Course Syllabus  
MIS 7660–001 – ADVANCED DATA MANAGEMENT  
Spring 2016  
3 Credit Hours

Instructor: Prof. M. L. Gillenson  
Phone1:  678-5607  
E-mail:  mgillnsn@memphis.edu  
Office:  329 Fogelman College of Business and Economics

URL: http://www.memphis.edu/bitm/faculty/markgillenson.php

Office Hours: Tuesday and Thursday 3:30 – 5:00 PM or by appointment

Course Overview

Focus on the latest database management paradigms for both transactional and decision support applications.

Pre-Requisites/Co-Requisites:
MIS 7605 or equivalent knowledge of data modeling, logical and physical database design, and relational database management including the SQL query language.

Required Text (and Related Materials):


Supplementary Materials:

Graph Databases, 2ed, by Robinson, Webber, and Eifrem; O'Reilly Media, 2015, ISBN 978-1491930892


Location of Course Materials

elearn.memphis.edu

Course Objectives:
To provide in depth knowledge of the four NoSQL database paradigms: key-value database, document database, big table database, and graph database. To explore the four NoSQL database paradigms from the points of view of function, data structure, and performance. To examine the types of applications for which each of the four NoSQL database paradigms have been used and the reasons particular paradigms are appropriate for particular applications. To review specific NoSQL database management products on the market today.

Fogelman College: Learning Outcomes for Your Degree

| MSBA | http://www.fcbeassessment.net/LearningOutcomes/MSBADegreeLearningOutcomes.pdf |

Course Methodology

Lectures, guest lectures from the business community, case studies, homework, hands-on exercises, exams, and projects.

Professor's Expectations:

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 all course activities.

Student's Expectations:

In my role as your instructor, there are certain things you can expect from me including: a well-organized and engaging learning experience, and response to emails with two (2) business days, and feedback on all work submitted with two (2) weeks.

Grading and Evaluation Criteria

One midterm exam during the semester -- 20%.

A required, comprehensive final exam – 30%

(Tuesday, May 3, 2016, 7:00 – 9:00PM)

Course projects -- 30%

Homework, hands-on exercises, and class participation- 20%

**There will be no make-up exam for the midterm exam.** If a student misses the midterm exam because of an approved absence, such as a documented illness, the score on the final exam will also count as the score on the midterm exam.

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

Attendance in class is expected, as lectures and class discussion are an important part of this course.
Students are required to read all of the assigned chapters and pages of the course textbook and other assigned readings. Students are responsible for the material in the assigned readings and for all material in the lectures. Students are responsible for all work covered and all announcements made in class. Finding out about work and announcements missed due to lateness or absence for any reason is each student’s responsibility.

**Final Course Grades**

This course will not be graded on a +/- basis.

**Course Topics**

**Tentative Course Topics and Chapter Assignments**

*NoSQL for Mere Mortals* by Sullivan

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1-14</td>
<td>Overview of the four NoSQL paradigms.</td>
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<tr>
<td>1-2</td>
<td>Introduction to NoSQL database management.</td>
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<tr>
<td>3-5</td>
<td>Key-value database.</td>
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<tr>
<td>6-8</td>
<td>Document database.</td>
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<tr>
<td>9-11</td>
<td>Column family (or big table) database.</td>
</tr>
<tr>
<td>12-14</td>
<td>Graph database</td>
</tr>
<tr>
<td>15</td>
<td>Database selection guidelines</td>
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</table>

Additional readings may be assigned from other sources.

Additional topics may be added to the course at the discretion of the instructor.

Guest lectures and student project presentations will occupy a substantial portion of the class time.

**Final Exam Schedule:**

The final exam for this class will be scheduled according to the Registrar’s academic calendar website.

**Course Policies**

**E-MAIL:**

I will send all official course email correspondence to the students’ “@memphis.edu” email account. Therefore, it is the student’s responsibility to actively manage this email account.
This includes ensuring that email messages are read, and that the mailbox is managed, e.g., no "mailbox is full" issues. University of Memphis regulations allow an instructor to discuss grades with a student only in person or by email request on the student’s UoM email account only.

**Attendance:**

Attendance in class is expected, as lectures and class discussion are an important part of this course.

**Adding/Dropping:**

See Registrar’s Office posted deadlines at http://www.memphis.edu/registrar/calendars/dates/15f-dates.php

**Academic Integrity**

All University of Memphis policies regarding Classroom Misconduct and Cheating will be enforced. These are defined by the Office of Student Conduct, http://www.memphis.edu/studentconduct/.

**Participation:**

To be successful in this course as a student, you must stay active and involved throughout the entire semester. Students are expected to participate in all interactive aspects of the course.

**Classroom or Online Behavior:**

In the classroom, it is imperative that students pay full attention to the instructor and not cause distractions to their fellow students or to the instructor. For these reasons, the use of laptop computers, cell phones, smart phones, Blackberries, tablets, and all other electronic devices, including recording devices, are not permitted in class. The only exceptions are if you are a dedicated laptop note taker or prefer to view the PowerPoint slides on your laptop.

**Late Assignments:**

Late homework/projects 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 described in this syllabus.

**Reporting Illness or Absence:**

[Your statement on reporting illness and/or absence.]

**Inclement Weather**

In the event that inclement weather requires the cancellation of classes at The University of Memphis, local radio and television media will be immediately notified. Additionally, UoM has established an Inclement Weather Hotline at 678-0888 as well as TigerText an emergency alert text messaging service available to students, faculty and staff.
**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 the change(s) on the course bulletin board.

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**Student Services**

Please access the [FCBE Student Services](#) page for information about:

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