

Program Information Report

School of Information Technology

The School of Information Technology gathers the diverse areas that make up the computer technology of today. From basic programming languages to systems development through networking, these programs provide the core of information technology. Develop skills in computer networking or programming in the growing field of applied information technology.

Washtenaw Community College offers programs at several levels for students who want to begin new careers, or advance in their existing careers. The first level is the certificate, which can vary from nine to thirty-six credits, depending on the field. Certificates generally prepare students for entry-level jobs.

After completing a certificate, students can progress to the next level, the advanced certificate. The credit hours required for these programs also vary. This type of certificate provides a more specialized level of skill development, and often allows students to upgrade their positions at their places of employment.

The next level, an Associate in Applied Science, is available for some programs. For some career fields, it is possible to earn a certificate, advanced certificate, and an Associate in Applied Science degree in the same field. In these cases, the credit hours from the certificate and advanced certificate can be applied to the credit hours needed for the Associate in Applied Science degree.

Alternatively, students can earn an AAS in Occupational Studies by completing a certificate, advanced certificate (if it exists) and General Education requirements.

Programming

Learn the foundation of computer programming or specialize in a programming language through these programs.

Web Database Programming (CVWDPR)

Advanced Certificate

Program Effective Term: Fall 2012

This program focuses on the development of Web databases and e-commerce applications. It is intended for students with a strong programming background. The coursework emphasizes server-side programming. CSS and professional HTML are given minimal coverage (students interested in these topics should consider the Web Technology certificate).

Program Admission Requirements:

Completion of CPS 161 or CPS 171 with a minimum grade of "B-" or instructor consent.

CPS 276 or	Web Programming Using Apache, MySQL, and PHP	
CPS 278	Java Server Programming	4
Elective	Select 3 additional classes from the following (not to repeat the choice made above): CIS 282*, CPS 251, CPS 261, CPS 276, CPS 278, CPS 293	11-12
Elective	Select one additional elective to meet a minimum of 16 credits if CIS 282 is chosen*	1-0

Minimum Credits Required for the Program: 16

PROGRAM PROPOSAL FORM

- Preliminary Approval** – Check here when using this form for preliminary approval of a program proposal, and respond to the items in general terms.
- Final Approval** – Check here when completing this form after the Vice President for Instruction has given preliminary approval to a program proposal. For final approval, complete information must be provided for each item.

<p>Program Name:</p> <p>Division and Department:</p> <p>Type of Award:</p> <p>Effective Term/Year:</p> <p>Initiator:</p>	<p><u>Web Database Programmer certificate</u></p> <p><u>CPS/CIS</u></p> <p><input type="checkbox"/> AA <input type="checkbox"/> AS <input type="checkbox"/> AAS <input type="checkbox"/> Cert. <input checked="" type="checkbox"/> Adv. Cert. <input type="checkbox"/> Post-Assoc. Cert. <input type="checkbox"/> Cert. of Comp.</p> <p><u>Fall 2011</u></p> <p><u>Clarence Hasselbach</u></p>	<p>Program Code:</p> <p>CVWDP</p> <p>CIP Code:</p> <p>11.0202</p>
<p>Program Features Program's purpose and its goals. Criteria for entry into the program, along with projected enrollment figures. Connection to other WCC programs, as well as accrediting agencies or professional organizations. Special features of the program.</p>	<p>This program is to provide a strong web and database programming experience for our students. To enter this program, students are expected to have programming experience equivalent to CPS 161 or CPS 171. The purpose of this certificate is to provide students with skills that are used in today's web and database industry.</p> <p>School of Information Technology Sub-school – Programming</p>	
<p>Need Need for the program with evidence to support the stated need.</p>	<p>The current job market values web and database knowledge.</p>	
<p>Program Outcomes/Assessment State the knowledge to be gained, skills to be learned, and attitudes to be developed by students in the program. Include assessment methods that will be used to determine the effectiveness of the program.</p>	<p><u>Outcomes</u></p> <ol style="list-style-type: none"> 1. Identify appropriate use of the SAX and DOM XML parsing algorithms 2. Identify appropriate use of secure connections using Hypertext Transfer Protocol Secure(https) 3. Identify appropriate use of dynamic web data access using AJAX and JQuery 4. Demonstrate sound software engineering techniques in developing a working web database driven shopping cart application using dynamic web data access techniques (AJAX and JQuery) 	<p><u>Assessment method</u></p> <ol style="list-style-type: none"> 1. Assess capstone course (CPS 280)

Please return completed form to the Office of Curriculum & Assessment and email an electronic copy to sjohn@wccnet.edu for posting on the website.

SN
 3/14/11 logged 2/7/11 *fg*

<p>Curriculum</p> <p>List the courses in the program as they should appear in the catalog. List minimum credits required. Include any notes that should appear below the course list.</p>	<p>Required: CPS 280 Advanced Web/Database Programming (Note that CPS 280 has a prerequisite of either CPS 276 or CPS 278)</p> <p>One of: CPS 276 – Web Programming Using Apache, MySQL, and PHP CPS 278 – Java Server Programming</p> <p>Students must take two (2) of the following classes not already selected above: CPS 276 – Web Programming Using Apache, MySQL, and PHP CPS 278 – Java Server Programming CIS 282 – Relational Database Concepts and Application CPS 251 – Android Programming Using Java CPS 293 – C#.Net</p> <p>Minimum 15 Credit Hours</p>																							
<p>Budget</p> <p>Specify program costs in the following areas, per academic year:</p>	<table border="1"> <thead> <tr> <th></th> <th>START-UP COSTS</th> <th>ONGOING COSTS</th> </tr> </thead> <tbody> <tr> <td>Faculty</td> <td>\$.</td> <td>\$.</td> </tr> <tr> <td>Training/Travel</td> <td>.</td> <td>.</td> </tr> <tr> <td>Materials/Resources</td> <td>.</td> <td>.</td> </tr> <tr> <td>Facilities/Equipment</td> <td>.</td> <td>.</td> </tr> <tr> <td>Other</td> <td>.</td> <td>.</td> </tr> <tr> <td>TOTALS:</td> <td>\$.</td> <td>\$.</td> </tr> </tbody> </table>				START-UP COSTS	ONGOING COSTS	Faculty	\$.	\$.	Training/Travel	.	.	Materials/Resources	.	.	Facilities/Equipment	.	.	Other	.	.	TOTALS:	\$.	\$.
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<p>Program Description for Catalog and Web site</p>	<p>This program focuses on the development of Web databases and e-commerce applications. It is intended for students with a strong programming background. The coursework emphasizes server-side programming. CSS and professional HTML are given minimal coverage (students interested in these topics should consider the Web Technology certificate).</p>																							
<p>Program Information</p>	<p>Accreditation/Licensure -</p> <p>Advisors – Clarence Hasselbach, Khaled Mansour</p> <p>Advisory Committee -</p> <p>Admission requirements - completion of CPS 161 or CPS 171 with a “B-“ or instructor consent</p> <p>Articulation agreements -</p> <p>Continuing eligibility requirements -</p>																							

Assessment plan:

Program outcomes to be assessed	Assessment tool	When assessment will take place	Courses/other populations	Number students to be assessed
Identify appropriate use of the SAX and DOM XML parsing algorithms	Common final for capstone course	Winter 2013	All sections	All students
Identify appropriate use of secure connections using Hypertext Transfer Protocol Secure (https)	Common final for capstone course	Winter 2013	All sections	All students
Identify appropriate use of dynamic web data access using AJAX and JQuery	Common final for capstone course	Winter 2013	All sections	All students
Demonstrate sound software engineering techniques in developing a working web database driven shopping cart application using dynamic web data access techniques (AJAX and JQuery).	Common rubric for capstone course to evaluate class project.	Winter 2013	All sections	All students

Scoring and analysis plan:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, other). Attach the rubric.

The first 3 items are evaluated by the final in CPS 280. The last item will be evaluated by the CPS 280 rubric (provided as an attachment).

2. Indicate the standard of success to be used for this assessment.

70% of all students must score at least 70% or better on all learning outcome evaluations.

3. Indicate who will score and analyze the data.

Assessment materials will be analyzed by the CIS department.

4. Explain how and when the assessment results will be used for program improvement.

Based upon the results of the evaluation, if 70% or more of the students score 70% or better, no action will be taken. If less than 70% of the students score more than 70%, then the program will be evaluated.

REVIEWER	PRINT NAME	SIGNATURE	DATE
Department Chair/Area Director	Clarence Hasselbach	<i>Clarence Hasselbach</i>	
Dean	Rosemary Wilson	<i>Rosemary Wilson</i>	2/1/11
Vice President for Instruction <input type="checkbox"/> Approved for Development <input type="checkbox"/> Final Approval	Stuart Blacklaw	<i>Stuart Blacklaw</i>	3/10/11
President <i>LARRY WHEATWORTH</i>		<i>Larry Wheatworth</i>	3/10/11
Board Approval			3/22/11

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Program Admission Requirements:

Completion of CPS 161 or CPS 171 with a minimum grade of "B-" or instructor consent.

Major/Area Requirements		(15 credits)
CPS 276 or	Web Programming Using Apache, MySQL, and PHP	4
CPS 278	Java Server Programming	4
CPS 280	Advanced Web/Database Programming	4
	Select two of the following courses not already selected above: CIS 282, CPS 276, CPS 278, CPS 251, CPS 293	7-8

Minimum Credits Required for the Program: 15