August 1, 2012

TO: Douglas Dykstra, Chancellor
Windward Community College

SUBJECT: Career & Technical Education Award

Windward Community College is awarded $40,483 in 2012-2013 Title I Career and Technical Education funds to support the entitled project:

Development of a Certificate of Competence in Plant-Food Production and Technology                   $40,483

The award period for the project is from July 1, 2012 to June 30, 2013 and the award number for the project is: WIN2012/13(1)-T1-04 and should be referenced on all future correspondence and reports. These funds must be expended and goods received by June 30, 2013. A completion report is due on October 10, 2013.

Please call Dominic (Nic) Estrella at 956-3865 if you have questions.

Sincerely,

[Signature]

Peter Quigley
Assoc. Vice President for Academic Affairs

Cc: R. Fulton, VCAA, CTE Dean
C. Togo, VCAS
K. Ishida, FA
L. Tsuchako, FA
S. Robinson, Dir. of Academic Programs
Strategy # 4
Program Year 2012-13

1. College: Windward Community College

2. (Descriptive) Strategy Title: Development of a Certificate of Competence in Plant-Food Production and Technology

3. Proposer’s Name: Ingelia White      E-Mail: ingelia@hawaii.edu


   Is this proposal a part of a multiple-year strategy? Yes
   If this is a multiple-year strategy, for what year is this proposal requesting funding?

   Year 1

5. Brief Statement of identified problem area and reason for selection:
   a) Provide relevant program and/or college data to support the need to address this problem.
   b) Describe alignment of problem to one or more Perkins Core Indicators, and as appropriate, goals from the UHCC Strategic Plan, Achieving the Dream, and/or other UHCC projects. (See pg. 2 of Instructions)
   c) Include narrative that is supported by data. Be brief and succinct.

The field of agriculture-based biotechnology is evolving each day, offering numerous career options. Besides employing people for research and development, the industry also caters to various other agricultural biotech-related fields including horticulture, floriculture, dairying, poultry farming, and landscaping. Agricultural based biotechnologists can also sharpen their academic skills by working with food processing or post-harvest technology. Academic programs certificates in these fields (Academic Subject Certificate in Bio-Resources and Technology – Plant Biotechnology, and Certificate of Completion in Agriculture Technology) have already been developed and offered at Windward Community College. Occupations related to agricultural biotech are expected to increase 10%-12% by 2018 (DILR Research and Statistics Office, 2010). These include jobs for crop, nursery, greenhouse workers; first line supervisors for farming, fishing and forestry workers; first line supervisors/managers of landscaping, lawn service, and grounds keeping workers; and landscaping and grounds keeping workers (Certified Nursery – Hawaii Department of Agriculture, 2012. Http://hawaii.gov/hdoa/pi/pq/nema_cert/nurseries-in-hawaii).

In order to attract a new generation of skilled agricultural-food technicians and broaden/enhance the skills and knowledge of existing agricultural biotech employees and incumbent workers in other related fields, the College proposes to develop a Certificate of Competence in Plant-Food Production and Technology (PFPaT).

The proposed project is aligned with the following Perkins Core Indicators - 1P1: Technical
Skill Attainment and 2P1: Credential, Certificate, Degree
The proposed project addresses the following UHCC and WCC Strategic Goals:

UHCC
4.1, Increase by 3% per year the number of degrees awarded, and or transfers to UH baccalaureate programs that lead to occupations where there is a demonstrated state shortage of qualified workers and where the average wage is at or above the U.S. average.


Enrollment in the program are conservatively projected at 16 for the first year and 18 for the second. Projecting a 70% completion rate based on WCC’s experience with other certificate programs, 11 students should complete after the first year and 13 after the second (assuming that students who do not complete do not return).

WCC
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.
4.6, Increase the number of degrees awarded, and/or transfers to UH baccalaureate programs that lead to occupations where there is a demonstrated state shortage of qualified workers and where the average wage is at or above the U.S. average by 3% per year.

The proposed Certificate of Completion in PFPaT will be one of the two agriculture biotechnology career-focused related degrees or certificates to be proposed this year, providing graduates with skills to take jobs for wages at or above the national average.

6. Brief Strategy Description: (Typically no more than one or two paragraphs)

• Answer the question: What do you want to do based on information provided in item #5 above?
• If this strategy is a continuation of a current strategy, indicate rationale for continuance. Strategies will not be considered for continued funding unless supporting data and rationale demonstrate impact effectiveness.
• Include supporting data i.e. effectiveness measures. Data on student needs, student impact (number served last year and anticipated number to be served in current year), and effectiveness must be provided below.
• Evidence of industry support.
• Include a short description on all proposed personnel to be paid for by these funds. The description should include:
  o the position(s) FTE,
  o if the hire will be regular or casual,
  o the position’s/positions’ classification(s) (e.g., counselor, lecturer, APT, etc.),
  o the position’s/positions’ job duties and how the duties will benefit the project,
  o the intended number of months of funding for each position. Please take into consideration the recruitment time for new hires.
• Itemize supplies valued at more than $500 and have a shelf life of 1 year or longer.
• Itemize equipment, whose description is an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost
which equals or exceeds $5,000.

- For travel, provide a breakdown the **estimated** cost including airfare, lodging, per diem, conference fees, and ground transportation. Include the conference name, description, location, and dates. If possible, include the conference flyer and/or agenda.
- For services, if the name of the specific vendor is known, please include that information. Also include a breakdown of service cost (cost per day, hour, etc.)
- For software, include the type of software package, the estimated costs and how the software will enhance the project.

The Certificate of Competence in PFPaT is a hybrid credit/noncredit certification program requiring a total of 9 credits. Each course offering can either be taken for a) credit (pursuant to a higher degree or a certificate of completion in Agricultural Technology or an Academic Subject Certificate in Bio-Resources and Technology – Plant Biotechnology), or an AA in Liberal Arts, or b) noncredit, leading to a Certificate of Competence in PFPaT, in preparation for immediate employment in the agricultural biotech industry.

As part of the PFPaT certificate program students will:
- Select the following classes (total of 9 credits): BOT 105 (Ethnobotany), AG 149 (Plant Propagation), AG 152 (Orchid Culture) and FSHN 185 (Human Nutrition)
- be trained in the use of lab and farm equipment through hands on training in the ethnophamacognosy lab, greenhouse, and the medicinal garden
- participate in a mentoring program where they work in local companies to gain experience before entering the workforce

Industry partners include Nalo Farms, Papahana Kuaola, Pioneer Hi-Bred International, Monsanto Inc., Diamond Head Plants, Native Plant Source, etc. After completing the certificate, students will be able to work with agricultural and food scientists in food, fiber, and plant research, production, and processing; and conduct tests and experiments to improve yield and quality of crops or to increase the resistance of plants to disease or insects.

**Funding requests/budget justification (see budget request sheet): total $40,352**

Project Director (2 credit summer overload): $3,852
The Project director (Dr. Ingelia White) will develop and oversee the project including teaching, developing curriculum, mentoring student interns, selecting/inviting/organizing different topics of presentations by a specialized speaker in classes and open forums, purchasing lab/garden/greenhouse supplies and equipment (a mini tractor) for use in medicinal garden and agriculture fields.

Student Interns @ $500: $5,000
Ten student interns will be mentored and worked in the partner companies or at Windward Community College Tissue Culture/Plant Biotechnology Laboratory, or Bioprocessing Medicinal Garden Complex. or Agriculture greenhouse to gain work experience before entering the workforce.

Materials and Supplies: $4,000
Garden tools, greenhouse tools, tool shed, bioprocessing supplies etc.

Other (a specialized speaker for a week): $2,500
Funding (R/T airfare, hotels, meals) to bring over a renowned expert to give presentations in botany, agriculture and phytobiotechnology classes, and public forums for a week in October, 2012 in various topics including vanilla global markets, orchid barcoding, orchid phylogenetic study and world orchid conservation.

A Mini Tractor with Backhoe: $25,000

7. Calendar of Planned Activities: (add or delete rows as appropriate)
   In chronological order, briefly describe the procedures/activities planned to achieve stated goal(s) or outcome(s)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Month(s) the Activity will take place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate development</td>
<td>spring and summer 2012</td>
</tr>
<tr>
<td>Recruit students</td>
<td>beginning spring 2012 and ongoing</td>
</tr>
<tr>
<td>Purchase supplies</td>
<td>summer/fall 2012</td>
</tr>
<tr>
<td>Offer certificate courses (BOT 105, AG 149, and FSHN 185 in fall 2012, BOT 105 and AG 152 in spring 2013)</td>
<td>beginning fall 2012 and ongoing</td>
</tr>
<tr>
<td>Internships</td>
<td>beginning fall 2012 and ongoing</td>
</tr>
</tbody>
</table>

8. Effectiveness Measures: (Refer to the identified problem – item #5, and describe the anticipated quantitative outcomes expected from the implementation of the strategy. Where appropriate, indicate the effectiveness measures that will be reported after year one, year two, etc.) **State the effectiveness measures clearly and in assessable terms.** The outcomes stated here must be addressed later in the completion report. Confer with your IR office to ensure the appropriateness of the measurement of outcomes.

- 80% of students (13 CoC graduates out of 16 students) will successfully complete the Certificate of Competence in PFPaT
- 70% of PFPaT students (11 CoC graduates) will enter the workforce and/or become agribioprocessing entrepreneurs
- 70% of PFPaT students (11 CoC graduates) will transfer or continue in the Agriculture and/or Plant Biotechnology programs

9. Budget Summary:  For system projects, the budget must include a breakdown of costs by campus along with a total system budget. (Double-click to access Excel Worksheet).
<table>
<thead>
<tr>
<th>Personnel (List all positions separately)</th>
<th>Budget</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project director (2 credits summer overload)</td>
<td>$3,852</td>
<td>Casual Hire/Overload</td>
</tr>
<tr>
<td>student internships (10 at $500 each)</td>
<td>$5,000</td>
<td>Student</td>
</tr>
</tbody>
</table>

| Personnel Subtotal | $8,852 |

| Fringe Total       | $131   |
| Personnel Subtotal | $8,983 |

<table>
<thead>
<tr>
<th>Services</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Material &amp; Supplies</td>
<td>4,000.00</td>
</tr>
<tr>
<td>Travel</td>
<td></td>
</tr>
<tr>
<td>Rentals</td>
<td></td>
</tr>
<tr>
<td>Other (specialized speaker for a week, hotel, M&amp;E, flight)</td>
<td>2,500</td>
</tr>
<tr>
<td>Equipment - Mini backhoe</td>
<td>25,000.00</td>
</tr>
</tbody>
</table>

| TOTAL COSTS          | $40,483 |
10. Certifications:
I certify that this proposal, budget, and certifications are accurate and complete and that this project will be conducted in accordance to Perkins policies and Federal, State, and University regulations and requirements.

I also certify that I have consulted with the appropriate Institutional Research, Business Office and Human Resources Office personnel and that they have reviewed all budgets and resource commitments and have found that they comply with Perkins, Federal, State, and University requirements and policies.

Proposer’s Signature: __________________________ Date: April 7, 2012
Print name: Ingelia White