COURSE FORMAT
This four-credit course will be taught through a combination of lecture, demonstration, and group and individual exercises. Exams, projects and assignments will be completed and submitted electronically and manually. CIS112 is a required course for CIS majors and fulfills an introductory core requirement for minors. This course has no prerequisites.

COURSE DESCRIPTION AND OBJECTIVES
This course provides the essential modeling and technical skills required to analyze, design and implement modern relational database applications. Upon completion of this course, students will be able to:

- describe and identify the functions of a DBMS and its role in application development;
- discuss the practical aspects of the relational model and demonstrate its implementation;
- apply practical aspects of database and user interface design principles;
- use a DBMS to create database-driven information systems;
- write SQL to create and manipulate database structures.

READINGS
The instructor will introduce additional required readings via Sakai throughout the course.

ASSIGNMENTS & GRADING POLICIES

Class Participation
You are expected to come to each class prepared to participate. Prepared students are those who have:

- read the assigned texts and multimedia materials in Sakai prior to the class meeting;
- reviewed the notes in Sakai;
- studied the concepts to be discussed;
- collected questions regarding the material and the course.

In addition to these preparatory steps, I assume that you check your W&J Email at least once per day. When you cannot attend class due to a conflict, I expect that you will contact me via your W&J Email as soon as possible. In the event of a major illness or other long-term conflict, please contact me immediately to make arrangements so that you do not fall behind in the class. Students needing to contact the instructor for any reason during the semester may do so by email, phone, or in person.

Students accrue participation points every day based on attendance and attentiveness to classroom activities. Students cannot make up missed classes, and therefore, they should consider attendance mandatory. Your presence in class is a necessary, but not a sufficient condition to earn participation points for a class. If students distract themselves or others from the planned activities for the day, those students will not receive participation points. Occasionally, a student will demonstrate outstanding participation and will be awarded additional participation points for this effort.

Quizzes
Quizzes are relatively straight-forward unannounced assessments delivered at random to verify that students are comprehending readings and course content. The quizzes are designed to reward students who regularly read and study the course content. Students cannot make up missed quizzes. Quizzes are closed book.
**Homework Assignments**
Homework assignments are designed to help students practice the core skills and review the important concepts of the course. Students should work on homework assignments individually. The four homework assignments (not projects) may be resubmitted provided that the student turned in the original assignment and resubmits the graded original assignment with the resubmitted work. When assignments are resubmitted, the assignment grade will be the weighted average of both submissions with the original submission weighted at 25% and the resubmitted work weighted at 75%. For example, if a student earns 15 of 30 points on the original assignment and 30 of 30 points on the resubmission, the student will receive a 26.25 for that assignment \((15*0.25=3.75;30*0.75=22.5;3.75+22.5=26.25)\). If students do not resubmit the assignment, the original grade serves as the grade for the assignment.

**Projects**
The two projects ask students to create a complex database application. These projects are largely self-directed and require students to work independently.

**General Comments about Homework and Projects**
- Late homework assignments and projects will be subject to a 5% deduction per day.
- Homework assignments and projects must be completed independently.
- Homework assignments and projects must be submitted via Sakai and manually.
- Resubmitted homework must include the original submission with my graded comments.
- Homework assignments and projects are due by class time on the assignment due date.
- Since this is a 4 credit class, you should spend at least 10 hours per week outside of class studying, preparing for class, and completing assigned work.

**Exams and Final Exam**
All exams are comprehensive. Students may use books and notes for all exams, but I strongly encourage students to study for these exams as if they were closed book exams.

**Summary of Graded Activities**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Occurrences</th>
<th>Points/Occurrence</th>
<th>Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>Every class</td>
<td>2</td>
<td>80</td>
</tr>
<tr>
<td>Quizzes</td>
<td>5</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>Homework Assignments</td>
<td>4</td>
<td>30</td>
<td>120</td>
</tr>
<tr>
<td>Projects</td>
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<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Exams</td>
<td>2</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Final Exam</td>
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<td>150</td>
<td>150</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>800</strong></td>
</tr>
</tbody>
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**Point-to-Final Letter Grade Conversion:**
A >= 760 | A- >= 720 | B+ >= 700 | B >= 660 | B- >= 640 | C+ >= 620 | C >= 580 | C- >= 560 |
D+ >= 540 | D >= 500 | D- >= 480 | F < 480 |

**COMFORTABLE LEARNING ENVIRONMENT**
Students with medical, psychological, learning or other disabilities desiring academic adjustments, accommodations, or auxiliary aids will need to contact the instructor. Students have the right to learn in a non-threatening environment that is free from intimidation or harassment. Shared resources such as computer labs or classroom computers must be kept free from offensive material. Students experiencing incidents which cause them to become uncomfortable should report these incidents to the instructor immediately. If the instructor is the source of intimidation or harassment, students should contact the department chair. As a courtesy to the instructor and to other students, please turn off electronic devices which may cause a distraction during class. Please do not allow your computer to become a distraction during class time – it is a tool for learning. **Playing games, checking email, and instant messaging are not acceptable activities on the computers during class.**
ACADEMIC HONESTY
The instructor assumes that each student has read the College’s Academic Honesty Policy, which can be found online in the 2014-2015 College Catalog. The instructor assumes that a student’s work represents a sincere attempt to engage with the course of study outlined for this class. Do not use the words of another without properly citing the source. All cases of academic misconduct will be handled according to the procedures defined in the Academic Honesty Policy. In this class you are NOT permitted to work together on homework or projects.

COURSE SCHEDULE
This course schedule is intended to outline student responsibilities for each week of study, including activities which will be graded for that week. Details for successfully completing each graded activity are available in Sakai. The instructor may change this course schedule.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic of Study/Reading Assignments</th>
<th>Graded Activities Due</th>
</tr>
</thead>
</table>
| Week 1 | 9/1, 9/3, 9/5 | **M**: Modeling and Metadata: Data Types  
W: Relational Model/First Normal Form  
3NF Tutorial  
F: Normalization: Functional Dependency  
Manga, Chapter 1 | Homework 1 due 9/5 |
| Week 2 | 9/8, 9/10, 9/12 | **M**: Normalization: 3NF/Well-formed relations  
Manga, Chapter 2  
W: Entity-Relationship Model  
Manga, Chapter 3  
F: Entity-Relationship Model | Homework 2 due 9/12 |
| Week 3 | 9/15, 9/17, 9/19 | **M**: Entity-Relationship Model  
W: Implementing Database Design  
F: Implementing Database Design | Homework 1 resubmit 9/17 |
| Week 4 | 9/22, 9/24, 9/26 | **M**: Implementing Database Design  
W: Implementing Database Design  
F: Exam 1 on 9/26 | Homework 2 resubmit 9/24 |
| Week 5 | 9/29, 10/1, 10/3 | **M**: Introduction to SQL  
Manga, Chapter 4  
W: DDL  
F: DML | |
| Week 6 | 10/6, 10/8, 10/10 | **M**: DML - Joins  
W: DML - Filtering and sorting detail data  
F: DML | Homework 3 due 10/10 |
| Week 7 | 10/13,10/15,10/17 | **M**: DML - Aggregate functions and group by  
W: DML - Aggregate data  
F: DML | Homework 3 resubmit 10/17 |
| Week 8 | 10/20,10/22,10/24 | **M**: NO CLASS - FALL BREAK  
WF: QBE: Query by Example | |
| Week 9 | 10/27,10/29,10/31 | **M**: QBE: Continued  
W: Database Applications & UI Design  
F: Exam 2 on 10/31 | Project 1 due 10/27 |
| Week 10 | 11/3, 11/5, 11/7 | **M**: Forms and Data Validation in MS Access  
W: Reports in MS Access  
F: Menus in MS Access | |
| Week 11 | 11/10,11/12,11/14 | **MWF**: GUI Development in MS Access | Homework 4 due 11/14 |
| Week 12 | 11/17,11/19,11/21 | **M**: SQL Integration  
Manga, Chapter 6  
WF: SQL Integration | Homework 4 resubmit 11/21 |
| Week 13 | 11/24,11/26,11/28 | **M**: SQL Integration  
W&F: NO CLASS - THANKSGIVING | |
| Week 14 | 12/1,12/3,12/5 | **M**: Advanced Database Concepts  
Manga, Chapter 5  
W: Database Security  
F: Final Exam Review | Project 2 due 12/5 |

Final Exam: Monday December 8th 9:00 AM