COURSE DESCRIPTION
This course provides an introduction to the theory and use of data management strategies in the enterprise.

LEARNING OBJECTIVES
The course introduces students to the components that make up an enterprise-wide data strategy and its importance to both business and technology strategic plans. Students will learn how to conduct key activities for implementing a successful enterprise-wide data strategy including the conceptual, logical and physical design activities.

Upon completion of this course, the student will demonstrate an understanding of basic database system concepts and principles by mastering the following:
• Describe the theoretical foundations of Relational Database Management Systems (RDBMS).
• Utilize the design of database systems to meet information objectives using the three level (conceptual, logical and physical) model of database design.
• Describe the management approaches that can be implemented in database planning, design, and administration.
• Discuss the emerging trends of database technologies.
• Demonstrate the ability to work with a group to design and implement a complete database application.
• Demonstrate the ability to implement a database with an enterprise database management system.

REQUIRED TEXT
Author: Jukic
ISBN: 9781943153190
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Publisher: Red Shelf


Gartner Reports
To access Gartner Reports:
1. go to http://my.gwu.edu
2. Login using your gwu email credentials
3. Go to the “Tools and Resources” tab
4. Select “Gartner Research Access for GW”
5. Search for article.

The instructor will assign current reference articles as indicated in the “Outline” section on Blackboard. These articles are REQUIRED READINGS.

(For Gartner articles, log in to http://my.gwu.edu using the same user id and password as for Blackboard, and choose “Tools and Resources,” then select the Gartner link and search for article.)

Email:
Please include ISTM6202 in the subject line. I try to check my email twice per day (M-F).

Evaluation
Student grades are based on the following components and relative weights:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Assignments/Labs</td>
<td>30%</td>
</tr>
<tr>
<td>Group Project (w/peer evaluation 5%)</td>
<td>30%</td>
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<tr>
<td>2 Exams (20%)</td>
<td>40%</td>
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Individual Assignments and Computer Labs

There will be 4 individual assignments about database design and 2 Labs for hands-on experience building a database. These assignments and labs are front-loaded into the first half of the course to build skills for the group project database design and implementation.

Several sessions of this course will involve the practical use of database management software. Students will be required to complete lab assignments focusing on the use of this software. A deliverable from each lab is due at the beginning of the class following the lab. Lab report formats will be provided with each lab.

The assignments and labs are intended to supplement the lecture material and to acquire skills that will be built upon as the course proceeds.

Because of this “building” affect, these deliverables must be completed on time. There will be a 10% per day penalty for late submissions.

Group Project

Students will work with their assigned groups. Each group will design a database to solve an information problem (selected by the student) and will present their database to the class at the end of the semester.

The presentation submitted at the end of the semester will include the following items: statement of purpose and information objectives, concept of operations, data validation, conceptual design, logical design, physical design, and role of each team member. Each team member will present the material related to his or her contribution to the project. The project team will provide a brief demonstration of the application. This presentation will be done by multimedia video. Each team member will complete a confidential peer evaluation.

Exams

The exams will cover material from lectures, the text, and readings. The exams will include multiple choice and/or short answer questions, problems and exercises. No books or notes will be allowed in
these exams. The Exam 2 will not be cumulative. There will be no make up exam, except for documented medical reasons.

**Attendance/Participation**

Attendance and participation in the ‘Live’ Sessions is expected by all students. If you cannot attend the ‘Live’ session then listen to the recorded session.

**3 Credit graduate computer laboratory course – 15 weeks**

Students will spend 1 hour per week in class. Out of class, they will spend an average (per week) of 2.5 hours reading and 4.5 hours working on computer assignments and projects. Over the course of the semester, students will spend 35 hours in instructional time and 85 hours on their assignments and preparing for class. Instructional time includes discussions and hands-on activities in class.

**Note**

All examinations, papers, and other graded work products and assignments are to be completed in conformance with the George Washington University Code of Academic Integrity.

**J*: Jukic Textbook**

**NoSQL**: Sadalage, Pramod J. and Fowler, Martin (2012) NoSQL Distilled: A Brief Guide to the Emerging World of Polyglot Persistence

**MDB**: Crash Course in MariaDB