

SLIS 5707.001/005 Data Modeling for Information Professionals

Instructor

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Office Hours and Online Live Classroom Interaction

During the office hours, the instructor or the TA can be reached via email and telephone. You can also come to Dr. Chen's office as listed below to ask questions.

Location:	Information Science Building Room 214
Date & Time:	Tuesday 9 am – Noon
Phone:	940-369-8393

This course will also use chat function provided by Vista to facilitate communication. A one-hour online chat in the live class with the instructor is scheduled on Wednesday nights for students to ask course-related questions. The attendance of the online chat is OPTIONAL.

Course Description

This course is designed to meet the needs of the information industry for data modeling and database design for text and multimedia applications. It focuses on the application of data modeling technologies to library and information science practice and research. The class project will provide hands-on experience in designing and implementing database systems for information service oriented organizations such as libraries, museums, publishers, and bookstores.

Course Objectives

Upon completion of this course, students should be able to:

- Understand the basic concepts of database and data modeling,
- Master database conceptual design using the Entity-Relationship modeling approach,
- Create conceptual design diagrams using graphics software packages,

- Master a Database Management System (Microsoft Access™ in this class, but a tutorial on MySQL will be presented so, if you wish, you can choose to use MySQL for your class project) for developing a real-world database system,
- Understand the syntax of Structured Query Language (SQL),
- Write SQL statements to perform tasks such as database table definition, new data input, and information retrieval,
- Understand trends in database-related technologies and the application of database technologies to various management activities in information organizations.

To achieve the above learning objectives, students enrolled in this class are expected to study 9 - 15 hours per week on this course.

Required Textbook (Note: This is the latest edition)

Rob, Peter and Coronel, Carlos. (2007). *Database Systems: Design, Implementation, and Management*, Seventh edition. ISBN 1-4188-3593-5. Thomson Course Technology; available at amazon.com, <http://www.barnesandnoble.com/> and www.course.com

Recommended Textbook

You are recommended to purchase **ONE** book about Microsoft Access to help you use Microsoft Access for class assignments and the class project. The class also provides a simple tutorial which specifies the procedures/steps for creating database tables, queries, forms using Access. Following are two Microsoft Access books for your choice:

Hahn, Pamela Rice (2000). *How to Use Microsoft Access 2000*. ISBN: 0-672-31491-6.

Blanc, Iris (2002). *Performing with Microsoft Access: Comprehensive course*. ISBN: 0-619-05863-3.

Online Reference Materials for Structured Query Language (SQL)

Some students found that SQL was not very easy to understand when studying only the chapters from the required textbook and the class lessons. The links below will help you to understand SQL better. The third link is a simple MySQL tutorial developed for students in this class who want to use MySQL for their class projects. And the last link is a tutorial to phpMyAdmin – a visual interface to MySQL.

- SQL Online Tutorial: <http://www.w3schools.com/sql/default.asp>
- MySQL Reference Manual: <http://dev.mysql.com/doc/>
- The MySQL tutorial: <http://max.lis.unt.edu/~ramazan/MySQL/index.html>
- Tutorial to phpMyAdmin: a visual interface to MySQL: <http://max.lis.unt.edu/~ramazan/PhpMyAdmin/index.html>

Software/Hardware Requirements

In this class, we will use Microsoft Access™ as the database management system for all assignments and class projects, students can also choose to use MySQL. We will also

use Microsoft PowerPoint™ or Microsoft Visio™ for tasks such as drawing Entity-Relationship Diagrams for the database design and project presentation.

Optional Face-to-face Meetings in Denton

The face-to-face meetings are optional, but students who have never used any database management systems are strongly recommended to attend. The F2F meetings will demonstrate the use of related software such as Access, and MySQL, and provide an opportunity for students to discuss their questions with the instructor. The meetings will be held on **Two Saturdays**. Please see **Optional F2F Meeting Schedule** at the end of this syllabus to find out the date, time and content for each meeting.

Assessment

A student's grade is composed of following:

<i>Class Participation:</i>	10%
<i>Assignments:</i>	50%
<i>Quiz:</i>	10%
<i>Class Project:</i>	30%

The UNT scale for **grading** is as follows:

A = 90-100
B = 80-89
C = 70-79
D = 60-69
F = 59 and below

Class Participation (10%)

This is an online course in Vista. You are expected to participate in online discussions. Minimum amount of participation will be 6 significant postings in which you can ask questions, answer questions posted by the instructor in class lessons, or respond to others' questions or comments. The grade for class participation will consider both quantity and quality of online discussion involvement.

Assignments (50%)

You will complete **FIVE** assignments designed to help you to understand the topics of Microsoft Access™, Conceptual Modeling, and SQL. You should prepare professional-quality assignments and use graphics software packages (such as Microsoft PowerPoint™, Microsoft Visio™, or other) to produce diagrams. Hand-written submission is not acceptable.

Turn in your assignments by submitting them to the drop boxes setup in the Vista class website by the date specified in the **Recommended Study Schedule and Due Dates**. If an emergency arises which prevents you from submitting your assignments, you should contact the instructor and the TA as soon as possible before the due date. Late work

without the permission of the instructor will receive a grade with a 10% penalty per day after the due date.

Quiz (10%)

You will take **ONE** quiz near the end of the semester. The quiz will cover all of the course content up to the date when the quiz is given. The questions in the quiz will be 30 multiple-choice questions that are randomly selected from the self-test questions and/or exercises (if applicable) distributed to you after each lesson. The quiz will be available in Vista class website. The instructions on how to take the quiz will be announced one week before the quiz is given.

If an emergency arises which prevents you from taking the quiz at the specified date & time, you should contact the instructor and the TA as soon as possible before the due date.

Class Project (30%)

This class will have one class project. The purpose of the class project is to allow you to demonstrate your understanding of data modeling and database design issues covered in the class by designing and implementing a real-world database that can handle data and information management issues at libraries, museums, publishers, bookstores, or other organizations. You are free to choose the topics you are interested in, but your class project can only be carried out after the instructor approves your project proposal.

You are strongly encouraged to form teams for the class project. A project team should include no more than three people. You can also choose to conduct the project by yourself. The more contributors to a project, the more ambitious it should be. Students in a team should be responsible for coordinating the work themselves. Each team member will receive an identical grade for the project.

You need to submit **a proposal, an intermediate report, and a final report** regarding the class project. Drop boxes will be created in Vista class website in the beginning of the semester. The requirements and deadlines for the three submissions will be specified in a separate document attached in the drop boxes. That document will also contain a list of possible topics suggested by the instructor. You can choose one from the list for your class project in case you don't have a topic.

You are required to submit the proposal, intermediate report, and the final project to the respective drop boxes. However, if your final report is large and difficult to be uploaded to Vista, students should deliver a CD containing all the related files to the instructor. The CD should be sent a few days before the due date of the final report so that it reaches the instructor by the due date to avoid any delay in grading.

Academic Misconduct

The School of Library and Information Sciences, University of North Texas has passed an "Academic Misconduct Policy" on April 15, 2005. All students should have signed the form "Student Acknowledgement of Academic Misconduct Policy" prior to enrollment in

their SLIS course or as part of their application to the School since Summer 2005. Below are extracts from the policy for your convenience.

The School of Library and Information Sciences (SLIS) expects all students to demonstrate both academic rigor and academic integrity. The purpose of this policy is to inform SLIS students of their responsibilities regarding the University of North Texas (UNT) Code of Student Conduct and Discipline and the procedures enforced by SLIS for cases of misconduct. The SLIS Academic Misconduct Policy is derived from the UNT Code, and some text in the SLIS policy is based on text in the Code.

The two categories of most relevance to SLIS are cheating and plagiarism. The UNT Code of Student Conduct and Discipline defines these in its categories of misconduct:

A. Acts of Dishonesty, including but not limited to:

1. **Academic dishonesty - cheating.** The term “cheating” includes, but is not limited to:
 - (a) use of any unauthorized assistance in taking quizzes, tests, or examinations;
 - (b) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments;
 - (c) the acquisition, without permission, of tests, notes or other academic material belonging to a faculty or staff member of the university;
 - (d) dual submission of a paper or project, or resubmission of a paper or project to a different class without express permission from the instructor(s).
 - (e) any other act designed to give a student an unfair advantage.

2. **Academic dishonesty – plagiarism.** The term “plagiarism” includes, but is not limited to:
 - (a) the knowing or negligent use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgement and
 - (b) the knowing or negligent unacknowledged use of materials prepared by another person or by an agency engaged in the selling of term papers or other academic materials.

To address problems of academic integrity, SLIS has zero tolerance for violations of the SLIS Academic Misconduct Policy. The following apply:

- The SLIS Academic Misconduct Policy applies to any work submitted for SLIS courses or degree requirements, including the Capstone Experience.
- SLIS will retain students' signed statements acknowledging their understanding of the SLIS Academic Misconduct Policy. SLIS instructors will not accept students' claims that they were unaware of SLIS and UNT policies, including definitions of forms of academic misconduct.
- SLIS instructors will follow UNT regulations for reporting suspected violations to UNT, imposing academic sanctions, and recording sanctions for confirmed violations.
- An academic sanction is a penalty imposed on a student for academic misconduct. Sanctions may range from reduction of a test or assignment grade to revocation of an academic degree.

- SLIS instructors retain the right to determine specific sanctions for their courses and to set additional policies and procedures that do not conflict with SLIS or UNT policies.
- Students who have received academic sanctions are not eligible for SLIS awards, honors, or other benefits.

Americans with Disabilities Act Compliance Statement

The School of Library and Information Sciences, University of North Texas is committed to full academic access for all qualified students, including those with disabilities. In keeping with this commitment and in order to facilitate equality of educational access, faculty members in the School of Library and Information Sciences will make reasonable accommodations for qualified students with a disability, such as appropriate adjustments to the classroom environment and the teaching, testing, or learning methodologies when doing so does not fundamentally alter the course.

If you have a disability, it is your responsibility to obtain verifying information from the Office of Disability Accommodation (ODA) and to inform me of your need for an accommodation. Requests for accommodation must be given to me no later than the first week of classes for students registered with the ODA as of the beginning of the current semester. If you register with the ODA after the first week of classes, your accommodation requests will be considered after this deadline.

Grades assigned before an accommodation is provided will not be changed. Information about how to obtain academic accommodations can be found in UNT Policy 18.1.14, at www.unt.edu/oda, and by visiting the ODA in Room 321 of the University Union. You also may call the ODA at 940.565.4323.

See Next Pages for:

[Readings and Lessons Release Schedule](#)
[Optional F2F Meeting Schedule](#)
[Recommended Study Schedule and Due Dates](#)

Readings and Lessons Release Schedule

Lessons	Topics	Readings	Release Date
1	Introduction to Database Concepts	Chapter 1	January 14
2	Database Models	Chapter 2	January 14
3	The Relational Database Model	Chapter 3	January 14
4	MS Access for Database Construction		January 14
5	Conceptual (Entity Relationship) Design Basics	Chapter 4.1.1– 4.1.4	January 31
6	More Issues in Entity Relationship (ER) Modeling	Chapter 4.1.5 – 4.1.11, Chapters 4.2 and 4.3	January 31
7	Normalization of Entities	Chapter 5	February 15
8	Database Design and Application Examples	Chapter 9	February 15
9	Structured Query Language (SQL) Basics	Chapter 7	March 1
10	Advanced Structured Query Language Applications	Chapter 8	March 1
11	Advanced Database Concepts	Chapters 10, 14	March 15
12	Database Applications in Library and Information Science	Readings	March 15

Optional F2F Meeting Schedule (All Meetings will be held at ISB 203)

Meeting	Date & Time	Content
Feb. 9	9am - Noon	Lessons 1-4 Question and Answering, Access Tutorial
	1pm - 4pm	Access Tutorial (cont.)
April 5	9am - Noon	SQL
	1pm - 4pm	SQL (Cont.) Using phpMyAdmin to facilitate learning SQL.

Recommended Study Schedule and Due Dates

Academic Week	Date	Study Focus	Assignment/Project /Survey Due
1	Jan. 14 - 20	Familiar with Vista Start Here Syllabus	
2	Jan. 21 -27	Lesson One Lesson Two	Class Survey (not graded)
3	Jan. 28 – Feb. 3	Lesson Three Lesson Four	
4	Feb. 4 - 10	Lesson Four (Continue)	Assignment One (by Feb.11)
5	Feb. 11 - 17	Lesson Five	Assignment Two (by Feb.18)
6	Feb. 18 – 24	Lesson Six	Class Project Proposal (by Feb. 25)
7	Feb. 25 – Mar. 2	Lesson Seven	
8	Mar. 3 - 9	Lesson Seven (cont.)	Assignment Three (by Mar.10)
9	Mar. 10 - 16	Lesson Eight	
10	Mar. 17 - 23	Spring Vacation	
11	Mar. 24 –30	Lesson Nine	Assignment Four (by Mar.24)
12	Mar. 31 - April 6	Lesson Ten	
13	April 7 - 13	Lesson Ten (cont.), Lesson Eleven	Assignment Five (by April 7)
14	April 14 - 20	Lesson Eleven (cont.) Review, Prepare for Quiz	Class Project Intermediate Report (by April 20)
15	April 21 - 27	Lesson Twelve	Quiz (April 21-27)
16	April 28 – May 4	Working on Class Project	Class Project Final Report (by May 5)
17	May 9	Grade Submitted to the University	