Course Syllabus — Spring 2026
Database Foundations for Business Analytics

Jindal School of Management
The University of Texas at Dallas

Course Information

Course

Course Number Section	BUAN 6320.0W1 & SYSM 6338.0W1
Course Title	Database Foundations for Business Analytics
Term and Dates	Spring 2026, January 20, 2026 – May 8, 2026

Professor Contact Information

Professor	Young U. Ryu
Office Phone	972-883-4065
Email Address	ryoung@utdallas.edu
Office Location	JSOM 3.426
Face-to-face Office Hours	by appointment at SOM 3.426
Online Office Hours	Mon. 5-6pm (US Central Time)or by appointment (through MS Teams) (For an appointment, send an email.)

Note: Please send emails for questions, instead of MS Teams chat messages.

About the Instructor

Young Ryu is Associate Professor of Information Systems. He has been teaching various MIS courses including Database Management Systems. His main research areas are data-mining applications and information security management. His Ph.D. degree in Information Systems was from The University of Texas at Austin in 1992.

Course Description

The main objective of the course is to understand relational database theories, data modeling with the entity-relationship diagramming technique, and industry standard SQL. MongoDB, a document-based NoSQL database system, is also covered.

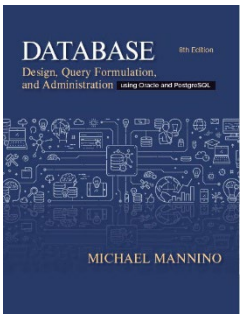
Student Learning Objectives/Outcomes

1. Create a conceptual data model when requirements are provided.
2. Convert a conceptual data model into a relational database structure.
3. Create and query relational databases using SQL.
4. Understand NoSQL database technologies and query NoSQL databases

Class Software

Microsoft Visio or *Visual Paradigm Community Edition* will be used for data modeling. *Microsoft SQL Server*, *MySQL*, *PostgreSQL*, or *Oracle Database* will be used as the main SQL platform. MongoDB will be used as the NoSQL database software. Detailed installation notes will be provided.

Textbooks and Materials



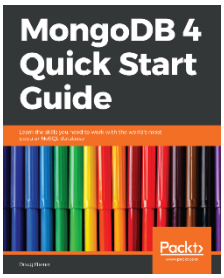
The textbook can be ordered online or purchased at the UT Dallas Bookstore (http://www.bkstr.com/texasatdallasstore/home).

Recommended Textbook for Relational Database & SQL

- Michael Mannino. *Database Design, Query Formulation, and Administration* (8th Edition). SAGE Publication, 2022. (ISBN: 9781948426954, EISBN: 9781948426947).
  - Chapters 1, 3, 4, 5, 6, & 9 will be used. (Coverage is very comprehensive.)
  - This book is labeled as "DB".

Less expensive electronic rental options are available at the textbook Web site (https://us.sagepub.com/en-us/nam/database-design/book287841) or other Web sites. (Do Google search for them.)

Note: The relational database and SQL coverages will follow the 8th edition. If you plan to use an older edition (e.g., 7th), please notice that there may be some discrepancy, though the immediately previous edition is very similar to the 8th edition. I will **not** provide the difference between the 8th edition and older editions. (I do not have any document explaining the difference.)



Book for MongoDB (Reference Only)

- Doub Bierer. *MongoDB 4 Quick Start Guide*. Packet Publishing, 2018. (ISBN: 978-1-78934-353-3).
  - Chapters 1, 2, 3, & 5 will be referenced. (Minimal coverage is available.)
  - This book is labeled as "MG".

Note: Less expensive or free eBook options are available. Do a Google search or check the book Web site.

- Additional course materials (lecture video clips, presentation slides, class note, etc.) are available at the course eLearning site.

JSOM Virtual Learning Launchpad Certificate Submission

To access the course materials, please complete the **JSOM Virtual Learning Launchpad** in eLearning. Follow these instructions: **Student JSOM Virtual Learning Launchpad Instructions**. The certificate must be completed each academic year and uploaded each semester for all synchronous / asynchronous courses. The Launchpad will be available before your course starts.

Course Policies

Makeup Exams

The final exam must be taken during the specified period. No makeup final will be given, except for documented/verified emergencies (e.g., medical).

Extra Credit

Under no circumstances will an extra project or assignment or any sort be given to "boost" individual students' grades. Absolutely no exception!

Late Work

For each assignment, there will be primary due date and secondary due date posted. Assignments turned in by 11PM Central Time on the primary due date will be accepted without any penalty; assignments turned in by 11PM Central Time on the secondary due date (which is 1 day after the posted primary due date) will be subject to 15% penalty. No assignments will be accepted after the secondary due date.

Class Participation

Students are required to login regularly to the online class site. The instructor will use the tracking feature in eLearning to monitor student activity.

Virtual Classroom Citizenship

The same guidelines that apply to traditional classes should be observed in the virtual classroom environment. Please use proper netiquette when interacting with class members and the professor.

Academic Calendar

WEEK	STARTING DATE	TOPIC	READING	ASSIGNMENT / ACTIVITY
1	1/20/2026	Course Introduction Introduction to Database	DB-Ch. 1	*Virtual Learning Launchpad Certificate*
2	1/26	Relational Data Model	DB-Ch. 3	
3	2/2	Entity Relationship Modeling	DB-Ch. 5	
4	2/9	Entity Relationship Modeling	DB-Ch. 5	Quiz (2/7-2/9) Chs. 1, 3, & Syllabus
	(The **quiz** uses **Honorlock** which requires a Webcam. Please visit the **Honorlock Website** for more information.)			
5	2/16	Entity Relationship Modeling	DB-Ch. 6	Assign 1 due (2/16)
6	2/23	Entity Relationship Modeling	DB-Ch. 6	
7	3/2	SQL	DB-Ch. 4	Assign 2 due (3/2)
8	3/9	SQL	DB-Ch. 4	
9	3/16	*Spring Break*	No class	
10	3/23	Advanced SQL	DB-Ch. 9	Assign 3 due (3/23)
11	3/30	Advanced SQL	DB-Ch. 9	
12	4/6	MongoDB	MG-Chs. 1, 2, & 3	Assign 4 due (4/6)
13	4/13	MongoDB	MG-Chs. 3 & 5	
14	4/20	MongoDB	MG-Chs. 3 & 5	Assign 5 due (4/20)
15	4/27	MongoDB	MG-Chs. 3 & 5	Assign 6 due (4/30)
16	Exam (**5/8**)	The exam will be taken on **5/8**. The details will be announced later.		Exam (**6-10PM, 5/8**)
	(The **exam** uses **Honorlock** which requires a Webcam. Please visit the **Honorlock Website** for more information.)			

Note: "DB-" is the database textbook; "MG-" is the MongoDB book.

Student Assessment

Grading Information

Weights

Assignment 1	10 points	10% if counted
Assignment 2	10 points	10% if counted
Assignment 3	10 points	10% if counted
Assignment 4	10 points	10% if counted
Assignment 5	10 points	10% if counted
Assignment 6	10 points	10% if counted
Online Short Quiz	10 points	10% if counted
(2 out of 7 assignments/quiz with lowest scores will be dropped.)		
Exam	50 points	50%
Total	100 points	100%

Note: **2-out-of-7 grading rule** (or **5-out-of-7 grading rule**) – Out of 7 assignments + quizzes, 2 with lowest scores will be automatically dropped. Students often make a mistake when submitting/uploading an assignment and often miss the quiz/assignment due date. The 2-out-of-7 rule is to reduce or eliminate impacts of such honest mistakes.

Grading Scale

Scaled Score	Letter Grade	Scaled Score	Letter Grade	Scaled Score	Letter Grade
93% or higher	A	90% – 92.9%	A-		
85% – 89.9%	B+	80% – 84.9%	B	75% – 79.9%	B-
65% – 74.9%	C+	60% – 64.9%	C		
lower than 60%	F				

Accessing Grades

Students can check their grades by clicking "My Grades" on the course menu after the grade for each assessment task is released.

Assignments

There will be 6 assignments (due by 11PM Central Time on due dates): one on relational algebra operations (DB-Chapter 3), one on entity relationship data model (DB-Chapters 5 & 6), two on SQL (DB-Chapters 4 & 9), and two on MongoDB (MG-Chapters 3 & 5). Each assignment will cover 10% of the final grade. Please see the Assignments link on the course menu and find assignment details in the attached assignment file(s) under each assignment link. (Note: **There are 6 assignments & 1 quiz; 2 of them with lowest scores will be dropped.**)

Assignment Submission Instructions

Locate the assignment in your eLearning course. You will submit your assignments in the required file format with a simple file name and a file extension. To submit your assignment, click the assignment

name link and follow the on-screen instructions to upload and submit your file(s). For additional information on how to submit assignments, view the Submitting an Assignment video tutorial.

Please Note: Each assignment link will be deactivated after the assignment due time. After your submission is graded, you may go to My Grades on the course menu and click the score link to check the results and feedback.

Online Quiz

There will be one short quiz on relational data model concepts (DB-Chapters 1 and 3). It will consist of 20 multiple-choice or true-false questions, which must be completed within one hour. (Note: **There are 6 assignments & 1 quiz; 2 of them with lowest scores will be dropped.**)

- The quiz uses **Honorlock** which requires a Webcam. Please visit the **Honorlock Website** for more information

You can access quiz/exam by clicking the quiz/exam link on the designated page. The quiz and the exam are timed, and you may take each of them only once (i.e., the number of attempts allowed is 1). Please read the on-screen instructions carefully before you click "Begin".

Please Note: The quiz link will be deactivated after the quiz due time. After your quiz is graded and released, you may go to My Grades page and click the score link of the quiz to view your graded submission. If you do not take the quiz, you will not be able to see the quiz questions. Under no circumstances will quiz questions be released to those who do not take the quiz.

Exam (Online at the eLearning Class Site)

The **online** exam covers all chapters and materials studied during the whole semester. It includes multiple-choice/true-false, short essay, SQL, and MongoDB query questions. It will take **2 hours**. The detailed exam format will be announced later on the Discussion board of the eLearning system.

- The **online** exam uses **Honorlock** which requires a Webcam. Please visit the **Honorlock Website** for more information

General Instructional Information

Class Participation

Regular class participation is expected. Students who fail to participate in class regularly are inviting scholastic difficulty. The grade for this course is indirectly tied to your participation in this class. Successful participation is defined as consistently following the class schedule to take all course online lectures, to complete the quizzes, and to submit assignments at the eLearning site. Also, taking the final exam is required. Class participation is regularly monitored by faculty. Failure to comply with these

Class Materials

The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course; however, these materials are for registered students' use only.

Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved AccessAbility Resource Center accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Disability and Accessibility Services at UTD

It is the policy and practice of The University of Texas at Dallas to make reasonable accommodations for students with properly documented disabilities. However, written notification from the AccessAbility Resource Center (ARC) is required. Students who have questions about receiving accommodation, or those who have, or think they may have, a disability (mobility, sensory, health, psychological, learning, etc.) are invited to contact ARC for a confidential discussion. ARC is located in the Administration Building, AD 2.224. They can be reached by phone at 972-883-2098, or by email at studentaccess@utdallas.edu.

Technical Requirements

In addition to a confident level of computer and Internet literacy, certain minimum technical requirements must be met to enable a successful learning experience. Please review the important technical requirements on the Getting Started with eLearning webpage.

Honorlock

This course uses Honorlock for the quiz and the exam. **Honorlock Website** lists the following minimum computer requirements (as of December 2025):

- A laptop or a desktop computer (cannot be a tablet/iPad/cell phone) – any Chromebook, Mac, or Windows device that meets Honorlock's MSRs.
- Minimum operating system: Windows 10, macOS 10.13 and higher, Chrome OS.
- A webcam & microphone (most laptops have microphone and camera integrated). If you are unable to purchase one, a limited number of webcams are available for checkout through the Office of Information Technology.
- Dual monitors are NOT permitted
- A photo ID (school ID: UTD Comet Card, or a government issued photo ID: driver's license/passport/state ID card)
- Google Chrome browser (minimum version 79) (download Google Chrome)
- The Honorlock Chrome Extension (download extension)
- A stable, reliable Internet connection (speed: 1.5 Mbps download, 750 Kbps upload). Students can run a system requirement check by going to the Honorlock Support page (Scroll down until you see "**Simple Single-Click Test**").

Please visit the **Honorlock Website** for more information.

Course Access and Navigation

The course can be accessed using the UT Dallas NetID account on the eLearning website. Please see the course access and navigation section of the eLearning Getting Started webpage for more information.

To become familiar with the eLearning tool, please see Student eLearning Tutorials webpage.

UT Dallas provides eLearning technical support 24 hours a day, 7 days a week. The eLearning Support Center https://ets.utdallas.edu/elearning/helpdesk services include a toll-free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

Communication

This course utilizes online tools for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please visit the eLearning Tutorials webpage for video demonstrations on eLearning tools.

Student emails and discussion board messages will be answered within 3 working days under normal circumstances.

Distance Learning Student Resources

Online students have access to resources including the McDermott Library, Academic Advising, The AccessAbility Resource Center, and many others. Please see the eLearning Current Students webpage for more information.

Server Unavailability or Other Technical Difficulties

The University is committed to providing a reliable learning management system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the online eLearning Help Desk. The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.