

Course Competencies Template - Form 112

GENERAL INFORMATION											
Name: Kaiyang Liang	Phone #: 72993										
Course Prefix/Number: CTS2463	Course Title: C# Web Application Development										
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: 9/17/2008	Effective Year/Term: 2009-1										
<input checked="" type="checkbox"/> New Course Competency <input 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><input type="checkbox"/> Communication</td> <td><input type="checkbox"/> Social Responsibility</td> </tr> <tr> <td><input checked="" type="checkbox"/> Numbers / Data</td> <td><input type="checkbox"/> Ethical Issues</td> </tr> <tr> <td><input checked="" type="checkbox"/> Critical thinking</td> <td><input checked="" type="checkbox"/> Computer / Technology Usage</td> </tr> <tr> <td><input type="checkbox"/> Information Literacy</td> <td><input type="checkbox"/> Aesthetic / Creative Activities</td> </tr> <tr> <td><input type="checkbox"/> Cultural / Global Perspective</td> <td><input type="checkbox"/> Environmental Responsibility</td> </tr> </table>		<input type="checkbox"/> Communication	<input type="checkbox"/> Social Responsibility	<input checked="" type="checkbox"/> Numbers / Data	<input type="checkbox"/> Ethical Issues	<input checked="" type="checkbox"/> Critical thinking	<input checked="" type="checkbox"/> Computer / Technology Usage	<input type="checkbox"/> Information Literacy	<input type="checkbox"/> Aesthetic / Creative Activities	<input type="checkbox"/> Cultural / Global Perspective	<input type="checkbox"/> Environmental Responsibility
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Course Description (limit to 50 words or less, must correspond with course description on Form 102): This course is designed to provide AS degree students majoring in computer information technology, database technology, or Internet services technology with skills necessary for web-based programming. Students learn C# programming for ASP.NET, including database skills and problem-solving using modular design techniques. The skills developed in this class will help prepare students for MCTS certification. Prerequisite(s): COP1332 or COP1334. Laboratory fee. AS degree credit only. (3 hr. lecture, 2 hr. lab)											
Prerequisite(s): COP1332 or COP1334	Corequisite(s):										

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

Competency 1: The student will demonstrate the ability to create ASP.NET web forms by:

1. Creating .ASPX forms.
2. Using server controls to create user interactivity and program usability.
3. Using code-behind pages to program object functionality and control dynamic web page behavior.
4. Adding event procedures to web server controls to enhance the functionality of web pages.
5. Using page events to initialize specified values.

Competency 2: The student will demonstrate an understanding of tracing in ASP.NET web applications by:

1. Explaining how to use tracing to debug programs.
2. Applying remote debugging from different locations.
3. Writing program routines that utilize trace statements.
4. Tracing into an individual program component.

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Competency 3: The student will demonstrate how to validate user input by:

1. Using page validation.
2. Using required field validator controls.
3. Using the validation summary control.
4. Using the compare validator control.
5. Using the regular expression validator control.

Competency 4: The student will demonstrate the ability to create user controls by:

1. Adding user controls to an ASP.NET web form.
2. Creating user controls to improve reusability.
3. Testing the user control to ensure it performs as intended.

Competency 5: The student will demonstrate the ability to access relational data by:

1. Using Visual Studio .NET to create a connection to the database.
2. Displaying a dataset in a list-bound control.
3. Connecting to a database.
4. Using a data grid control to create paging and selection.
5. Using multiple tables to create relationships between data from different sources.
6. Accessing data with data readers.
7. Viewing data from the database.

Competency 6: The student will demonstrate the ability to call stored procedures with ADO.NET by:

1. Explaining the uses and advantages of using stored procedures.
2. Creating stored procedures in SQL Server.
3. Using ADO.NET to call stored procedures.

Competency 7: The student will demonstrate the ability to read and write XML data by:

1. Explaining the XML architecture in the ASP.NET environment and its usage.
2. Translating XML data to relational data.
3. Transferring XML data over the Internet.
4. Using the XML Web Server Control to display XML data on the web page.

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Competency 8. The Student will demonstrate the ability to create and call XML Web Services by:

1. Explaining the advantages of using XML web services.
2. Calling an XML web service by HTTP.
3. Using a proxy to call an XML web service.
4. Creating an XML web service.

Competency 9. The Student will demonstrate the ability to manage states by:

1. Using session variables.
2. Using cookies.
3. Using application variables.
4. Storing session variables in a database.
5. Using Visual Studio.Net built-in tools to set up a web application.

Competency 10 The Student will demonstrate the ability to configure, optimize, and deploy ASP.NET web applications by:

1. Using the cache object to optimize performance.
2. Using ASP.NET output caching.
3. Configuring an ASP.NET web application.
4. Using multiple methods, including publishing, installation set up, and copy-and- paste to deploy an ASP.NET web application.

Competency 11 The Student will demonstrate how to protect ASP.NET web application by:

1. Describing the ASP.NET and Internet Information Services (IIS) authentication methods.
2. Using windows-based authentication.
3. Using forms-based authentication.

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