Course Syllabus

MIS 7605–001 – BUSINESS DATABASE SYSTEMS

Fall Semester, 2020

3.0 Credit Hours

(Last updated: 7/21/2020)

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Office Hours: MW 3:30-5:00PM.

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Course Overview:

This course is about data and the database management systems that allow the data to function as the basis for all aspects of the work of every kind of business organization, today. It is a survey course that requires no specific background, although it is difficult to imagine that a graduate student in today’s world has not dealt with data in one form or another in their schooling, their work, or their personal life. Sometimes people ask whether this course is a “theory course”. The answer is that it is not. It is a course in understanding the nature of data and how to manage it, including such practical topics and techniques needed in industry as database design, database administration, database performance, and some hands-on work with the SQL query language. True to this course structure, exam questions are primarily problem solving and multiple choice in nature, as opposed to essay questions.
Pre-Requisites/Co-Requisites:
None

Required Texts (and Related Materials):


Location of Course Materials:
elearn.memphis.edu.

Course Objectives:
By successfully completing this course, students will be able to:

- Accurately define the term “database management” and clearly differentiate it from simple file storage.
- Construct an entity-relationship model.
- Design a relational database.
- Write basic SQL data retrieval statements.
- Discuss database administration, data dictionaries and catalogs, backup and recovery, concurrency control, and database security, as well as contemporary topics such as distributed database procedures, client/server database environment, data warehousing, and NoSQL DBMS.

Fogelman College: Learning Outcomes for Your Degree
This course is designed to help you to meet the overall learning objectives for the MSIS degree offered by the Fogelman College. You should take the time to become familiar with the overall learning objectives as a student in the MSIS degree program.

- Graduates will be competent in the use of technology.
- Graduates will be effective communicators.
- Graduates will be knowledgeable about threats and opportunities in a global society.
- Graduates will be problem solvers.
Course Methodology

Readings from the textbook, additional materials as appropriate, homework, hands-on exercises, and exams.

Professor’s Expectations of Students:

In general, you should assist the instructor in creating a positive, supportive environment for learning by staying engaged in the course and actively participating in class.

Student's Expectations of the Professor:

In my role as your instructor, there are certain things you can expect from me including: well-organized and engaging learning experience, response to emails within two (2) business days, and feedback on all work submitted within 7-10 calendar days. Note that I will check email during the weekends on only a limited basis.

Grading and Evaluation Criteria

Over the semester, you will have a variety of opportunities to earn points towards your final (overall) letter grade in this course. This section of the syllabus describes the assessed work you will be doing and how overall (final) letter grades will be computed.

Final Course Grades

Final course grades will be based on a curve to be determined at the end of the course. The following point ranges represent the grade prior to a curve being applied:

<table>
<thead>
<tr>
<th>Point Range</th>
<th>Assigned Grade</th>
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<tbody>
<tr>
<td>90-100 Points</td>
<td>A</td>
</tr>
<tr>
<td>80-89 Points</td>
<td>B</td>
</tr>
<tr>
<td>70-79 Points</td>
<td>C</td>
</tr>
<tr>
<td>60-69 Points</td>
<td>D</td>
</tr>
<tr>
<td>Under 60 Points</td>
<td>F</td>
</tr>
</tbody>
</table>

Your overall grade for the semester is based on how well you perform on a mixture of activities including class participation, exams, homework, and hands-on exercises.

Summary of Graded Activities

Points earned on the assessed activities will be distributed as follows:
<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Exams</td>
<td>85</td>
</tr>
<tr>
<td>Homework and Exercises</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>100 pts</td>
</tr>
</tbody>
</table>

**Final Exam Schedule**

An optional final exam will replace the lowest exam score. The final exam for this class will be scheduled according to the Registrar’s academic calendar website, to be announced.

Late homework will only be accepted with the approval of the instructor.

Students are required to read all of the assigned chapters and pages of the course textbook and other assigned readings and/or watch assigned videos.

**COVID-19 Information for students is available at:**
https://www.memphis.edu/fcbe/faculty/covid_19_notice.php
## Course Topics and Chapter Assignments

<table>
<thead>
<tr>
<th>Topics</th>
<th>Chapters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Data Modeling</td>
<td>2</td>
</tr>
<tr>
<td>The Enhanced E-R Model</td>
<td>3</td>
</tr>
<tr>
<td>Logical Database Design and The Relational Model</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to SQL</td>
<td>5</td>
</tr>
<tr>
<td>Advanced SQL</td>
<td>6</td>
</tr>
<tr>
<td>Pages 251-264 (joins and non-correlated subqueries)</td>
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<tr>
<td>Pages 272-274 (tips for developing queries)</td>
<td></td>
</tr>
<tr>
<td>Databases in Applications</td>
<td>7</td>
</tr>
<tr>
<td>Pages 318-328 (concurrency and security)</td>
<td></td>
</tr>
<tr>
<td>Physical Database Design and Infrastructure</td>
<td>8</td>
</tr>
<tr>
<td>Pages 333-356 (physical database design)</td>
<td></td>
</tr>
<tr>
<td>Pages 358-375 (data dictionaries, security, backup and recovery)</td>
<td></td>
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<tr>
<td>Data Warehousing</td>
<td>9</td>
</tr>
<tr>
<td>Pages 387-414</td>
<td></td>
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<td>Pages 422-434</td>
<td></td>
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<tr>
<td>Big Data Technologies</td>
<td>10</td>
</tr>
<tr>
<td>Pages 444-461 (NoSQL database)</td>
<td></td>
</tr>
<tr>
<td>Data and Database Administration</td>
<td>12</td>
</tr>
</tbody>
</table>
Course Policies

E-MAIL:

All students are required to maintain and access their University of Memphis (@memphis.edu) email account. You will receive all official course correspondence at this email account. Any inability to receive incoming mail in a timely fashion (e.g., not regularly checking your email, having a “full mailbox” condition, etc.) is the student’s responsibility.

Attendance:

You are expected to stay active and engaged throughout the academic term and keep up with the schedule of activities. Your full engagement in the class begins on the first day of the semester and should be maintained through the end of the course. For students receiving federal student loans, any lack of engagement in the course may be treated as non-attendance and potentially impact access to student loans in the future.

Adding / Dropping:

If you have questions about adding or dropping classes, please refer to this page on the Registrar’s website (opens in new window).

Academic Integrity:

The University of Memphis has clear codes regarding cheating and classroom misconduct. If interested, you may refer to the Student Handbook section on academic misconduct for a discussion of these codes. Note that using a “Solutions Manual” is considered cheating. Should your professor have evidence that using a “Solutions Manual” has occurred, he/she may take steps as described on the campus’ Office of Student Conduct website (opens in new window). If you have any questions about academic integrity or plagiarism, you are strongly encouraged to review the Fogelman College's Website on Academic Integrity (opens in new window).

Classroom Behavior:

All participants in the course should be considerate of the other course participants and treat them (as well as their opinions) with respect. The class will operate under the assumption that any and all feedback offered is positive in nature and that the intentions of the person(s) providing feedback are strictly honorable. Insensitivity in this area will not be tolerated. If you have any questions about online communication, you should review the Fogelman College's Netiquette website (opens in new window).

Late Assignments:

Late homework will only be accepted with the approval of the instructor.
Extra Credit:

There is no extra credit offered in this course. Your final grade will be computed based on your work on the formal/assessed activities previously described in this syllabus.

Reporting Illness or Absence:

Please inform the instructor in the event of illness, inclement weather, or other events that interfere with your class attendance or your ability to complete any of the coursework on time. *Being busy at work is not a legitimate excuse.*

Syllabus Changes:

The instructor reserves the right to make changes as necessary to this syllabus. If changes are necessitated during the term of the course, the instructor will immediately notify students of such changes both by individual email communication and posting both notification and nature of change(s) on the online course management system.

Student Services

Please access the [FCBE Student Services (opens in new window)] page for information about:

- Students with Disabilities
- Tutoring and other Academic Assistance
- Advising Services for Fogelman Students
- Technical Assistance