Based on ABET CAC Student Learning Outcomes

1. **Course Number and Name:**
   CSET 3300 Data-Base driven Web Sites
2. **Credits and Contact hours:**
   Credits: 4 hours, Contact: 3 lecture hours; 1 lab hours
3. **Instructor's or course coordinator's name:**
   Hong Wang
4. **Text book, title, author, and year:**
   Web Database Applications with PHP and MySQL, 2nd Edition, Hugh E. Williams, 2004
   Database Systems The Complete Book, 2nd Edition, Garcia Molina, 2008
   a. **Other supplemental materials:**
      None
5. **Specific Course Information:**
   a. **Brief description of the content of the course (catalog description):**
      This course covers the creation of dynamic Web applications that interact with a database using server-side scripts and server programs. The material covered includes database fundamentals, server-side scripting language functions for database manipulation and server considerations.
   b. **Pre-requisites, or co-requisites:**
      CSET 3150
6. **Specific goals for the course:**
   a. **Specific outcomes of instruction:**
      1. Develop an understanding of relational database concepts and design principles.
      2. Develop an understanding of basic and advanced SQL statements.
      3. Apply the PHP server-side scripting language and MySQL database management system to the creation of dynamic web site applications.
      4. Understand and implement realistic MySQL/PHP web applications.
      5. Use the Web effectively to locate reference and tutorial resources for MySQL and PHP
   b. **Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course: 1, 2, 4**
      1. An ability to analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions;
      2. An ability to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline;
      4. An ability to recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
7. **Brief list of topics to be covered:**

1. Understanding the MySQL database server
2. Creating and querying databases, the basic concepts
3. Identifying database anomalies, normal forms and other database basics
4. Building MySQL tables with the Structured Query Language
5. Extracting database information with MySQL selects and functions
6. Working with multiple tables using joins and unions
7. PHP server-side scripting language
8. Working with PHP variables, operators, control structures, and functions
9. Writing readable, maintainable PHP code
10. Using object-oriented techniques in PHP
11. Performing simple and advanced database operations with PHP scripting
12. Using PHP built-in functions
13. Creating user-defined functions in PHP
14. Implementing simple MySQL/PHP applications: e.g., a guestbook and a survey
15. Developing more sophisticated MySQL/PHP applications: e.g., a catalog, a content manager, a threaded discussion, a problem tracking system, and a shopping cart.
16. Creating HTML forms.