

Course Competencies Template - Form 112

GENERAL INFORMATION											
Name: McChester Odoh	Phone #: 7-7443										
Course Prefix/Number: COP2843	Course Title: Implementing Open Source Databases										
Number of Credits: 4											
Degree Type	☐ B.A. ☐ B.S. ☐ B.A.S. ☐ A.A. ☒ A.S. ☐ A.A.S. ☐ C.C.C. ☐ A.T.C. ☐ V.C.C.										
Date Submitted/Revised: 10-22-2009	Effective Year/Term: 2009-3										
☒ New Course Competency ☐ Revised Course Competency											
Course to be designated as a General Education course (part of the 36 hours of A.A. Gen. Ed. coursework): ☐ Yes ☒ No											
The above course links to the following Learning Outcomes: <table border="0" style="width: 100%;"> <tr> <td>☐ Communication</td> <td>☐ Social Responsibility</td> </tr> <tr> <td>☐ Numbers / Data</td> <td>☐ Ethical Issues</td> </tr> <tr> <td>☒ Critical thinking</td> <td>☒ Computer / Technology Usage</td> </tr> <tr> <td>☐ Information Literacy</td> <td>☐ Aesthetic / Creative Activities</td> </tr> <tr> <td>☐ Cultural / Global Perspective</td> <td>☐ Environmental Responsibility</td> </tr> </table>		☐ Communication	☐ Social Responsibility	☐ Numbers / Data	☐ Ethical Issues	☒ Critical thinking	☒ Computer / Technology Usage	☐ Information Literacy	☐ Aesthetic / Creative Activities	☐ Cultural / Global Perspective	☐ Environmental Responsibility
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Course Description (limit to 50 words or less, <u>must</u> correspond with course description on Form 102): This course is an introduction to open-source database programming for students majoring in database and internet technologies. Students learn how to use and implement MySQL for the purpose of storing and retrieving information from the MySQL database. In conjunction with knowledge of open-source technologies such as Linux, Apache and PHP (LAMP), students will develop highly available, dynamic, web-based applications. Prerequisite: CGS1060. Laboratory Fee. A.S. degree credit only. (3 hr. lecture; 2 hr lab).											
Prerequisite(s): CGS1060	Corequisite(s):										

Course Competencies: (for further instruction/guidelines go to: <http://www.mdc.edu/asa/curriculum.asp>)

Competency 1: The student will demonstrate an understanding of basic database structure by:

1. Identifying the key elements of a database.
2. Defining common SQL terminology.
3. Describing how SQL statements are used in developing databases.
4. Explaining the MySQL architecture.
5. Establishing, connecting, and terminating connection to the MySQL server.
6. Executing SQL statements.

Competency 2: The student will demonstrate the ability to use SQL statements to manage database objects by:

1. Identifying the server SQL mode prompts.
2. Implementing MySQL identifiers, syntax and naming rules.
3. Using appropriate case sensitivity in SQL statements.
4. Identifying the appropriate MySQL character set to support various database engines.
5. Creating a database.

Revision Date: 09-11-2009

Approved By Academic Dean Date: _____

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6. Selecting, creating, dropping, and altering database.
7. Creating, dropping, indexing, and altering tables.
8. Performing multiple table retrievals with joins.

Competency 3: The student will demonstrate the ability to create a database using various data types by:

1. Identifying data value categories.
2. Listing the MySQL data types.
3. Describing how MySQL handles invalid data values.
4. Working with sequence-related data types.
5. Identifying expression, evaluation, and data type conversion.
6. Choosing appropriate data types for a given system.

Competency 4: The student will demonstrate the ability to implement and execute stored procedures by:

1. Using compound statements and statement delimiters to manipulate data.
2. Creating stored functions and procedures to automate data manipulation.
3. Creating event triggers to call a stored function or procedure.
4. Implementing security for stored procedures and views.
5. Loading data efficiently.
6. Identifying scheduling and locking issues.
7. Implementing administrative-level optimizations.

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