(309) 692-4092 or (800) 251-4299 CIS 308 – Summer 2017

Course Number & Name: CIS 308 Advanced Database Management Systems

Credit Hours: 4 quarter hours

Method of Delivery: Classroom/Flex

**Course Description:** This course investigates advanced database models. Topics include the Enhanced E-R Model, converting conceptual data model to the relational data model, database design and performance, advanced SQL, concepts of client/server architecture and applications, middleware, and database access; data quality, and security. Students will apply the studied topics to a real-world model or case study selected by the instructor.

Prerequisites: CIS 208

Textbook: Database Systems: Design, Implementation & Management, 12th Ed.

Authors: Hoffer, Venkataraman, and Topi

Publisher: Pearson

ISBN-13: 9781305627482

## Materials needed for the Course:

Students need access to a computer machine with Internet, a printer, and a USB flash drive (memory stick) to store needed files. Students can use terminals available in Midstate labs as well as their laptops and personal computers.

# **Learning Objectives:**

Upon completion of this course, the student will be able to:

- 1. Use a computer and apply computer-related terminology intelligently.
- 2. Browse the web and utilize other aspects of the Internet.
- 3. Use various types of software.
- 4. Identify and use various computer components, including input and output devices.
- 5. Recognize and name different operating systems and types of computer networks.
- 6. Store and retrieve information from a database.
- 7. Explain how programs are created.

#### **Grading Scale:**

| 90 – 100% | Α |
|-----------|---|
| 80 – 89%  | В |
| 70 – 79%  | С |
| 60 – 69%  | D |
| 0 - 59%   | F |

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#### Midstate Plagiarism Policy:

Plagiarism is using another person's words, either by paraphrase or direct quotation, without giving credit to the author(s). Plagiarism can also consist of cutting and pasting material from electronic sources by submitting all or a portion of work for assignment credit. This includes papers, computer programs, music, sculptures, paintings, photographs, etc. authored by another person without explicitly citing the original source(s). These actions violate the trust and honesty expected in academic work. Plagiarism is strictly against the academic policy of Midstate College. Its seriousness requires a measured, forceful response which includes consequences for inappropriate and/or no citation.

In courses containing writing assignments, the College promotes the use of an electronic resource, which compares the student's writing against previously submitted papers, journals, periodicals, books, and web pages. Students and instructors can use this service to reduce the incidence of plagiarism. This electronic resource has been found to conform to legal requirements for fair use and student confidentiality. It is able to provide a report to the student indicating the parts of the assignment that match.

#### **Student Success:**

The Office of Student Success is available to students seeking tutoring for individual classes or who need assistance with writing assignments. Information is also available on test taking techniques, how to take notes, developing good study skills, etc. Contact Student Success in Room 217 (in person); (309) 692-4092, extension 2170 (phone); <a href="mailto:studentsuccess@midstate.edu">studentsuccess@midstate.edu</a> (email).

**Instructor:** Marcus Washington

**Email:** mcwashington@midstate.edu

Phone or Txt: (309) 472-6638

**Office hours:** 30 minutes before class or by appointment

#### Policies and procedures:

- 1. Homework assignments will be given to apply the concepts learned from lectures and textbook. Quizzes and exams will be given to assess student comprehension of the material.
- Every chapter will be followed by a student activity, be it a homework assignment, a spontaneous quiz, or a scheduled test. The student may have a quiz even though a homework assignment is to be turned in.
- 3. Assignments are due at the end of the class period. All homework is to be turned in with your name, date, and assignment name. Late homework will get a 20% penalty per a class period. No makeup work is accepted during the final week of the term.

#### **Grading specifications:**

These percentages are all approximate values

Attendance/participation 10% Mid-Term/Final Exam 10% Assignments/Homework 80%

#### Class attendance:

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Regular class attendance is expected. No more than 10% absence will be tolerated. It is the student's responsibility to notify the instructor when a class will be missed. If you know of a conflict ahead of time, turn in your homework early. If the instructor receives no call or email one hour before the missed class period, the student would be considered absent and no make-up would be allowed for that day. Makeup exams will only be given in case of extreme, fully-reasonable situations.

#### Course participation requirements:

Participation consists of three factors: Class attendance, homework completing, and taking part of group and class activities. All three aspects are considered in order for the instructor to grant a participation grade. Participation is NOT equivalent to class attendance only. The course participation grade will be issued by the instructor in last week of the quarter, prior to issuing the term grade.

#### Grading scale:

90 – 100: A 60 – 69: D 80 – 89 : B 0 – 59: F 70 – 79 : C

#### **Tentative Term Schedule and Covered Material**

| Week | Dates   | Chapter | Topic   | Learning Objective |
|------|---------|---------|---|--------------------|
| 1    | May 22  | 1       | Class overview<br>Introductions / Context of<br>Database Management | 1                  |
| 2    | May 29  | 2       | Modeling Data in the<br>Organization                                | 1,2                |
| 3    | June 5  | 3       | Enhanced E-R Model  | 2,3                |
| 4    | June 12 | 4       | Logical Database Design and the Relational Model                    | 3,4                |
| 5    | June 19 | 5       | Physical Database<br>Design and Performance                         | 4,5                |
| 6    | June 26 | 6       | Mid-Term Exam /<br>Introduction to SQL                              | 5,6                |
| 7    | July 3  | 7       | Advanced SQL  | 6,7                |
| 8    | July 10 | 8       | Database Application<br>Development                                 | 7,8                |

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| 9  | July 17     | 9,10                              | Data Warehousing/ Data<br>Quality and Integration   | 8,9              |
|----|-------------|-----------------------------------|---|------------------|
| 10 | July 24     | 11,12,<br>13,14                   | Overview: Distributed Databases, Object- Oriented Data Modeling, and Using Relational Databases to Provide Object Persistence | 9,10,11,12,13,14 |
| 11 | July 31     | Make Up and review for Final Exam |   |                  |
| 12 | August<br>7 | Final Exam                        |   |                  |