EL CENTRO COLLEGE
ITSE 2409
DATABASE PROGRAMMING
SYLLABUS

COURSE DESCRIPTION

Prerequisites: Basic understanding of problem solving and logic structures used with computers obtained in ITSC 1429 or equivalent experiences approved by instructor consent.

Course Description: Database development using database programming techniques emphasizing database structures, modeling, and database access.

This course will demonstrate techniques for designing, organizing and implementing database programming techniques using MySQL and Access in a web environment. This course covers installation, configuration, and administration of a MySQL database for use with current web technologies including XML, Java and PHP. We will discuss Pearl and ASP and Web Compatible database engines will be explored.

This is a 4 credit hour course. (3 lec., 4 lab.)

WECM END-OF-COURSE OUTCOMES: Develop database applications using a structured query language; create queries and reports from database tables; implement data integrity; optimize query performance; create and maintain indexes; and create appropriate documentation.

STUDENT LEARNING OUTCOMES:
Upon successful completion of ITSC 2409, students will be able to:
Demonstrate the ability to install, configure and maintain a MySQL relational database.
Build web pages to create, update and delete data from a database.
Describe components of a disaster recovery plan that are required for database driven web sites.
Utilize current server-side technologies such as PHP, XML and/or Java to connect and retrieve data from a MySQL database.
Exercise procedures needed to maintain and troubleshoot a database.

COURSE MATERIALS


And
Course will use http://Lynda.com tutorials cost proximately $40.67 for access between Jan 17 to May 17, 2012. Tutorials include:

<table>
<thead>
<tr>
<th>Course Names</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Installing Apache, MySQL, and PHP</td>
<td>1h 49m</td>
</tr>
<tr>
<td>SQL Essential Training</td>
<td>2h 46m</td>
</tr>
<tr>
<td>MySQL Essential Training</td>
<td>2h 46m</td>
</tr>
<tr>
<td>PHP with MySQL Essential Training</td>
<td>11h 1m</td>
</tr>
<tr>
<td>PHP with MySQL Beyond the Basics</td>
<td>10h 27m</td>
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A student of this institution (El Centro College) is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

**MAJOR COURSE REQUIREMENT**

Students will participate in Discussion Forums which allow them to communicate on a project in a life-like environment

Students will complete Lynda.com tutorials, exercises and quizzes to demonstrate their understanding and enhance their skills using Apache web server, SQL, MySQL and PHP to connect to a database

Students will produce web pages in their Web Portfolio Project that demonstrate the complex concepts of server/client-side scripting using PHP, XML and/or Java to connect and retrieve data from a MSQl database

Students will complete Lab Assignments which include the following:

- Implementing the process of normalization through 3NF
- Normalizing a database design to 3NF with menu-driven components
- Documenting a database design using Entity Relationship Diagrams, data and components of a disaster recovery plan
- Creating, updating and deleting data from a database applying PHP and XML to code in their web portfolio
- Installing, configuring and maintaining a MySQL relational database on the web server

The web-based portfolio will include a component of each of the programming languages covered in the class and will evaluate the student's understanding of database programming concepts and knowledge.
SUBJECT MATTER
Topics covered in the lecture portion of the course include:
- Exploring the Environment
- Using Variables and Input
- Controlling your Code with Conditions and Functions
- Loops and Arrays
- Better Arrays and String Handling
- Working with files
- Writing Programs with Objects
- XML and Content Management Systems
- Using MySQL to Create Databases
- Connecting to Databases within PHP
- Data Normalization
- Building a Three-tiered Application

DISCLAIMER
The provisions contained in this syllabus do not constitute a contract between the student and El Centro College. These provisions may be changed at the discretion of the Coordinator/Instructor. When necessary, appropriate notice of such changes will be given to the student.

The instructor-of-record may provide additional information to enhance the course to meet the needs of the enrolled students, provided that the enhancements do not conflict with the official course syllabus.

POLICIES
Students should click on the links below and read all of these policies.

General institutional policies
Course-related institutional policies