WEST TEXAS A & M UNIVERSITY  
COLLEGE OF BUSINESS  
Department of Computer Information Systems  
CIDM 3350 Database Concepts and Design  
Course Syllabus. Spring 2012

Professor: Dr. Amjad Abdullat  
Times/Location: T/Th. 10:30 - 11:45 Classroom Center Building room 205  
Office Location: Classroom Center Building room; Room 208b  
Office Hours: T/Th. 2:00 P.M. to 3:30 P.M., MWF 10:00 A.M. 12:15 P.M.  
M/W 2:00 P.M. to 3:30 P.M.  
Office Phone: 806-651-2443  
E-Mail: aabdullat@wtamu.edu

Catalog Description: 
Principles of database design and structure. Analysis and implementation of database systems with emphasis on the relational model. Detailed study of data modeling concepts and techniques. Topics include physical and logical design, normalization, SQL, transaction and concurrency control, security and data integrity.

Prerequisites: 
CIDM 1315 or equivalent

Required text: 

Course Overview 
Database management systems form the backbone of virtually every modern corporate information system. Database systems are one of the oldest, and most pervasive and valuable technologies for supporting information needs in all types of organizations. Management of modern organizations is impossible without database systems—inventory and sales could not be tracked, personnel administered, suppliers and customers relationships managed, accounting and marketing performed, electronic trading, markets and other segments of electronic commerce conducted, and so on. Simply, there is no business and management without database systems. Database systems evolved through several technological stages up to today’s distributed systems connected and accessible through the Internet.

This course provides a balanced introduction to the design and implementation of corporate database management systems. Its aim is to introduce basic concepts of database and database management systems. This course explores fundamentals of database systems. It enables students to analyze connections between data and business, understand database management systems (DBMS—software for creating and managing database systems), techniques of storage and retrieval of database systems, and to develop simple DBMS applications. We will examine effective strategies and techniques for data modeling. By understanding the information needs and data flows within an organization, we can create a database solution that best serves our users. The design skills we master in this course are universal.

At the end of this course, it is expected that students will have a reasonably good idea about file organizations, relational data model, relational algebra, SQL statements, conceptual, logical and physical models, normalization forms database processing, transaction management, database recovery and possibly database security. These are fun topics and are easier to grasp with a well-planned approach. Please note that self-reading of a number of sections of the textbook is highly recommended.

Terms of Use
A student’s continued enrollment in this course signifies acknowledgment of an agreement with the statements, disclaimers, policies, and procedures outlined within this syllabus and elsewhere in the WTClass environment. This Syllabus is a dynamic document. Elements of the course structure (e.g., dates and topics covered, but not policies) may be changed at the discretion of the professor.

Learning Goals of the BBA Program
The College of Business at West Texas A&M University seeks to prepare students in the BBA degree program for careers in business and to foster their professional growth and advancement via the key learning goals. Each learning goal is accompanied by an operational definition for the goal.

- **Goal 1: Professional Communication:** Graduates of the BBA program will be effective communicators.
  - Upon successful completion of the course, students will be able to develop a data model for a database application using an appropriate modeling tool such as ER diagrams.

- **Goal 2: Critical Thinking:** Graduates of the BBA program will be critical thinkers.
  - Upon successful completion of the course, students will be able to use SQL DDL statements to implement relational data models;
  - Upon successful completion of the course, students will be able to use SQL DML statements to query and modify data in a relational database.

- **Goal 3: Business Environment:** Graduates of the BBA program will be knowledgeable of ethical, global, and social environmental factors and how they relate to business decisions.
  - Upon successful completion of the course, students will be able to demonstrate and identify data integrity and security requirements.

- **Goal 4: Functional Business Analyses and Applications:** Graduates of the BBA program will be knowledgeable in the functional areas of business and their integration.
  - Upon successful completion of the course, students will be able to demonstrate an understanding of the major components of a database, concepts of database systems, and the rationale of the relational data model.
  - Upon successful completion of the course, students will be able to demonstrate their understanding of developing an enterprise data model that reflects the organization's fundamental business rules.

Scholastic Dishonesty Statement
It is the responsibility of students and instructors to help maintain scholastic integrity at the University by refusing to participate in or tolerate scholastic dishonesty. Commission of any of the following acts shall constitute scholastic dishonesty. This listing is not exclusive of any other acts that may reasonably be said to constitute scholastic dishonesty: acquiring or providing information for any assigned work or examination from any unauthorized source; informing any person or persons of the contents of any examination prior to the time the examination is given in subsequent sections of the course or as a makeup; plagiarism; submission of a paper or project that is substantially the same for two courses unless expressly authorized by the instructor to do so; submission of a paper or project prepared by another student as your own. You are responsible for being familiar with the University’s Academic Integrity Code, as well as the COB Student Code of Ethics below.

WTAMU COB Student Code of Ethics
Each student enrolled in COB courses accepts personal responsibility to uphold and defend academic integrity and to promote an atmosphere in which all individuals may flourish. The COB Student Code of Ethics strives to set a standard of honest behavior that reflects well on students, the COB and West Texas A&M University. All students enrolled in business courses are expected to follow the explicit behaviors detailed in the Student Code of Ethics.

**Code of Ethics:**
- Do not use notes, texts, solution manuals, or other aids for a quiz or exam without instructor authorization.
• Do not copy the work of others and/or allow others to view your answers or copy your work during a quiz, exam, or on homework assignments.
• Do not allow other parties to assist in the completion of your quiz, exam, homework, paper, or project when not permitted.
• Do not work with other students on projects or assignments without authorization from the course instructor.
• Properly cite and specifically credit the source of text, graphic, and web materials in papers, projects, or other assignments.
• Do not forge the signature of an instructor, advisor, dean, or another student.
• Provide truthful information for class absences when asking faculty for excused absences or for a make-up for a quiz, exam, or homework.
• Provide truthful information on your resume including work history, academic performance, leadership activities, and membership in student organizations.
• Respect the property, personal rights, and learning environment of all members of the academic community.
• Live up to the highest ethical standards in all academic and professional endeavors.

Students violating the Student Code of Ethics will be reported to the Dean’s office and are subject to penalties described in the West Texas A&M University Code of Student Life, which may include suspension from the University. In addition, a violator of the Student Code of Ethics may become ineligible for the following:

• Participation in student organizations sponsored by the COB.
• Recognition for College academic honors, awards, and scholarships.

Software requirements:
We will be using MS 2008 SQL Server Database for the course. Each student in the course will be receiving a user account and database area on the CIDM Department MS SQL server. To access the server from off campus you will need a copy of MS SQL Client. A copy of MS SQL Client is available from the instructor upon acceptance of the license agreement.

Course objectives:

<table>
<thead>
<tr>
<th>Program Student Outcome</th>
<th>Course Learning Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO1: An ability to analyze a problem and identify the computing requirements appropriate to the solution</td>
<td>CLO1: Upon successful completion of the course, students will be able to demonstrate an understanding of the major components of a database, concepts of database systems, and the rationale of the relational data model.</td>
</tr>
<tr>
<td></td>
<td>CLO2: Upon successful completion of the course, students will be able to use SQL DDL statements to implement relational data models;</td>
</tr>
<tr>
<td></td>
<td>CLO3: Upon successful completion of the course, students will be able to use SQL DML statements to query and modify data in a relational database.</td>
</tr>
</tbody>
</table>
PO2: An ability to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs

CLO4: Upon successful completion of the course, students will be able to demonstrate their understanding of the use of ER diagramming techniques to design normalized relational data models.

CLO5: Upon successful completion of the course, students will be able to develop a data model for a database application using an appropriate modeling tool such as ER diagrams.

CLO6: Upon successful completion of the course, students will be able to demonstrate their understanding of developing an enterprise data model that reflects the organization's fundamental business rules.

CLO7: Upon successful completion of the course, students will be able to demonstrate and identify data integrity and security requirements.

Course Format
The instructor will lecture and make presentations on topics of database design. The instructor will analyze and review several realistic examples to discuss the relevant problems to the topic of relational database design. Classes will include a mixture of lecture, exercise as discussions, and student participations. The class assignments and exercises will provide the framework for our discussion, and we will try to outline several lesson learned from each situation.

Class Requirements
The requirements for the class include 1) final exam, 2) two mid-term exams, and 3) several homework assignments. Assignments must be turned-in by the due date announced in the class.

The exams (midterms and final) will cover lecture, textbook material, web site material referenced in class, assignments, and in-class exercises. Exams will employ a variety of question types. Dates for the exams are noted on the schedule.

Examinations taken late or assignments turned in late will not be accepted unless prior arrangement made with the instructor. If you must miss an exam, please try to let me know ahead of time. If you miss an exam for an unexpected reason, see me as soon as you can after the test date. Late work will not be accepted except under truly adverse circumstances. Accepted late assignments will be graded on less than a 100 scales varying on days late and quality of work. No incompletes will be given in this class for any reason. Exams dates on the tentative plan for the semester are estimates.

The requirements include:

1. Final Exam
The final exam will be comprehensive; and it is intended to gauge your understanding of the course material covered. In addition to the textbook reading assignments, the final exam cover any materials discussed in the class and any presentation made until that point in the class. The final exam is closed book. No make-up exam is ordinary given. In case of emergency absence, notify the instructor before the exams.

2. Midterm Exams
Examinations are intended to gauge your understanding of the course material covered. There will be two examinations. In addition to the textbook reading assignments, the exams will cover any materials discussed in the class and any presentation made until that point in the class. Exams are closed book and no make-up exam is ordinary given. In case of emergency absence, notify the instructor before the exams.
3. Homework Assignments

There will be several homework assignments for this class. Understanding the homework assignments will be essential for successful completion of the course. Copying someone else’s answers will not be allowed, nor having someone else do your assignments for you be allowed. It is important that every student must work on homework individually unless stated otherwise, and they must turn them in on time. No homework will be accepted after the deadline. Identical home works will not be accepted and, as required by the university policy, the case will be reported to the university authority for necessary action. Please note that identical homework means identical algorithms or identical descriptions or identical solutions, etc. Copying solutions from any web site will be regarded as cheating and the case will be reported to the university authority. It is students’ responsibility to find out what was covered in the class during his/her absence. Such absence from the class will not be accepted as a reason for not submitting the homework on time or for obtaining a poor score in exams. Submitted work must be presented in a professional format.

Class Participation

Classes are most enjoyable for you and for me when everyone is prepared to interpret the materials intelligently, frame good questions, exchange ideas, and seek answers. Students expected to read the assigned materials before coming to class and participate actively in class discussion. The following are examples of good contributions to class participations: raising relevant questions, insightful questions, making comments that build on the ideas of others; helping other students contribute their ideas; offering your own ideas to help analyze cases to develop sound course of action; sharing your own personal experiences in a way that adds to better understanding of topic being discussed; talking with appropriate frequency, i.e., neither dominating the conversation nor being too quiet.

Effective participation can take many forms and should serve to exhibit your own learning and to foster a positive learning environment for the class. You may do this by adding to the flow of the discussion by building on others’ comments or by redirecting the discussion into other critical areas, sharing your expertise (technical, industry, or other), posing questions, constructively criticizing, and summarizing the main learning points.

It is also worth considering some of the factors that would be seen as not participating: an attitude of disrespect towards others, holding the floor too long, lack of sensitivity to what is being discussed at the time of your interjection, ‘me too’ comments that fail to add anything useful, or inappropriate humor. Failure to attend class, late arrival, early departure, and frequently leaving class for short periods will also be seen as means to compromise learning and the learning environment. At my discretion, these factors can contribute to negative assessments of participation for a given class session. Enthusiastically participating in the course generally leads to greater individual contribution to the classroom environment, which often leads to higher levels of learning for everyone involved.

Class Attendance

Students are expected to attend ALL classes on time. You are expected to attend all class sessions. Much of the group activity and planning will take place during the class sessions. You must come to the presentations and exams unless you have a valid excuse (serious illness, family emergency, etc.). You MUST notify your instructor in advance of any anticipated absence from class. If you know you will be absent from class on examination day, you must make arrangements in ADVANCE to take the exam at a time determined by your instructor — unless the circumstances are extreme and unanticipated; makeup exams are not given. Repeated late arrival for class lectures is inexcusable if not documented in advance.

Grades

A student’s final grade will be based on homework assignments content, quality, clarity, neatness, accuracy and timeliness, examination grades, quiz grades, and leadership. Student attendance will significantly impact a student’s final grade. Absences could potentially reduce cumulative grade point average by a maximum of one letter grade. Being removed from a team will negatively impact a student’s overall grade. The number of points that you accumulate will determine individual course grade. Points will be based on exams, homework assignments, and the class participation and attendance. These components will be weighted as follows:

| Two midterm exams | 300 Points |
Homework assignments and quizzes | 400 Points
Class leadership and participation | 100 Points
Final exam | 200 Points
Total | 1000 Points

The instructor reserves the right to adjust any person’s scores by up to 5% points. This subjective evaluation will be based on exceptional growth, or other factors not measured by the items above. Thus, your final grade will be based on the total points you accumulate, taking into account both their absolute and relative values to other scores in the class. A letter grade of C is considered competent for undergraduate work. A letter grade of A is considered outstanding student achievement and reserved for such. A letter grade of D is below undergraduate level expectation and indicates a need for improvement. Grades will be based on the following percentage: a need for improvement. Grades will be based on the following percentage:

| 900-1000 | A |
| 800-890 | B |
| 700-790 | C |
| 650-690 | D |
| < 640 | F |

Technology Requirements
All technological requirements for the successful completion of this course are the responsibility of the student, including access to a working computer with broadband internet connection and state-of-the-art security. The student is responsible for all technological problems not related to WTAMU, including but not limited to equipment failures, power outages, and internet breakdowns. Furthermore, students are responsible for all necessary technical and operational skills for completing this course, and for being familiar with WTClass (the Angel Learning System) both in a general sense and in a specific sense as pertaining to this course and any materials stored within. The professor is not responsible for any technical matters related to WTClass. Students must contact WTClass if they have problems accessing and/or using Angel.

Viewpoints Disclaimer
The views expressed in this document, web-based course materials, and/or classroom presentations and discussions are those of the professor and do not necessarily represent the views of West Texas A&M University, its faculty and staff, or its students. Views expressed by students are likewise those of the person making such statements. It is understood and expected that each individual within this course will respect and allow individual difference of opinion.

External Websites Disclaimer
Neither the professor, the COB, nor WTAMU are responsible for the content of external websites discussed in the classroom and/or linked to via online course materials, emails, message boards, or other means. Referred websites are for illustrative purposes only, and are neither warranted nor endorsed by the professor, COB, or WTAMU. Web pages change frequently, as does domain name ownership. While every effort is made to ensure proper referencing, it is possible that students may on occasion find materials to be objectionable for reasons beyond our control.

Physical or Educational Access
West Texas A&M University seeks to provide reasonable accommodations for all qualified persons with disabilities. This University will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student’s responsibility to register with Disability Support Services and to contact the faculty member in a timely fashion to arrange for suitable accommodations.

Evacuation Statement
If you receive notice to evacuate the building, please evacuate promptly but in an orderly manner. Evacuation routes are posted in various locations indicating all exits, outside assemble area, location of fire extinguishers, fire alarm pull stations and emergency telephone numbers (651.5000 or 911). In the event an evacuation is necessary: evacuate immediately do not use elevators; take all personal belongings with you; report to outside assemble area...
and wait for further information; students needing assistance in the evacuation process should bring this to the attention of the instructor at the beginning of the semester.

**Chemical and Equipment Safety Statement**

Safety is everyone’s responsibility. Material Safety Data Sheets (MSDSs) are provided for all chemicals used in this class. MSDSs provide information about physical properties, health risks, fire explosion data, and other important information associated with these chemicals. Before handling or using a chemical, you should refer to the MSDS for that chemical. It is your responsibility to inform the instructor in writing of any health conditions that may prevent you from safely using a chemical (pregnancy, auto immune deficiency, etc.). It is also the responsibility of the student to report any spill or problems found while storing or using a chemical. If you are unsure about a chemical, always ask. If you see any unsafe condition, notify your instructor immediately. If you are unsure about the proper and safe operation of any piece of equipment, ask your instructor for proper instruction. All injuries, spill of materials and unsafe conditions must be reported to the instructor immediately.
The tentative course schedule is a guideline created to facilitate learning within the course. It shows the order of topics. Its main purpose is to list the sequence in which topics will be covered. Actual times will likely be adjusted as the semester progresses. Class discussions will emphasize some parts of the text material and elaborate on others. You are expected to be on time for all class meetings. If you must miss a class, it is your responsibility to get notes and any announcements from another classmate. It is expected that you keep track of all announcements in class and of the actual progress during the semester. Homework assignments will be announced in the class. The topics and dates as outlined in the course schedule are subject to change. All necessary changes will be announced.

<table>
<thead>
<tr>
<th>WEEK</th>
<th>Day</th>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>T</td>
<td>8-28</td>
<td>Course Introduction and overview</td>
</tr>
<tr>
<td>2</td>
<td>Ch. 1</td>
<td>Th.</td>
<td>8-30</td>
</tr>
<tr>
<td></td>
<td>Ch. 2</td>
<td>T</td>
<td>9-4</td>
</tr>
<tr>
<td>3</td>
<td>Ch. 3</td>
<td>Th.</td>
<td>9-6</td>
</tr>
<tr>
<td>4</td>
<td>Ch. 3</td>
<td>T</td>
<td>9-11</td>
</tr>
<tr>
<td>5</td>
<td>Ch. 3</td>
<td>Th.</td>
<td>9-13</td>
</tr>
<tr>
<td>6</td>
<td>Ch. 4</td>
<td>T</td>
<td>9-18</td>
</tr>
<tr>
<td>7</td>
<td>Ch. 4</td>
<td>Th.</td>
<td>9-20</td>
</tr>
<tr>
<td>8</td>
<td>Ch. 4</td>
<td>T</td>
<td>9-25</td>
</tr>
<tr>
<td>9</td>
<td>Th.</td>
<td>9-27</td>
<td>Introduction to MS SQL Server</td>
</tr>
<tr>
<td>10</td>
<td>Ch. 7</td>
<td>T</td>
<td>10-2</td>
</tr>
<tr>
<td>11</td>
<td>Ch. 7</td>
<td>Th.</td>
<td>10-4</td>
</tr>
<tr>
<td>12</td>
<td>T</td>
<td>10-9</td>
<td>SQL</td>
</tr>
<tr>
<td>13</td>
<td>Ch. 6</td>
<td>Th.</td>
<td>10-11</td>
</tr>
<tr>
<td>14</td>
<td>Ch. 6</td>
<td>T</td>
<td>10-16</td>
</tr>
<tr>
<td>15</td>
<td>Ch. 7</td>
<td>Th.</td>
<td>10-18</td>
</tr>
<tr>
<td>16</td>
<td>Ch. 7</td>
<td>T</td>
<td>10-23</td>
</tr>
<tr>
<td>17</td>
<td>Ch. 9</td>
<td>Th.</td>
<td>10-25</td>
</tr>
<tr>
<td>18</td>
<td>Ch. 9</td>
<td>T</td>
<td>10-30</td>
</tr>
<tr>
<td>19</td>
<td>Ch. 8</td>
<td>Th.</td>
<td>11-1</td>
</tr>
<tr>
<td>20</td>
<td>Ch. 8</td>
<td>T</td>
<td>11-6</td>
</tr>
<tr>
<td>21</td>
<td>Ch. 8</td>
<td>Th.</td>
<td>11-8</td>
</tr>
<tr>
<td>22</td>
<td>T</td>
<td>11-13</td>
<td>Exam II</td>
</tr>
<tr>
<td>23</td>
<td>Ch. 10</td>
<td>Th.</td>
<td>11-15</td>
</tr>
<tr>
<td>24</td>
<td>Ch. 10</td>
<td>T</td>
<td>11-20</td>
</tr>
<tr>
<td>25</td>
<td>Th.</td>
<td>11-22</td>
<td>Happy Thanksgiving</td>
</tr>
<tr>
<td>26</td>
<td>Ch. 11</td>
<td>T</td>
<td>11-29</td>
</tr>
<tr>
<td>29</td>
<td>CH. 11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Ch. 15</td>
<td></td>
<td>12-7</td>
</tr>
<tr>
<td>31</td>
<td>T</td>
<td>12-11</td>
<td>Final Exam @ 10:30 a.m.</td>
</tr>
</tbody>
</table>