Section 1: MWF 8:00 – 9:00 AM, Clow 207 (Mondays & alternate Fridays starting Feb 12th)
MIS Lab - Clow 33 (Wednesdays & alternate Fridays starting Feb 5th)

Instructor: Dr. George C. Philip
Office: Clow Faculty 207
Office Phone: 424-3152 or 424-1441 (Program Assistant)
Email: philip@uwosh.edu
Office hours: M, T, W, R: 1:15 - 3:00 PM; or by appointment.


Course Packet: Available in the book store.

Course Description:
Database systems are studied in the context of their use in business, including design, development, administration, and use of database systems to support information systems and decision-making.

Topics include database concepts, data modeling, database design and development, normalization, the relational model, database implementation, administration of database systems, and Business Intelligence systems including data warehouses. Special emphasis will be given to design of databases. Application development using DBMS software will be studied through the use of the popular database management system, Oracle (10g), including SQL plus, Forms, and Procedures.

Course Objectives:
1. The student will understand the importance of database design.
2. The student will acquire the knowledge and skills to apply data modeling techniques to database design problems.
3. The student will be able to normalize data structures and understand why non-normalized data structures are undesirable with respect to dependencies and maintenance.
4. The student will learn the SQL language and how to develop simple business applications using Oracle DBMS.
5. The student will develop knowledge and skills in business intelligence, data warehousing, and data base administration.

College of Business Administration Assessment Goals (applicable to this course):
Business Knowledge: The COBA graduate will be competent in a functional area (major field).
Analytical Thinking & Problem Solving Skills: COBA graduates will analyze situations and make decisions, using problem solving techniques, as well as creative and advanced critical thinking skills.

The objectives of the MIS major that are addressed in this course are:
1. MIS graduates will have an understanding of information systems analysis and design
2. MIS graduates will be able to develop software using a visual development tool
3. MIS graduates will be able to model and develop database applications
4. MIS graduates will have the basic knowledge/skills to evaluate, select and use appropriate information technology to solve business problems in the various functional areas.

Policies:
1. Exams must be taken at the specified times unless prior permission is obtained from the instructor for an alternate time. Students are expected to attend all class and lab sessions. If you miss a lab session, you must complete the missed lab work before coming to the next session, since most lab exercises build from what you did in previous sessions. Certain in-lab/in-class exercises will be collected and evaluated. There will be no make-up for missed class exercises due to unexcused absence.

2. All assignments are individual assignments, unless specified otherwise. They must be done independently. **Copying other student's work, letting other students see or copy your work, or working together on assignments will result in serious penalties.**

3. Assignments are to be typed (word processing), organized and placed in an 8 1/2 x 11 inch folder. Assignments must be handed in at the beginning of class on the assigned due date. The front page of the assignments must show clearly your name, and the name/number of the assignment.

**Grading Scheme:**

Grades will be determined based on the following point distribution. There could be minor changes in the points awarded for each item.

<table>
<thead>
<tr>
<th>Evaluation Tool</th>
<th>Max Points</th>
<th>Your Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz</td>
<td>20</td>
<td>___</td>
</tr>
<tr>
<td>Exam I</td>
<td>80</td>
<td>___</td>
</tr>
<tr>
<td>Exam II</td>
<td>60</td>
<td>___</td>
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<tr>
<td>Oracle/SQL Assignments</td>
<td>85</td>
<td>___</td>
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<tr>
<td>Database Design Assignments</td>
<td>60</td>
<td>___</td>
</tr>
<tr>
<td>Class/Lab/Practice Exercises, Attendance/Participation/Professionalism, Prof Development**.</td>
<td>45</td>
<td>___</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>350</strong></td>
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**Professional Development Component**

Eight points (out of 45) is for your participation in a professional development activity. You may select one from the following two options.

**Option I.** Attend two professional MIS meetings/events. For example,
1. MIS club meeting. (Make sure you write your name in the sign up sheet at the meeting.)
2. Meetings of professional organizations in the IT field. (Assoc. of I.T. Professionals has monthly meetings in Appleton). Provide a brief report of the presentation.
3. Tour or other professional development activity arranged by the MIS club

**Option II.** Make a 10-minute presentation to the class on a current topic in database development – database software, new technologies (ex. Object oriented DB), applications, management, etc. No written report is required.

Class/Lab exercises typically are done during the class/lab. You will be asked to provide the results of these exercises in class. In some cases, you will be asked to hand-in the results. There will be no make up for missed exercises due to absences. Practice exercises are done outside the class time.
## COURSE OUTLINE

Database concepts will be discussed every Monday, and alternate Fridays starting with Feb 12th. SQL/Oracle will be covered every Wednesday and alternate Fridays starting with Feb 5th. **The lab dates are shown in bold**, in column 1 below.

<table>
<thead>
<tr>
<th>Class/Lab</th>
<th>Assignments</th>
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<tbody>
<tr>
<td><strong>Week 1</strong></td>
<td>Ch. 1 &amp; 2: The Database Environ. &amp; Develop. Process</td>
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<tr>
<td>Feb 1,3,5</td>
<td>Lab: MM Ch.1, 2: Intro to Oracle &amp; SQL*Plus, creating tables</td>
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<tr>
<td><strong>Week 2</strong></td>
<td>Ch. 3: Entity/Relationship (E/R) Modeling</td>
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<tr>
<td>Feb 8,10,12</td>
<td>Lab: MM Ch.2; Ch. 3A, HPM Ch.7: SQL-Add, update, delete data</td>
</tr>
<tr>
<td><strong>Week 3</strong></td>
<td>Ch. 3: E/R Model; Ch. 4: Enhanced E/R Modeling</td>
</tr>
<tr>
<td>Feb 15,17,19</td>
<td>Lab: MM Ch.3A, 3B, HPM Ch7: SQL-Retrievng data from a single table</td>
</tr>
<tr>
<td><strong>Week 4</strong></td>
<td>Ch. 5: Database Design</td>
</tr>
<tr>
<td>Feb 22,24,26</td>
<td>Lab: MM Ch. 3B, HPM Ch7: SQL – Retrieving data from a single table</td>
</tr>
<tr>
<td><strong>Week 5</strong></td>
<td>Ch. 5: Database Design</td>
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<tr>
<td>Mar 1,3,5</td>
<td>Lab: MM Ch.3C, HPM Ch.8: Multitable queries</td>
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</tbody>
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**Week 6**  
Mar 8,10,12 Lab: MM Ch.3C, HPM Ch.8: Multitable queries

**Week 7**  
Lab: MM Ch.3C: Administration, Multiuser environment, MM Ch 4A: PL/SQL

**SPRING BREAK**

**Week 8**  
Mar 29, 31, Apr 2 Ch. 5: Normalization  
Lab: MM Ch. 4A, 4B: PL/SQL, Implicit/Explicit Cursors

**Week 9**  
**Exam 1: April 5**  
Apr 5,7,9 Lab: MM Ch.9A(P.703-725): Advanced PL/SQL  
Practice Ex 3&4, due 4/4

**Week 10**  
Ch. 6: Physical DB Design  
Apr 12,14,16 Lab (14th & 16th) MM Ch 5A, 5B, 5C: Oracle Forms  
DB Design Assign3, due 4/16
Week 11  Ch 11: Business Intelligence & Data Warehousing

Apr 19, 21, 23  BI Articles:

Lab: MM Ch. 6A, 6B: Custom Forms (Selected Topics)
MM Ch. 8: Creating an Integrated Application
MM Ch 9B: Database triggers

Week 12  BI & Data Warehousing  Oracle Assign 3, due 4/26
Apr 26, 28, 30  Lab (on 28th & 30th): MM. Ch 6: Form Builder

Week 13  May 3, 5, 7  Ch. 12: Database Administration
Lab: MM. Ch 9A(P.725-734), 9B: Database Triggers;

Week 14  Oracle Assign 4, due 5/10
May 10, 12, 14  Exam 2, May 12.

Grading Scale
91.0% – 100%  A
88.0% – 90.9%  A–
85.0% – 87.9%  B+
81.0% – 84.9%  B
78.0% – 80.9%  B–
75.0% – 77.9%  C+
70.0% – 74.9%  C
67.0% – 69.9%  C–
64.0% – 66.9%  D+
60.0% – 63.9%  D
<60  F