College of Hospitality and Technology Leadership

COP 3718
Intermediate Database Systems

Spring 2015
3 Credit Hours

University of South Florida – Sarasota/Manatee
8350 North Tamiami Trail, Sarasota, FL 34243
Instructor: Xiomara Casado

Class Meeting time: No Face-to-face meetings.  
Meets Wednesday 1:00 pm – 3:50 pm via Blackboard Collaborate

E-Mail: Please use Canvas “Messages” for ALL course related communications  
Alternative e-mail: xcasado@sar.usf.edu

PREREQUISITES: Consult your Advisor for the latest prerequisites

COURSE DESCRIPTION: This course provides an in-depth treatment of working with Relational DBMS, with particular reference to MySQL using PHP

COURSE TOPICS:
This course will cover the following content areas:

1. Setting the testing environment for the course using XAMPP
2. MySQL tools  
   a. Administrative Tools and User Interfaces  
   b. Design tools  
   c. Command line tools
3. Database Design  
   a. Data types  
   b. Character sets  
   c. Design and develop a database  
   d. Normalization  
   e. Join types
4. SQL language/commands  
   a. SQL commands and functions  
   b. Link data from multiple tables
5. Access Administration and Security  
   a. Access Privilege System  
   b. Create, rename and delete users  
   c. Grant and revoke user privileges
6. Stored Routines and Triggers  
   a. Stored Procedures  
   b. Stored Functions
7. MySQL and PHP  
   a. Create PHP scripts to insert, edit, delete records locally and remotely  
   b. Create PHP scripts to retrieve data from multiple tables using simple and complex queries
8. MySQL interaction with Microsoft Office and Open Office
9. ODBC (Open Database Connectivity)  
10. JDBC (Java Database Connectivity)

COURSE OBJECTIVES
Students are expected demonstrate the design and implementing of a database as well as apply database skills across multiple areas both independently and as a team member. Through implementation of a term project, students will demonstrate communication and database skills. Students will develop intermediate database programming skills with MySQL/SQL and perform database implementation and basic administration.

**BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY MISSION STATEMENT:** The mission of the Information Technology Program is to provide high quality educational opportunities for students interested in pursuing careers in the broad range of fields that support our computer/information-based society and economy. Additionally, the goal is to utilize the resources of the program to provide service to society; and to emphasize to students the need for lifelong learning, to have ethical conduct, and an understanding of the diverse social context in which Information Technology is practiced.

**BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY PROGRAM LEARNING OUTCOMES (PLOs):**
1. Demonstrate technical knowledge and skill sets (computational and analytic) needed for success in careers related to Information Technology.
2. Demonstrate an understanding of professional ethics in the development and application of Information Technology.
3. Design and develop computer processes and systems of advanced complexity.
4. Assess the potential value of new technologies and see possibly beneficial applications.
5. Conduct computer research, organize a structured presentation, and deliver it in a way that communicates to novice users as well as computer experts.

**COURSE STUDENT LEARNING OUTCOMES:**

Upon completion of this course, students will be able to:
1. Install and configure MySQL, along with the many software tools that are used in conjunction with MySQL
2. Perform numerous exercises to implement the topics covered in the course
3. Perform database implementation and basic administration
4. Properly design databases
5. Know when and how to use stored procedures
6. Use PHP to interact with a database locally and remotely
7. Develop database programming skills with MySQL/SQL and PHP
8. Use tools to build an integrated database application (PHP, Apache, MySQL)

**TEXT AND MATERIALS**

A. Texts: There is no required textbook for this course.

B. Suggested Supplementary Materials:

**GRADING, EVALUATION AND ATTENDANCE POLICIES:**
Student performance will be evaluated based on tests, assignments and projects, as detailed below. All assignments are expected to be turned in on time, by midnight of the date assigned in Canvas. They must be submitted through the “Assignments” section of Canvas. Late assignments will not be accepted unless prior permission has been granted by your Instructor. Assignments will be reviewed in class after the Due Date.
Below are a summary for the determination of the final grade and an explanation for each component:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage of grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams (2)</td>
<td>20%</td>
</tr>
<tr>
<td>Assignments, Class Participation (class, online)</td>
<td>60%</td>
</tr>
<tr>
<td>Project/Presentation</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

A grade will be determined based on the total of possible points earned, as follows: A = 90-100; B = 80-89; C = 70-79; D = 60-69; F = 59 or below

**Exams – 20%**
There will be two (2) exams. Each will be worth 10% of your grade (20% in all). Exams will not be cumulative – each will cover the topics covered prior to the exam, although an understanding of earlier material may be necessary as background. There will be no makeup exams. Exceptions on medical grounds will require a doctor’s letter, which will be verified by the appropriate department personnel.

**Quizzes, Assignments, and Participation – 60%**
These will account for 60% of your grade. All work should be submitted on time, by midnight of the due date. Late submissions will be penalized (or not accepted for some assignments, as announced). Dates for quizzes on this syllabus are tentative, as they may occur as we complete relevant course topics.

**Projects/Presentations – 20%**
Each student will create a simple web interface written in PHP to present users options to enter, modify, delete records, as well as present reports pulling data from multiple tables in a database. Potential topics may be brainstormed in class. Projects/presentations will be evaluated based on guidelines which will be provided to you in Canvas.

**Extra Credit**
There will be no extra credit assignments

**Incomplete Grade**
An Incomplete grade is reserved for those with good reason for having missed a small amount of work, and must be agreed by the student and instructor during the course as circumstances require. Otherwise, exams not taken or assignments not turned in will receive a zero grade and will be counted in the final grade accordingly. Please note that it is the student’s responsibility to ensure that work is completed before the end of the following semester and the Incomplete changed to a regular grade. If this is not done before the end of the following semester, the Incomplete automatically becomes an F.

**Attendance Policy**
Completing the first assignment by September 1st will count as your ‘First Day Course Attendance’. Failing to complete the first assignment by its due date WILL result in an automatic withdrawal. Students are not required to attend class. Material covered in class will not necessarily be contained in the suggested textbooks. Falling behind in assignments will affect students’ grades. Students are responsible for material covered in class, any announcements, schedule changes, etc. Late work will not be accepted unless you obtain approval from your instructor in advance. Sessions are recorded and will be made available to students.

The last day to drop a course with a grade of “W” is November 1. There will be no refund and no academic penalty.

**USFSM Policies**

- **Academic Dishonesty**: The University considers any form of plagiarism or cheating on exams, projects, or papers to be unacceptable behavior. Please be sure to review the university’s policy in the catalog, USFSM Undergraduate Catalog or USFSM Graduate Catalog, the USF System Academic Integrity of Students, and the USF System Student Code of Conduct.
B. **Academic Disruption**: The University does not tolerate behavior that disrupts the learning process. The policy for addressing academic disruption is included with Academic Dishonesty in the catalog: [USFSM Undergraduate Catalog](http://example.com) or [USFSM Graduate Catalog](http://example.com), USF System Academic Integrity of Students, and the [USF System Student Code of Conduct](http://example.com).

C. **Contingency Plans**: In the event of an emergency, it may be necessary for USFSM to suspend normal operations. During this time, USFSM may opt to continue delivery of instruction through methods that include but are not limited to: CANVAS, Blackboard Collaborate, Skype, and email messaging and/or an alternate schedule. It’s the responsibility of the student to monitor CANVAS site for each class for course specific communication, and the main USFSM and College websites, emails, and [MoBull](http://example.com) messages for important general information. The USF hotline at 1 (800) 992-4231 is updated with pre-recorded information during an emergency. See the [Safety Preparedness Website](http://example.com) for further information.

D. **Disabilities Accommodation**: Students are responsible for registering with the Office of Students with Disabilities Services (SDS) in order to receive academic accommodations. Reasonable notice must be given to the SDS office (typically 5 working days) for accommodations to be arranged. It is the responsibility of the student to provide each instructor with a copy of the official Memo of Accommodation. Contact Information: Disability Coordinator, 941-359-4714, disabilityservices@sar.usf.edu; [http://www.usfsm.edu/students/disability](http://www.usfsm.edu/students/disability).

E. **Fire Alarm Instructions**: At the beginning of each semester please note the emergency exit maps posted in each classroom. These signs are marked with the primary evacuation route (red) and secondary evacuation route (orange) in case the building needs to be evacuated. See [Emergency Evacuation Procedures](http://example.com).

F. **Religious Observances**: USFSM recognizes the right of students and faculty to observe major religious holidays. Students who anticipate the necessity of being absent from class for a major religious observance must provide notice of the date(s) to the instructor, in writing, by the second week of classes. Instructors canceling class for a religious observance should have this stated in the syllabus with an appropriate alternative assignment.

G. **Sexual Misconduct/Sexual Harassment Reporting**: USFSM is committed to providing an environment free from sex discrimination, including sexual harassment and sexual violence ([USF System Policy 0-004](http://example.com)). The Counseling and Wellness Center is a confidential resource where you can talk about incidents of sexual harassment and gender-based crimes including sexual assault, stalking, and domestic/relationship violence. This confidential resource can help you without having to report your situation to either the Office of Student Rights and Responsibilities (OSSR) or the Office of Diversity, Inclusion, and Equal Opportunity (DIEO), unless you request that they make a report. Please be aware that in compliance with Title IX and under the USF System Policy, educators must report incidents of sexual harassment and gender-based crimes including sexual assault, stalking, and domestic/relationship violence. If you disclose any of these situations in class, in papers, or to me personally, I am required to report it to OSSR or DIEO for investigation.

The Deputy Coordinator for USFSM is Mary Beth Wallace, AVP for Student Enrollment, Engagement and Success, 941-359-4330 or marybeth@sar.usf.edu.

**Campus Resources:**
- Counseling Center and Wellness Center 941-487-4254
- Victim Advocate (24/7) 941-504-8599

**List of off-campus resources:**
- Hope of Manatee: 941-755-6805
- Safe Place & Rape Crisis Center (SPARCC) – Sarasota: 941-365-1976
- First Call for Help- Manatee: 941-708-6488
  - Sarasota & North Port 941-366-5025
- Manatee Glens: 941-782-4800

**G. Web Portal Information**: Every newly enrolled USF student receives an official USF e-mail account. Students receive official USF correspondence and CANVAS course information via that address.
**GENERAL INSTRUCTION FOR STUDENTS**

Students are **not** permitted to take notes or tape lectures for the purpose of sale. This includes Blackboard Collaborate recordings. Internet access and a reasonable up-to-date web browser are required. An account and one empty database will be created for you to access a web server at USF. The credentials to access this account will be provided to you the first week of class.

**COURSE SCHEDULE:** Please note this is a **tentative schedule** – some shifting could occur as we progress into the semester. There may be times where a Blackboard Collaborate session needs to be pre-recorded; students will be notified in advance.

<table>
<thead>
<tr>
<th>Week of</th>
<th>Topic</th>
<th>Assignments / Quizzes</th>
</tr>
</thead>
</table>
| 01/07   | Class Introduction  
          | Syllabus Review      
          | What is MySQL         
          | The Test Environment  |
| 01/14   | Using MySQL interactively  
          | Implement basic SQL commands using *mysql* command line/interactive mode |
| 01/21   | MySQL Tools and Options  
          | Administrative Tools and User Interfaces |
|         | Database Design |
| 01/14   | Database Design |
| 01/28   | SQL language/commands |
| 02/04   | SQL language/commands (Create MySQL databases, insert/update/delete records/perform simple and complex queries using *mysql* interactive mode) |
| 02/11   | MySQL interaction with Microsoft Office |
| 02/18   | Access Administration and Security |
| 02/25   | MySQL and PHP |
| **03/04** | **SPRING BREAK** |
| 03/11   | MySQL and PHP (access local databases, insert/update/delete records/perform simple and complex queries through PHP) |
| 03/18   | MySQL and PHP (access a remote database, insert/update/delete records/perform simple and complex queries through PHP) |
| 03/25   | Stored Procedures and Triggers  
          | Note: The last day to drop a course with a grade of “W” is November 2. There will be no refund and no academic penalty. |
| 04/01   | Stored Procedures and Triggers |
| 04/08   | Wrap up |
| 04/15   | Term Project Presentations |
| 04/22   | Term Project Presentations |