

MIS 325: Database Management Spring 2013

Room: UTC 1.130
Time: MW 9:30 to 10:45 MW 11:00 to 12:15
Unique: 03995 04000

John Mote

Office: CBA 5.226
Hours: MW 12:30 to 2:00
Mail: jmote@utexas.edu
Phone: 471-9436

TAs

Office: CBA 5.226
Hours: to be announced

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 explore the use of Excel, ASP and PHP for the analysis of exported data and the user-interface component of web-based databases.

Given a basic database 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.

Recommended Textbook

Murach's SQL Server 2012 for Developers

Bryan Syverson and Joel Murach

Murach Books, 2012

ISBN-13: 978-1-890774-69-1

<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 computer (Windows or Mac running Windows). Installation instructions will be provided during the semester.

Class Web

All of the class material (slides, assignments, sample databases, 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 20 Exam	20 percent
March 27 Exam	20 percent
April 29 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 grades and suggested solutions are posted. 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.

Date	Topic
January 14 (Mon)	Course Introduction
January 16 (Wed)	Spreadsheet Modeling & Analysis
January 23 (Wed)	Basic Database Concepts (Part 1)
January 28 (Mon)	Basic Database Concepts (Part 2)
January 30 (Wed)	Database Models & ER Diagrams
February 4 (Mon)	Normalization
February 6 (Wed)	Modeling Exercise
February 11 (Mon)	SQL Introduction
February 13 (Wed)	SQL Data Definition Language (Part 1)
February 18 (Mon)	SQL Data Definition Language (Part 2)
February 20 (Wed)	Exam One
February 25 (Mon)	SQL Select: Basics
February 27 (Wed)	SQL Select: Aggregation
March 4 (Mon)	SQL Select: Joins
March 6 (Wed)	SQL Select: Special Cases
March 18 (Mon)	SQL Insert, Update & Delete
March 20 (Wed)	Functions & Stored Procedures
March 25 (Mon)	SQL Odds & Ends
March 27 (Wed)	Exam Two
April 1 (Mon)	ASP/PHP Introduction
April 3 (Wed)	ASP Application
April 8 (Mon)	ASP Select (Part 1)
April 10 (Wed)	ASP Select (Part 2)
April 15 (Mon)	ASP Select (Part 3)
April 17 (Wed)	ASP Insert
April 22 (Mon)	ASP Update & Delete
April 24 (Wed)	ASP/PHP Odds & Ends
April 29 (Mon)	Exam Three