AUTHORIZATION TO PLAN (ATP) AN ACADEMIC PROGRAM (Revised 06/12/07)

Please complete all sections with an emphasis on items 7, 8, 9 and 10. The ATP is not to exceed 5 pages.

1. School/College and Department/Unit:
Windward Community College, Mathematics/Business Dept.

2. Chair/Convener of Planning Committee:
Vanessa Cole

3. Program Category:  _X_ New  ___Modified  ___Interdisciplinary  _X_

4. a. Degree or Certificate Proposed:
Certificate of Achievement in Web Development

   b. List similar degrees or certificates offered in UH System:
   No similar Certificate of Achievement is offered within the UH System

5. Planning
   a. Planning period (not to exceed one year or reapplication is necessary)
   Fall 2014-Spring 2015

   b. Activities to be undertaken during the planning phase
      • Research if any additional courses will be required.
      • Investigate the feasibility of aligning with national certification
      • Development of any additional courses needed
      • Development of program sheets and student pathways
      • Develop strategies for student recruitment and retention
      • Investigate the possibility of student internships
      • Solicit community input and support
      • Completion of program proposal

   c. Submission date of program proposal
      Spring 2015

   d. Workload/budget implications during planning period
      None

6. Program Description (Objectives and relationship to campus mission and strategic plan)
This certificate will provide skills necessary for employment in the rapidly growing field of web technology. Our cross disciplinary approach integrates various aspects of web publishing, including art, music, journalism and computing, programming and other areas. Due to this, the certificate primarily packages together existing courses. However, some new courses may need to be developed which are more specific to web development, such as coding, scripting, etc.
Program outcomes:

- Use appropriate web development tools to design an effective, visually appealing website that communicates a message, incorporates appropriate media, and adheres to usability and accessibility standards.
- Create web publishable media such as digital music, journalism, audio and video, or other artistic elements.
- Develop programming and scripting to incorporate in effective dynamic websites and applications.

This Certificate specifically relates to Windward Community College Action Outcomes 2.8, 4.1, 4.3, 4.5, and 4.8, as explained below.

2.8 Increase the diversity and number of programs offered to or in underserved regions by increasing the number and types of programs offered by at least one per two-year period.

This is a new type of program for WCC and would increase the diversity of our offerings.

4.1. Contribute to the development of a high-skilled, high-wage workforce through the establishment of at least one new specific, career-focused degree, certificate or career pathway per year that leads to employment in emerging fields (innovative, knowledge-intensive – DBEDT fields, including life sciences, health and wellness, information technology, film and digital media, alternative energy, ocean and marine science, earth and space sciences, astronomy, diversified agriculture, and dual-use (military/civilian) technology.

This is a highly career focused certificate that leads to employment in the emerging field of information technology.

4.3 Expand the curriculum that prepares students for nursing, social work, information technology, and other critical workforce shortage areas by adding at least one new course per year.

This will expand our curriculum in information technology, by adding a new program of study and related course work.

4.5 Promote the knowledge, skills, and opportunities that support current and emerging STEM fields and careers by increasing credit and noncredit STEM course enrollments by 3% per year.

This CA promotes knowledge, skills and opportunities specific to Technology (STEM) fields and careers. Its focus on job ready and employable skills should correlate positively not only with increased initial enrollments but also persistence through to degree completion, raising enrollments in courses associated with the degree.

4.8. Increase the number of degrees and certificates awarded in Science, Technology, Engineering, and Math (STEM) fields. (includes both credit and noncredit) by 3% per year.

By providing a focused career path in STEM that leads to career readiness in an emerging field, this certificate should increase the number of degrees and certificates awarded in STEM.
The Web Development CA ties to the WCC mission statement by offering an innovative program in arts and sciences and providing career learning. It works to serve the needs of the Ko'olau communities in providing career learning.

7. Program Justification (Needs and Rationale. Include, as appropriate, internal and external factors driving need for this program; description of needs assessment; number of interested student per year; need for such a program in relation to workforce development, graduate studies, etc.)

Web development is a growing field, which is not currently fully supported by programming at Windward Community College. While we currently offers a number of courses that would apply to this certificate, the only relevant certificate/degree is our 9-credit certificate of completion (CO) in Web Support. This CO only touches the surface of this growing field.

Web Development contributes to a system-wide initiative in Creative Media. In spring 2014, Windward Community College, and all other UHCC’s, entered into a Multi-campus Memorandum of Agreement in Creative Media Collaboration with UH-West Oahu. Many of the courses planned for the Certificate of Achievement are also a part of this agreement.

According to CareerOneStop, employment in this field between 2012 to 2022 is expected to grow 14% locally and 20% nationally.

<table>
<thead>
<tr>
<th>Web Developers</th>
<th>2012</th>
<th>2022</th>
<th>%change</th>
<th>Annual openings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>360</td>
<td>410</td>
<td>14%</td>
<td>10</td>
</tr>
<tr>
<td>US</td>
<td>141,400</td>
<td>169,900</td>
<td>20%</td>
<td>5,070</td>
</tr>
</tbody>
</table>

Table 1. Growth in Web Developer positions.


People currently working in this field might also seek to earn the certificate as a means of upgrading their skills in this rapidly evolving area.

The US Department of Labor Onestop reports web developers’ wages, as provided in charts below. Note that the median wages for Web Developers ($21.48/hour in Hawaii) is almost three times our minimum wage ($7.25/hour).
Table 2. Yearly wages associated with Web Developer careers.

<table>
<thead>
<tr>
<th></th>
<th>Hawaii</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>$110,400</td>
<td>$82,200</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>$63,200</td>
<td>$44,700</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>$33,300</td>
<td>$31,500</td>
</tr>
</tbody>
</table>

- "High" indicates 90% of workers earn less and 10% earn more.
- "Median" indicates 50% of workers earn less and 50% earn more.
- "Low" indicates 10% of workers earn less and 90% earn more.

Table 3. Hourly wages associated with Web Developer Careers.

Computing is a growing area in which more workers are needed. According to a June 2, 2014, article in Forbes, Information Technology (IT) workers were among the “top ten hardest jobs to fill.” Information in the article was obtained from ManpowerGroup's Talent Shortage Survey [Dill, K. (2014, June 2). The 10 Hardest Jobs To Fill In 2014. Retrieved from Forbes: http://www.forbes.com/sites/kathryndill/2014/06/02/the-10-hardest-jobs-to-fill-in-2014/]
Enrollment in ICS courses at WCC has continued to grow over the past 5 years. For ICS courses above ICS101 enrollment in 2013-2014 academic year was 187% of enrollment from 2009-2010. With early enrollment figures for Fall2014, the trend of upward enrollment is continuing. Clearly, students are interested in the ICS courses, and providing a certificate program will help these students continue to build career skills.

Growth of ICS courses above ICS101:

<table>
<thead>
<tr>
<th>Courses</th>
<th>2009-2010</th>
<th>2010-2011</th>
<th>2011-2012</th>
<th>2012-2013</th>
<th>2013-2014</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>sev</td>
<td>enr</td>
<td>sev</td>
<td>enr</td>
<td>sev</td>
</tr>
<tr>
<td>ICS 107: Website Development</td>
<td>4</td>
<td>77</td>
<td>5</td>
<td>87</td>
<td>5</td>
</tr>
<tr>
<td>ICS 111: Intro to Computer Science</td>
<td>2</td>
<td>35</td>
<td>3</td>
<td>59</td>
<td>2</td>
</tr>
<tr>
<td>ICS 119: Intro to Social Media</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ICS 123: Intro to Audio &amp; Video Editing</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>ICS 141: Discrete Math for Comp Sci</td>
<td>1</td>
<td>13</td>
<td>1</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>ICS 203: Digital Image Editing</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ICS 207: Building Web Applications</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ICS 211: Intro to Computer Science II</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Totals</td>
<td>7</td>
<td>125</td>
<td>11</td>
<td>189</td>
<td>11</td>
</tr>
</tbody>
</table>

8. Description of resources required
   a. Faculty (existing and new FTEs)
   WCC currently has 1.0 position in ICS, 1.0 position in Business Technology and one 0.5 position which is scheduled to end July 2015 and several lecturers. We would be able to facilitate the teaching of the classes with the current staff; however, with the anticipated elimination of our 0.5 position, an additional 1.0 position in Computer Science or a related field will be necessary. The business technology instructor is retiring, so that position will also need to be replaced. One of the positions will need teaching equivalencies to co-ordinate the program.

   b. Library resources (including an evaluation of current resources and an estimate of the cost of additional resources required)
   Current resources are sufficient for our needs which include access to academic databases, periodical indexes such as EBSCO, and other such resources.

   c. Physical resources (space, equipment, etc.)
   Initially, no new physical resources will be required. Our existing computer classrooms are sufficient to cover the needs of our ICS courses in terms of course scheduling. We intend to offer a number of sections for the ICS courses for this degree through distance learning.

   As the program grows, we may need additional lab space, office space.

   d. Other resources required (staff, graduate assistantships, etc.)
   Supplemental instruction would be desired to support student success.

9. Five-Year Business Plan. Provide a five-year projected budget for the program that includes:
   a. Annual costs to implement the program
The main cost to implement the program would be for teaching equivalencies for a coordinator for the program, as the courses are already being taught 3-credits teaching equivalency is requested for this program.

b. Projected enrollment and estimated tuition revenue
See item f. below

c. How will be program be funded?
General tuition income and possible grants

d. Does the current or proposed budget (Department/College/Campus) include funds or a request for funds for the proposed program? Please provide details.
For the most part, this is a repackaging of current course offerings, and little or no additional costs are anticipated.

e. Given a “flat budget” situation, how will the proposed program be funded?
Student tuition

f. Mini Cost Revenue Template

<table>
<thead>
<tr>
<th>ENTER VALUES IN HIGHLIGHTED CELLS ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>FY15-16</td>
</tr>
<tr>
<td>PROGRAM COSTS</td>
</tr>
<tr>
<td>Faculty w/o fringe*</td>
</tr>
<tr>
<td>Other personnel costs w/o fringe</td>
</tr>
<tr>
<td>Library</td>
</tr>
<tr>
<td>Equipment/Supplies</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>TOTAL Expenses</td>
</tr>
</tbody>
</table>

| REVENUES                              |
|                                        |
| Projected Enrollment                   | 22       | 22       | 22       | 22       | 22       |
| No. of Courses                        | 10       | 10       | 10       | 10       | 10       |
| No. of Credits                        | 30       | 30       | 30       | 30       | 30       |
| SSH                                    | 660      | 660      | 660      | 660      | 660      |
| Tuition Rate/Credit****               | $114     | $114     | $114     | $114     | $114     |
| Total Revenue from Tuition            | $75,240  | $75,240  | $75,240  | $75,240  | $75,240  |
| Other Sources of Income               |
| TOTAL Revenues                        | $75,240  | $75,240  | $75,240  | $75,240  | $75,240  |

*Assuming a 4% increase in faculty pay. Faculty pay is based on Rank 2 instructor. Teaching 24 credits with 3 credits teaching equivalency for coordinating the program
**Lecturer pay for 6 credits.
***Assuming no increase in tuition

Courses will also have other students in addition to students seeking the CA. Projected number of certificate seeking students is 6 for FY15-16 and is expected to grow to 18 by GY19-20
10. **Impact on current courses or programs.**
The impact could show an increased enrollment in current courses, with a possible need for additional sections. This program could attract students to our program and increase overall enrollment at the campus.

11. **If this program is multidisciplinary, provide evidence of commitment for support from the colleges, departments, programs, and/or individuals expected to participate.**
   Approved by the Math/Business Department

   Ongoing - consulting with other departments.
Reviewed by: (The ATP has completed the campus approval process prior to review by Council of Chief Academic Officers)

**Campus Chief Academic Officer:**
Comments and Recommendations:

<table>
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<tr>
<th>Print Name</th>
<th>Signature</th>
<th>Date</th>
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**Council of Chief Academic Officers (Systemwide Consultation):**
Comments/Recommendations:

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<tr>
<th>Print Name</th>
<th>Signature</th>
<th>Date</th>
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**Chancellor:** __ Approved  ____ Disapproved

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<tr>
<th>Print Name</th>
<th>Signature</th>
<th>Date</th>
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</thead>
</table>

(Final signed copy is provided to the Vice President of Academic Planning and Policy for Program Action Report) 6/12/07

**Review of ATP Proposals at Windward Community College**

New Program Proposal:

New Program Proposal levels of review done prior to or concurrent with the ATP submission for off-campus review.

1. **Proposer**

   Vanessa Cole  Vanessa Cole  9/30/2014

2. **Department Area (more than one departmental instructor’s signature required)**

   Deacon Hanson  Deacon Hanson  9/30/2014
   Laura Sue  Laura Sue  9/30/2014
   Jody-Lynn Storm  Jody-Lynn Storm  10/2/2014
   Jean Okumura  Jean Okumura  10/2/2014
3. Department

[Signature]  
Department Chairperson  
10/2/14  

4. Division

[Signature]  
Dean of Instruction  
10/2/14  

5. Curriculum Committee Review

☑ Approved  
Reason:  

[Signature]  
Kathlyn Trull  
Oct 28, 2014  
Curriculum Committee Chairperson  

6. Faculty Senate Review

☒ Approved  
Reason:  

[Signature]  
P. McLean  
11/6/14  
Faculty Senate Chairperson  

7. Vice Chancellor for Instruction

☑ Approved  
Reason:  

[Signature]  
11/10/14  
Vice Chancellor for Instruction  

8. Chancellor

☑ Approved  
Reason:  

[Signature]  
11/24/14  
Chancellor  

Disapproved