includes changes to due dates and contents of exams, assignments, labs, and projects). **A late arrival to the class is counted as an absence.**

*Students with absences will begin losing "participation points."  
Students having more than 3 absences will drop one letter grade.  
Students having more than 6 absences will drop two letter grades.*

### **ELECTRONIC COURSE SUPPORT**

I use the Texas A&M University eCampus system (<http://ecampus.tamu.edu>) as a means of electronic support for class activities. I will refer to this resource as the course website. The course website contains links to the syllabus and other pertinent course information such as handouts and assignments. You should check the course website regularly to be informed of what is happening in the class.

I rely extensively on electronic communication with the class. As professionals, you should have the habit of regularly checking your e-mail. When I send e-mail messages to the class, I will use the email system on the course website.

You can access the eCampus system using your NetID and password.

## **OFFICE HOURS POLICY**

Office hours provide an opportunity for you to obtain specific guidance and help understanding the course material. I expect you to use them as your needs demand. At the end of the semester, I tend to be unsympathetic toward individuals with grade problems who have never attempted to get help via office hours.

The purpose of office hours is for you to obtain assistance in understanding the course material. I will gladly respond to questions that you may have regarding material that was covered during a class discussion and/or provide feedback on diagramming or modeling efforts that do not pertain to assigned homework or projects.

## **STUDENTS WITH DISABILITIES**

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 believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit <http://disability.tamu.edu>.

## **RELIGIOUS HOLIDAYS**

It is the policy of the University to excuse absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required course work that may fall on religious holidays (Student Rules: Rule 7 and Appendix IV at <http://student-rules.tamu.edu>). If possible, please speak with the instructor in advance of any such observances to make appropriate arrangements for missed work.

## **AGGIE HONOR CODE**

*"An Aggie does not lie, cheat, or steal or tolerate those who do."*

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Honor System. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System. You can learn more about the Honor Council Rules and Procedures as well as your rights and responsibilities at the following URL:

<http://aggiehonor.tamu.edu>

For each assignment or project that is submitted for grading in this course, students must affirm their commitment to the Aggie Honor Code with the following statement.

*“On my honor, as an Aggie, I have neither given nor received unauthorized aid on this academic work.”*

Even if you do not explicitly state the above, by submitting any course deliverable, you affirm your adherence to the Aggie Honor Statement for that deliverable.

“Texas A&M University students are responsible for authenticating all work submitted to an instructor. If asked, students must be able to produce proof that the item submitted is indeed the work of that student. Students must keep appropriate records at all times. The inability to authenticate one’s work, should the instructor request it, is sufficient grounds to initiate an academic dishonesty case.” (<http://www.tamu.edu/aggiehonor/acadmisconduct.htm>)

I will follow the steps and processes outlined in the Honor Council Rules and Procedures in all cases of academic misconduct in this class.

## **FOOD AND DRINK IN THE CLASSROOM**

We have beautiful, state-of-the-art classrooms in the Wehner Building. We want to maintain the high quality of these classrooms for current and future students. Thus, it is necessary for you to adhere to the established policy of no beverages (except water), food, tobacco products, or like items within the Wehner Building Classrooms. I will enforce this policy strictly.

## **CLASS POLICIES**

- *Do not engage in disruptive behavior in the classroom.* Interfering with your fellow students' ability to learn will not be tolerated.
- *Turn assignments in when they are due.* I will accept late assignments and projects as outlined under “Late Work Policy” above. “Late” means any time after I have collected the assignment in class or the deadline for delivery has passed.
- *Be prepared.* I expect each student to come to class fully prepared to discuss the material from the assigned readings. I expect students to have read the text (or other material) before class and rely on their preparedness to drive class discussions.
- *Attend class.* If you must miss class, it is your responsibility to find out what material, homework assignments, schedule changes, etc. you missed. Do not come to my office later and ask, “Did I miss anything?” (Assume I would answer “yes” to this question.)
- *Arrive on time and stay for the duration of each class.* If you must be late to or leave early from class, please let me know beforehand and be as unobtrusive as possible. It is very disruptive to have students walking in and out during class time.

- *Maintain Back-Up Copies of All Work.* You are responsible for retaining back-up copies of all work. When you submit your projects for grading you should ensure that you have a duplicate back-up copy of the assignment (both hard and soft copy).
- *Take exams during the scheduled time.* I will follow guidelines as established by the TAMU Student rules regarding excused absences (Student Rules: Rule 7 -- <http://student-rules.tamu.edu>). I will allow students with excused absences adequate time and opportunity to make-up missed exams after they provide proper documentation and notice to the instructor. At my discretion, I may allow students with unexcused absences to take make-up exams.

### **MISCELLANEOUS CLASS NOTES**

**Problems:** Let me know, as early as possible, if you have trouble with the material. Ask questions during class; come see me during office hours; send e-mail messages to me; etc. In short, if you are doing the work and need help, get it! I cannot help you if I am not aware of the problem.

**Privacy of grades:** I post scores and grades on the course website. You will only be able to see your own scores and grades. I do not discuss scores or grades over the phone or via e-mail. If you would like to discuss your scores or grades, please visit me during office hours.

**Syllabus changes:** The topics and dates as outlined in the course schedule are subject to change. I will announce and discuss all necessary changes in class. In addition, I will post a notice via the course website. You are responsible for making sure you are aware of any such changes. However, the dates of the examinations will not change.

## COURSE SCHEDULE

Date	Class Discussion	Assignment
Jul 2	Course introduction	
Jul 3	The database environment and development process	
Jul 4	<i>Independence Day: No Class</i>	
Jul 5	Modeling data in the organization	
Jul 8	Continued...	
Jul 9	Continued...	
Jul 10	The enhanced ER model and operational constraints	
Jul 11	Continued...	
Jul 12	Continued...	
Jul 15	Logical database design and the relational model	
Jul 16	Continued...	
Jul 17	Continued...	
Jul 18	Continued...	
Jul 19	<b>Modeling Midterm Exam</b>	
Jul 22	Introduction to SQL / DDL / Introduction to project	
Jul 23	DML	
Jul 24	Continued...	
Jul 25	Project day	
Jul 26	Advanced SQL	Project Phase I Due
Jul 29	Continued...	
Jul 30	Continued...	
Jul 31	Continued...	
Aug 1	Continued...	
Aug 2	Continued...	Project Phase II Due
Aug 5	Physical database design and performance	
Aug 6	<b>Final Exam (SQL) -- 10:30 a.m. to 12:30 p.m.</b>	