Miami Dade College

Course Competencies Template - Form 112

GENERAL INFORMATION	
Name: Eugene Kinnaird	Phone #: 73928
Course Prefix/Number: CTS2823	Course Title: Developing Internet Applications Using Apache
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: ☒ Communication ☒ Numbers / Data ☒ Critical thinking ☐ Information Literacy ☐ Cultural / Global Perspective ☒ Social Responsibility ☒ Ethical Issues ☒ Computer / Technology Usage ☒ Aesthetic / Creative Activities ☐ Environmental Responsibility	
Course Description (limit to 50 words or less, must correspond with course description on Form 102): This course is designed for students who are preparing to become web developers. Students learn how to build dynamic, web-based applications using open-source technologies such as Linux, Apache, MySQL, and PHP (LAMP). Pre-requisites: CTS1111, COP2842, COP2843. Laboratory Fee. A.S. degree credit only. (3 hr. lecture; 2 hr lab).	
Prerequisite(s): CTS1111, COP2842, COP2843	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 analyze site requirements by:

1. Identifying the function of the web site given a specific requirement.
2. Describing the required services.
3. Analyzing web site usage requirements.
4. Selecting appropriate hardware given a specific requirement.
5. Analyzing network bandwidth, scalability issues, and connectivity requirements.

Competency 2: The student will demonstrate the ability to install Apache by:

1. Identifying current versions of Apache and their uses.
2. Selecting an appropriate installation method.
3. Installing Apache on various operating system platforms.
4. Examining log files to verify successful installation.

Competency 3: The student will demonstrate the ability to build and deploy data-driven e-commerce applications by:

1. Planning, designing, and creating database tables.
2. Designing a user-friendly interface.
3. Designing and creating input forms.
4. Validating user input.
5. Creating cookies and session variables to store user information.
6. Creating server-side scripts to process transactions including checkout and payment processes for a shopping cart.
7. Troubleshooting navigation issues and site functionality.

Competency 4: The student will demonstrate the ability to organize content across an intranet by:

1. Listing different types of file systems and directory structures.
2. Selecting appropriate database management systems.
3. Selecting appropriate programming languages.
4. Developing database environments to interface with the front end system.

Competency 5: The student will demonstrate an understanding of how to publish and manage content by:

1. Explaining how content management works.
2. Building and maintaining a content management Web site.
3. Explaining how content deployment works.
4. Deploying content to the project source.
5. Securing a content deployment server and its projects (authentication, authorization, auditing, etc.).
6. Managing deployment.

Competency 6: The student will demonstrate an understanding of how to search for content by:

1. Creating stored procedures.
2. Building and submitting queries.
3. Building Search pages.

Competency 7: The student will demonstrate the ability to secure content by:

1. Identifying methods for authenticating users.
2. Describing various user access control methods.
3. Limiting access to a web site using HTTP methods.
4. Implementing secure web sites using appropriate protocols and mechanisms.
5. Identifying common site vulnerabilities related to hacking and malicious attacks.

Competency 8: The student will demonstrate the ability to build and deploy web-based communications applications by:

1. Identifying an appropriate communications application to meet user needs (e.g., email, calendar, address book).
2. Planning and creating tables to store user records.
3. Selecting an appropriate email service (e.g. sendmail).

4. Configuring protocols for sending and receiving messages.
5. Identifying appropriate usage for cookies and sessions.
6. Creating and deploying a social networking environment (e.g., wiki, blog).
7. Discussing ethical issues related to social networking sites.
8. Writing and presenting project proposals and presentations.

Competency 9: The student will demonstrate an understanding of site optimization by:

1. Identifying key metrics that impact site performance.
2. Testing web site performance against an established baseline.
3. Troubleshooting connectivity issues and navigation issues.
4. Analyzing web site usage.
5. Evaluating user feedback of a site's performance and aesthetics.