

Course Competencies Template - Form 112

GENERAL INFORMATION			
Name: Mario Sanchez	Phone #: 76174		
Course Prefix/Number: CGS1541	Course Title: Database Applications		
Number of Credits: 4			
Degree Type	<input type="checkbox"/> B.A. <input type="checkbox"/> B.S. <input type="checkbox"/> B.A.S <input type="checkbox"/> A.A. <input checked="" type="checkbox"/> A.S. <input type="checkbox"/> A.A.S. <input type="checkbox"/> C.C.C. <input type="checkbox"/> A.T.C. <input type="checkbox"/> V.C.C		
Date Submitted/Revised: 06-25-2008	Effective Year/Term: 2008-1		
<input type="checkbox"/> New Course Competency <input checked="" type="checkbox"/> Revised Course Competency			
Course to be designated as a General Education course (part of the 36 hours of A.A. Gen. Ed. coursework): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
The above course links to the following Learning Outcomes: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Communication <input checked="" type="checkbox"/> Numbers / Data <input checked="" type="checkbox"/> Critical thinking <input checked="" type="checkbox"/> Information Literacy <input type="checkbox"/> Cultural / Global Perspective </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Social Responsibility <input type="checkbox"/> Ethical Issues <input checked="" type="checkbox"/> Computer / Technology Usage <input type="checkbox"/> Aesthetic / Creative Activities <input type="checkbox"/> Environmental Responsibility </td> </tr> </table>		<input type="checkbox"/> Communication <input checked="" type="checkbox"/> Numbers / Data <input checked="" type="checkbox"/> Critical thinking <input checked="" type="checkbox"/> Information Literacy <input type="checkbox"/> Cultural / Global Perspective	<input type="checkbox"/> Social Responsibility <input type="checkbox"/> Ethical Issues <input checked="" type="checkbox"/> Computer / Technology Usage <input type="checkbox"/> Aesthetic / Creative Activities <input type="checkbox"/> 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 designed for students who require a knowledge of how to work with current database applications. Students learn the concepts, features, and commands of a database and how to apply them to a variety of real world and business applications using the Microsoft Access application. Prerequisite(s): CGS1060 and basic knowledge of database applications. 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 a practical understanding of database fundamentals by:

1. Defining a database.
2. Defining the components of a database.
3. Describing the structure of a database.

Competency 2: The student will demonstrate the use of the Microsoft Access 2007 Database Application by:

1. Describing and using the Access 2007 components.
2. Describing and using the Access 2007 objects.
3. Creating a database.
4. Creating tables.
5. Creating fields with appropriate data types.
6. Creating basic Forms, Reports and Queries.

Competency 3: The student will demonstrate the understanding and use of Indexing by:

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1. Defining an index.
2. Describing the need for indexing.
3. Delineating the similar nature of indexes and keys.
4. Describing the several types of keys.
5. Implementing the several types of keys on various tables in a database.

Competency 4: The student will demonstrate an understanding of basic database design principles by:

1. Determining the appropriate Field Data Type and Field Size for every field in every table.
2. Create tables via the Design Function, Importing Data and the Wizard.
3. Assigning the appropriate keys and indexes to the tables.
4. Create basic table relationships.

Competency 5: The student will demonstrate the maintenance and update of a database by:

1. Defining and describing a query.
2. Creating efficient queries.
3. Using both the query wizard and the query design tool to create queries.
4. Including the use of criteria in the selection and omission requirements of the query.
5. Including basic aggregation and computations in select queries.
6. Querying from several tables concurrently.
7. Creating queries that perform pattern searching, include logical constraints and derive data.

Competency 6: The student will ensure data integrity in the database by:

1. Defining data integrity.
2. Creating table relations with referential integrity.
3. Incorporating cardinality and semantics into the relationships.

Competency 7: The student will create information presentation objects and functions by:

1. Creating Forms and Reports via the Design and Wizard functions.
2. Using Dynamic Data Types.
3. Including advanced aggregation techniques.
4. Performing basic analytic techniques using the Data Sheet view, creating Pivot Tables and Pivot Charts.
5. Applying the analytic techniques on real-world large size data sets.

Competency 8: The student will demonstrate knowledge of database maintenance and security by:

1. Performing basic database maintenance as part of the Access functions.
2. Analyzing database performance as part of the Access functions.
3. Linking several databases.
4. Allocating the Trusted Site feature to the database(s).
5. Modifying the Database Properties.

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