

# **MIS 325: Database Management Spring 2011**

Room: UTC 1.130  
Time: MW 9:30 to 10:45    MW 11:00 to 12:15  
Unique: 03735                    03740

## **John Mote**

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## **TAs: Andrew Cooley & Stephanie Taylor**

Office: CBA 5.226  
Hours: TTh 12:30 to 3:30

## **Course Objectives**

Databases form the backbone of virtually every modern corporate information system. The database supports the organization's highly structured, operational activities (e.g., inventory, sales, marketing, personnel) as well as the ad hoc, strategic managerial analysis of complex business decision problems (e.g., new product introduction, plant expansion, off-shoring, downsizing, stock offerings). Without a well designed and intelligently implemented database, the organization will have a difficult time remaining competitive in the marketplace.

This course provides a balanced introduction to the design and implementation of corporate database management systems. We will examine effective strategies and techniques for modeling typical corporate data collection, retrieval and analysis problems. By understanding the information needs and data flows within an organization, we can create a database solution that best serves our users. The design skills we master in this course are universal. That is, the same basic modeling skills are needed whether we are designing a database for a single-user, pc-based environment or for a thousand-user, client-server, distributed environment.

Given a database design, and the corresponding hardware and network environment, the next crucial step of the process is the implementation phase (including verification). We will use Microsoft SQL Server as our primary vehicle for mastering the database implementation process. We will also use ASP and PHP for the user-interface component of web-based databases.

Given a basic design and implementation, the final step of the process is the ongoing monitoring and revision of the database management system as the organization, the users and the database itself evolve over time. Clearly, this step never ends.

## **Textbook**

Murach's SQL Server 2008 for Developers

Bryan Syverson and Joel Murach

Murach Books, 2008

ISBN-13: 978-1-890774-51-6

<http://www.murach.com>

## **Supplemental Readings**

Additional readings will be provided throughout the semester to provide background and to help fill gaps in the lectures.

## **Software**

You do not need to purchase any software for this class. Everything is available on the computers in the Mod and Millennium Labs. You may also download the software (Visio Pro and SQL Server) at no cost to your own Windows computer. Installation instructions will be provided during the semester.

## **Class Web**

All of the class material (slides, assignments, sample databases and ASP/PHP applications, FAQs, grades, etc) will be available from the class web (not Blackboard):

<http://www.utexas.edu/courses/mis325>

## **Teaching Assistants**

The TAs will help students with software training and homework assignments. They will also grade some of the assignments, but not the exams.

## **Attendance**

Roll is never taken, but attendance is strongly encouraged. No credit will be given for missed quizzes or in-class assignments.

## **Grading**

Assignments & Quizzes	40 percent
February 28th Exam	20 percent
April 4th Exam	20 percent
May 4th Exam	20 percent

## **Assignments**

All assignments will be posted on the web. Most assignments will be turned in electronically. Late assignments will be penalized twenty percent per calendar day (not class day) up to the time when the graded assignments are returned to the class. In order to be fair to the other students in the class, late assignments cannot be accepted after that point.

## **Quizzes**

A few unannounced quizzes may be given during the semester. They will count as minor homework assignments.

## **Exam Format**

The first exam will be held in the classroom. It will be closed book.

The second and third exams will be held in the Mod Lab. They will be open book, open note, open web. You must verify that you are able to logon to the lab computers prior to the exams. If you cannot logon, then speak to the staff in the Millennium Lab.

Sample exams will be distributed prior to each exam.

## **Re-grades**

Occasionally, assignments and exams are graded incorrectly. All requests for re-grades must be submitted within one week of the date the graded item is returned to the class.

## **Students with Disabilities**

The University of Texas provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641 TTY.

## Prerequisites

There are no formal prerequisites for MIS 325. Some students do, however, know a procedural programming language like Visual Basic. Some are learning VB this semester in MIS 304. Quite a few students know a bit about web programming (HTML, CSS, JavaScript). A handful know some SQL, but very few have a deep knowledge of the language. To repeat: There are no prereqs for this class. You will be taught everything you need to know about VB, HTML, SQL and all of the other acronym languages.

## Tentative Schedule

Revisions to the schedule (as well as suggested readings, assignments, handouts, etc) will be announced in class and posted on the web.

<b>Date</b>	<b>Topic</b>
January 19th (Wed)	Course Introduction
January 24th (Mon)	Basic Database Concepts (Part 1)
January 26th (Wed)	Basic Database Concepts (Part 2)
January 31st (Mon)	Database Models & ER Diagrams (Part 1)
February 2nd (Wed)	Database Models & ER Diagrams (Part 2)
February 7th (Mon)	Normalization
February 9th (Wed)	Modeling Exercise
February 14th (Mon)	SQL Introduction
February 16th (Wed)	SQL Server Tour (in Mod Lab)
February 21st (Mon)	SQL Data Definition Language
February 23rd (Wed)	SQL Select: Basics
<b>February 28th (Mon)</b>	<b>Exam One</b>
March 2nd (Wed)	SQL Select: Aggregation
March 7th (Mon)	SQL Select: Joins
March 9th (Wed)	SQL Select: Special Cases
March 21st (Mon)	SQL Insert, Update and Delete
March 23rd (Wed)	Functions and Procs
March 28th (Mon)	ASP/PHP: Introduction
March 30th (Wed)	ASP/PHP: Classweb2 Tour (in Mod Lab)
<b>April 4th (Mon)</b>	<b>Exam Two (in Mod Lab)</b>
April 6th (Wed)	ASP/PHP: Drill-Down Selects (Part 1)
April 11th (Mon)	ASP/PHP: Drill-Down Selects (Part 2)
April 13th (Wed)	ASP/PHP: Multi-Table Selects
April 18th (Mon)	ASP/PHP: Inserts (Part 1)
April 20th (Wed)	ASP/PHP: Inserts (Part 2)
April 25th (Mon)	ASP/PHP: Updates & Deletes
April 27th (Wed)	ASP/PHP: Odds & Ends
May 2nd (Mon)	Course Wrap Up
<b>May 4th (Wed)</b>	<b>Exam Three (in Mod Lab)</b>