Thomas L. Brown
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CS 340: Introduction to Database

Fall 2012

Course Description:

This course offers lecture, laboratory, and online interaction to provide a foundation in data management concepts and database systems. It includes representing information with the relational database model, manipulating data with an interactive query language (SQL) and database programming, database development including internet applications, and database security, integrity and privacy issues.

Audience:

Students planning to enroll for this course should have mastered the fundamentals of programming and basic data structures.

Student Learning Outcomes:

Install, configure, and interact with a relational database management system;
Describe, define and apply the major components of the relational database model to database design;
Learn and apply the Structured Query Language (SQL) for database definition and manipulation;
Utilize a database modeling technique for a single entity class, a one-to-one (1:1) relationship between entity classes, a one-to-many (1:M) relationship between entity classes, a many-to-many (M:M) relationship between entity classes, and recursive relationships;
Define, develop and process single entity, 1:1, 1:M, and M:M database tables;
Learn and implement the principles and concepts of information integrity, security and confidentiality;
Apply ethical computing concepts and practices to database design and implementation.

References and Software:

1. Murach, Joel. Murach's MySQL. Mike Murach & Associates, 2012. ISBN:978-1-890774-68-4.

2. MySQL is installed on servers and on individual computers in the computer lab. This software (and associated documentation) is free for academic use and may be downloaded from mysql.com

Measurement and Evaluation:

Grades will be based upon an evaluation of exam scores (3@100 points ea.) and lab projects (200 points). A point total in the range of 450-500 will earn the grade "A", 400-449 a "B", 350-399 a "C" and so on. College policy must be followed to obtain an "X" (incomplete). Unless circumstances are beyond control, the student is expected to withdraw instead of delaying completion of the course.

Class Policy, Procedure and Rules

Assigned Readings:
The student is expected to read assignments to prepare for scheduled discussions of the material.

Attendance:
The student is expected to attend orientation classes, the exam meetings, and scheduled project presentations. Regular class and/or online participation should ensure that expectations are understood, and provide feedback to monitor and assess progress. The student is responsible for accessing the course website to obtain assignments and related materials.

Participation:
The student is expected to take part in class or online discussions, implement and test software and program examples, and assist class members with technical issues.

Lab projects:
It is expected that the student will begin each project when assigned or as topics are approved, then present system components by the scheduled progress reporting dates.

Exams:
The student is expected to complete each exam at the scheduled time. If an exam is missed, the next exam score will be substituted. Exams are based upon all learning objectives to be reached before the scheduled date.

Intellectual Honesty:
By departmental policy, the discovery of plagiarism (i.e. copying from another's exam paper or lab project) will result in a grade of "F" on that submission for an individual grade. A subsequent breach of this policy mandates a grade of "F" for the course.

Conduct:
"All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (Student Handbook)

Special Accomodations:
Students in need of accomodations for disabilities should contact the Director of Disability Resources and Services, Gee Library, Room 132, phone 903.886.5150 or 5835.