

**VALDOSTA STATE UNIVERSITY**  
**MASTER OF LIBRARY & INFORMATION SCIENCE**  
**MLIS 7999 Foundation of Database Design for Information Professionals**  
**Syllabus--Fall Semester 2006**  
Three Credit Hours

**Instructor:**

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***Course Description:***

Prerequisite or corequisite: MLIS 7000 or consent of the instructor. Addresses government and industry needs for design, implementation, and management of the database systems. Focuses on the application of data modeling technologies in library and information science practice and research.

***Course Objectives:***

Upon completion the student will be able to:

- Explain the fundamental principles of database systems.
- Develop database conceptual design using the Entity-Relationship Model approach.
- Demonstrate skills and perspective to analyze real-world requirements, produce a data model, and implement the database.
- Use Structured Query Language (SQL).
- Develop and optimize complex SQL queries to perform tasks such as table creation, data input, and retrieval.
- Evaluate trends in database technologies and the application of database technologies to various activities.

***Class Activities:***

Class activities include a set of readings, assignments and quizzes, online discussions, and a term project. Students will complete weekly assignments that provide an opportunity to demonstrate familiarity with the course content. Assignments will provide students with conceptual and practical understanding of database design principles and SQL syntax. Self-test quizzes will help students measure their understanding of the course content. Students should participate in online meetings to discuss and share their opinions of the week's topics, assignments, and readings. The purpose of the term project is to allow students to demonstrate their understanding of data modeling and database design issues covered in the class by designing and implementing a database that can handle real-world data and information management issues. Term project report should include problem statement, background information about the problem, ER diagrams, data dictionary, rationale for the design, challenges faced in design and implementation, and brief evaluation of the project.

***Textbooks and Required Software:***

- Rob, Peter and Coronel, Carlos. “*Database Systems: Design, Implementation, and Management*”. 6th ed. Thomson Course Technology, 2004. ISBN 0-619-21323-X

There are also required, supplemental readings to cover broad areas of database design, management, privacy, and current issues. These readings are made available to the student through the web as pdf files. It is expected that each student will have the ability to download and open up both pdf files and Word (doc) files.

### Software

- **Microsoft Access** (version 2000 or later) as the database management application for assignments and the term project.
- **Microsoft Visio** (version 2000 or later) for creating Entity-Relationship Diagrams.
  - Students are allowed to use other applications to create ER diagrams such as Microsoft Power Point and Dia (open source) available at <http://www.gnome.org/projects/dia/>

### Grading:

A set of readings, assignments and quizzes, online discussions, and a term project.

Grades will be calculated as follows:

- Participation: 10%
- Assignments: 50%
- Quizzes: 5% (extra credit)
- Readings: 10%
- Term Project: 30%

### Participation (10%)

1. The course is designed for online delivery.
2. Students should participate in online meetings to discuss and share their opinions of the week's topics, assignments, and readings.
3. Date and time information for online meetings will be made available on class website and WebCT.
4. All questions regarding content, assignments, quizzes, and readings should be posted to class message board.
5. Students are expected to answer such questions posted by their classmates and it will count towards their grade.

### Assignments (50%) & Quizzes (5%)

- Students will complete weekly assignments that provide an opportunity to demonstrate familiarity with the course content.
- Assignments must be submitted as Microsoft Word documents.
- Collaboration on homework assignments is encouraged. You may consult outside reference materials, other students, or the instructor. However, all of your solutions should reflect your understanding of the subject matter at the time of writing.
- Assignments will provide students with conceptual and practical understanding of database design principles and SQL syntax.

Self-test quizzes are designed to help students measure their understanding of the course content.

### **Readings(10%)**

Only the readings below are required, but you might find some of the other resources useful in supplementing what we cover in class and in helping you complete the assignments. The articles cover broad areas of database design, management, privacy, and current issues. Students should post their views about each article at the designated area on the message board for discussion.

#### Foundations

- Codd, E. F. (1970). A Relational Model of Data for Large Shared Data Banks

#### Database Design and Management

- Grosky, W. I. (1997). Managing multimedia information in database systems
- Lopatovska, I. V., Oguz, F., Moen, W.E. (2004). Design, Development, and Implementation of a Texas Library Directory Database: A Multipurpose Database for the Library of Texas
- Nicholson, S. (2003). The Bibliomining Process: Data Warehousing and Data Mining for Library Decision-Making

### **Term Project (30%)**

- The purpose of the term project is to allow students to demonstrate their understanding of data modeling and database design issues covered in the class by designing and implementing a database that can handle real-world data and information management issues.
- Students are free to choose the topics of personal interest.
- Instructor approval required to start a class project.
- The instructor will also provide a list of possible projects for your selection.
- Students are required to submit progress reports (problem statement and background information) about the term project.
- Term project report must be submitted along with the designed database.
- Term project report should include problem statement, background information about the problem, ER diagrams, data dictionary, rationale for the design, challenges faced in design and implementation, and brief evaluation of the project.

Final grades will be assigned as follows:

- A – 91-100
- B – 81-90
- C – 71-80
- D – 60-70
- F – 0-69

### ***Technological Requirements:***

As this is an online course that also focuses its attention on online information services, students must have almost daily access to the Internet. That access will use email and the web (through

the student's browser) for class-related communication. As mentioned above, it is expected that each student will be capable of dealing with pdf files and Word documents (doc files).

Course communications will use . . .

1. WebCT Vista email system and discussion board are official means of communication in this class. In addition, VSU email system may be used alternatively in case WebCT Vista fails.
2. A WebCT Vista website, used by the instructor to make links available for each unit of the topical units

### ***VSU Policies:***

Please become aware of and be guided by these VSU policies.

Access Office for Students with Disabilities: <http://www.valdosta.edu/ssp/index.shtml>

Academic Dishonesty, p. 254 of Graduate Catalog, 2006/07:  
[http://www.valdosta.edu/catalog/0607/grad/grad\\_251-280.pdf](http://www.valdosta.edu/catalog/0607/grad/grad_251-280.pdf)

Student Code of Conduct: [http://www.valdosta.edu/stulife/handbook/pages\\_39-48.pdf](http://www.valdosta.edu/stulife/handbook/pages_39-48.pdf)

Equal Opportunity Statement:  
<http://www.valdosta.edu/eopma/eos.shtml>

Sexual Harassment:  
<http://www.valdosta.edu/legal/shp.html>