BUAN 6320
Database Foundations for Business Analytics
Short Course Info and Schedule – Fall 2018
JSOM 1.107 Friday 4:00 p.m. - 6:45 p.m.

Instructor: Dr. James Scott, PhD

Email: james.a.scott@utdallas.edu

Office Hours: Dr. Scott, JSOM 14.314 – Thursday 4:00 p.m. – 6:00 p.m. or by Appointment

TA: Sina Haqiqi, sxf161730@utdallas.edu, JSOM 2.604, Mondays, 4 – 6 pm

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Prerequisites

There are no prerequisites for this course.

Course Description

The course provides database knowledge for non-MIS business students to function effectively in their functional area. The course covers the fundamentals of relational data model and database queries, and the basic concepts of NoSQL databases. Structured Query Language will be used extensively. Concepts around use of NoSQL/MongoDB will be covered as well. May not be used to fulfill degree requirements in MS Information Technology and Management. Credit cannot be received for both courses, MIS 6320 and MIS 6326. (3-0) Y

Learning Objectives

1. Understand relational database concepts
2. Understand entity-relationship modeling and its role in database design
3. Manipulate data in a database using the SQL language
4. Understand data management in various contexts: SQL and NoSQL

The Course will be a combination of lectures, and conceptual discussions. It is intended to be a practical/applied hands-on course where the student will learn to import, manage, analyze, extract, and report data to derive information about the data collection. Experience sharing sessions with practitioners will be organized. The students are expected to come prepared with the readings, analysis of cases, assigned for particular sessions.

Recommendation

While the instructor will demonstrate in class interaction of Microsoft Excel, Microsoft SQL, Oracle (Cloud), MySQL, Erwin, and MongoDB in class with examples, the student may gain a better understanding of the material by following along on their own laptop.

While the class may use JSOM computer labs, it is recommended that the student have a laptop from the first day of class. While any operating system is fine, it is recommended that the laptop have at least 8GB of **Required** ram and about 100MB hard disk space available.

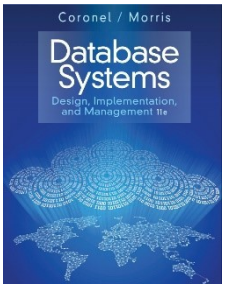
Academic Calendar and Course Outline

*The outline given here is a **tentative** schedule that I will do my best to follow as closely as possible. However, any changes that may become necessary will be announced in class and posted in eLearning course site. Presently 66% of the course concentrates on SQL with 33% concentrating on NoSQL. Corporate Databases will be used in the class for exercises and assignments.*

Session	Date	Text	Descriptions	Notes	Suggested Exercises
1	8/24	Syllabus	Course Introduction Introduction to Database Systems	SQL & NoSQL	
2	8/31	Ch. 1	Database Systems	SQL	First Assignment
3	9/7	Ch. 2	Data Models	SQL	
4	9/14	Ch. 3	The Relational Database Model	SQL	First Assignment Due
5	9/21	Ch. 4	Entity Relationship Modeling Introduction to Erwin	SQL	Second Assignment
6	9/28	Ch. 6	Normalization of Database Tables **Exam 1 Review**	SQL	Second Assignment Due
7	10/5		**Exam 1**	SQL	
8	10/12	Ch. 7	Introduction to Structured Query Language	SQL	Third Assignment
9	10/19	Ch. 8	Advanced Structured Query Language	SQL	Third Assignment Due
10	10/26	Ch. 9	Database Design (Erwin) **Exam 2 Review**		
11	11/2		**Exam 2**	SQL	Fourth Assignment
12	11/9	Ch. 10	Transaction Management and Concurrency Control Introduction to NoSQL	SQL & NoSQL	Fourth Assignment Due
13	11/16	Ch.1 & 2	Write NoSQL queries using MongoDB	NoSQL	Project Assigned
14	**11/23**		**Thanksgiving**		
15	11/30	Ch.3 & 4	Write NoSQL queries using MongoDB **Exam 3 Review**	NoSQL	Fifth Assignment
16	12/7		**Exam 3**	NoSQL	Fifth Assignment Due Project Due

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

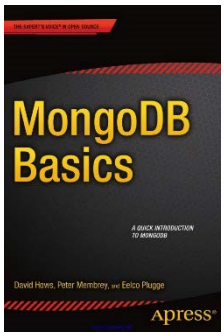
Text Book (eBook version is completely acceptable)



Database Systems: Design, Implementation, and Management, Eleventh Edition (Coronel, 20140204, p. ii)

Coronel, C. and Morris, S.

Cengage Learning Publisher
ISBN-13: 978-1285196145



MongoDB Basics

Hows, David
Membrey, Peter
Plugge, Eelco

Apress Publisher
ISBN-13: 978-1484208960

Assignment Guidelines

- All readings are to be completed before class on the date posted.
- **All assignments must be submitted by the posted due date in eLearning.**
- Assignments must adhere to the APA style guide of formatting, citing, and referencing.
- **No extra credit assignments are available**
- Descriptions of assignments will be posted as they are assigned.
- **No make-up exams will be given without valid reason (medical or death).**
- The exams will consist of multiple answer, multiple choice, fill-in-the-blank, and short essay questions.
- **The final exam is not comprehensive.**
- General grading criteria can be found in eLearning. Assignment specific grading criteria will be included with the assignment instructions.
- **All assignments will be submitted via eLearning. I do *not* accept assignments via email. If you submit an incorrect assignment or need to resubmit your assignment in eLearning you will be allowed to resubmit, if, the homework assignment is completed before the due date.**

Grading

This course will feature a mix of activities and written and problem solving assignments. Homework will include readings from the text, assignments, and activities that usually require the student to complete some type of task. The instructor will provide detailed instructions as

well as the grading criteria for each assignment. Please consult the course schedule for deadlines. **While five assignments have been listed to complete this class by the instructor only four assignments will be used for grading purposes. The four graded assignments will be determined by random selection.**

Grading Scheme

Grade Component	Points
Random Assignment 1	**100**
Random Assignment 2	**100**
Exam 1	**150**
Random Assignment 3	**100**
Exam 2	**150**
Random Assignment 4	**100**
Project	**150**
Exam 3	**150**
TOTAL POINTS	**1000**

Scoring

Final Points Equal	Letter Grade
933-1000	**A**
900-932	**A-**
867-899	**B+**
833-866	**B**
800-832	**B-**
767-799	**C+**
733-766	**C**
700-732	**C-**
667-699	**D+**
633-666	**D**
600-632	**D-**
0-599	**F**

Course & Instructor Policies

eLearning will be used for class content (e.g., class slides and assignment descriptions) and the recording of grades. Slides will be posted before class. Class announcements (e.g., change in assignment dates) will also be posted.

Instructor Response Policy: The instructor will respond to all student inquiries (emails, voice messages, etc.) within 48 hours (excluding holidays and weekends).

Attendance Policy: Attendance is extremely important. Students are expected to attend all classes in order to achieve maximum success. **Attendance sign-in sheets are presented using a random selection method.** Attendance will be taken and used in consideration for the Participation grade; however, this grade will also reflect the instructor's judgment of the value of contributions to class discussion. There is no makeup for missed in-class assignments.

Late Work: All assignments are due by the eLearning listed due date and time (not during and not after), on the specified date. **I do not accept late assignments unless *prior* arrangements have been made with the instructor.**

Academic Integrity: The University is committed to academic excellence and expects academic honesty from all members of the University community and believes that it is essential for academic excellence and integrity. Academic honesty includes adherence to guidelines established by the instructor in a particular course for both individual and group work. It prohibits representing the work of others to be one's own (plagiarism); receiving unauthorized aid on an assignment (cheating); and using similar papers or other work products to fulfill the obligations of different classes without the instructor's permission. Penalties for academic dishonesty may include a grade of "F" on the work in question or for the course. In addition, any student engaged in academic dishonesty will be subject to disciplinary action. Please refer to the General Polices website (see below) for detailed information pertaining to academic dishonesty, including procedures for determining disciplinary action.

WORKING TOGETHER on Individual Assignments: This course will have a considerable amount of computing work for application assignments. Each student, is expected to do their own work on the "individual" assignments. Copying another student's work (computer files) or having another person do your work is scholastic dishonesty and will be dealt with accordingly.

General Policies & Procedures

For information regarding general University policies and procedures, please go to http://go.utdallas.edu/syllabus-policies. These policies include the following:

- Technical Support
- Field Trip Policies, Off-Campus Instruction and Course Activities
- Student Conduct and Discipline
- Academic Integrity
- Copyright Notice
- Email Use
- Withdrawal from Class
- Student Grievance Procedures
- Incomplete Grade Policy
- Disability Services
- Religious Holy Days
- Avoiding Plagiarism