June 5, 2014

To: Loni Delaplane, Instructor
    Kaua`i CC

From: John Morton, Vice President for Community Colleges

Subject: FY2015 Developmental Education Initiatives

The UHCC system is pleased to support the project, "2014 Math Boot Camp Peer Tutors", in the amount of $540.00. This project is a one-week, 20-hour math boot camp which will offer the opportunity to selected students to take a refresher course and higher math course and will focus on improving motivation for math success.

The project funding is subject to the following requirements:
1. Implementation will occur in AY 2014-15.
2. All funds must be expended, not just encumbered, by June 30, 2015.
3. The project final report (in the form attached) must be submitted in electronic form to Gayle Ishii (gaylei@hawaii.edu) with a copy to Suzette Robinson (suzetter@hawaii.edu) and to Laurie Kuribayashi (laurieak@hawaii.edu) not later than September 30, 2015.


Tuition and Fee Special funds will be transferred to your campus for this project after July 1, 2014.

Based on the information provided in your final report, funds may be re-purposed. The project proposal and reports will be published on the UHCC website.

Thank you for your work in developing innovations to increase student success in developmental education. We look forward to working with you as the project unfolds.

cc: Helen Cox, Chancellor
    Peter Quigley, AVPAA
    James Dire, VCAA
    Brandon Shimokawa, VCAS
    Leighton Oriide, Fiscal Officer
    Suzette Robinson, Director for Academic Programs
    Gayle Ishii, Academic Support
    Lisa Tsuhako, Budget Specialist
    Laurie Kuribayashi, Developmental Education Committee Chair

Att: Final Report template
### FY 2015 UHCC Project Proposal Form

- ATD  
- Developmental Education  
- Financial Aid  
- Part Time Student Initiative

**SCAN AND SUBMIT PROPOSAL WITH REQUIRED SIGNATURES BY:** March 18, 2014

**Date:** 3/18/2014  
**REVISION DATE:**

**Project Title:** 2014 Math Bootcamp Peer Tutors  
**Budget Request:** $540  
**College:** Kauai Community College  
**Proposer's Name:** Loni Delaplane  
**Proposer's Email Address:** ldel@hawaii.edu

## PART 1 PROPOSAL

<table>
<thead>
<tr>
<th>Proposal</th>
<th>Pts</th>
<th>Narrative</th>
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| 1. Project Summary |   | KauCC math instructors plan to host a one-week, 20-hour Math Bootcamp. Goals of the bootcamp will be:  
- to identify students who are likely to succeed in a higher math course than they placed into; and to offer these students a math refresher and the option to take the higher math course (This will reduce the time to certificate or degree.)  
- to improve student's attitudes and understanding about their mathematical abilities so that they are more motivated to take and succeed in a math class  

Note: The majority of the cost of bootcamp, including supplies and instructor assigned time will be funded through KauCC's C3T1 Grant. However, the C3T1 Grant does not support peer tutors. So we are seeking funding for the peer tutors only through this proposal.

**Actions to be taken and resources needed:** In order to implement Math Bootcamp, we will need funding for 2 peer tutors and one out-of-class assistant (ideally, one of the tutors could also serve as the assistant). We have already secured funding for two instructors assigned time as well as supplies to facilitate group work (markers, portable white boards, etc.). The lead instructor and the out of class assistant will be in charge of actively recruiting students to participate in Bootcamp. The lead instructor will also facilitate registration, work with counselors, recruit tutors, purchase supplies, and plan all non-curriculum details of Bootcamp. Both instructors will create lessons for whole group and focus group activities, as well as work together to design a pre-test and post-test. The post test will be vetted by all KauCC Math instructors and used to determine whether initial placement score should be overridden. The peer tutors will circulate during group work, guiding and facilitating discussion. To ensure that students can enroll in the higher course should they increase in placement, the lead instructor will work with the registrar to hold seats in Math 75, Math 100, and Math 115 for potential bootcamp students.

**Data Supporting Need:** Bootcamp will draw on the success and lessons learned from other recent KauCC initiatives, specifically Math 26 and 2013 Math Bootcamp. The chart below |
shows National and KauCC data on the percentage of students who pass a college level math, based on where they started in the developmental pipeline.

<table>
<thead>
<tr>
<th>% of Students Completing College-Level Math:</th>
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<tbody>
<tr>
<td>Kauai CC vs. National Data</td>
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<tr>
<td>Initial Placement</td>
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<tr>
<td>1 level below college (M325)</td>
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<tr>
<td>2 levels below college (M324)</td>
</tr>
<tr>
<td>3 levels below college (M322)</td>
</tr>
<tr>
<td>Kauai's CC</td>
</tr>
<tr>
<td>National Data</td>
</tr>
<tr>
<td>25%</td>
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<tr>
<td>10%</td>
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<tr>
<td>15%</td>
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See Referral, Enrolment, and Completion in Developmental Education Sequences in Community Colleges; CCRC Working Paper No. 15; Bailey, Joong, and Cho; Dec 2009.

Ongoing/Previous Initiatives:
Math 26 is a 5-credit accelerated developmental algebra course that has nearly doubled the percentage of students who test at or below the Math 24 level that successfully complete a college level math course, increasing from 19% to 33%. The course success rate of Math 26 is 69%, higher than either of the two single courses it replaces.
Instructors credit the success of Math 26 to the following factors:
- Meeting for 5 hours a week provides an immersive experience in which to team content and develop strong bonds with peers, peer tutors, and the instructor.
- Math 26 curriculum challenges students from the start, beginning the semester with new material so that students see the course as challenging, rather than a review of previously learned material (avoiding the common "I already know this, so I can afford to skip a few classes" pitfall).

2013 Bootcamp was a one week, 4 day initiative focusing on improving student's mathematical/critical thinking skills and attitude towards math. (2013 Bootcamp did not focus on placing students into a higher level course, but rather preparing them for the course for which they had registered.) Students from 2013 Bootcamp reported that the team teaching, peer tutors, and group work style was what they liked most about bootcamp.

2014 Bootcamp
This year's bootcamp will incorporate several strategies that have been used in the above successful initiatives at KauCC. These strategies including Peer Tutors, team teaching, focusing on concept development rather than drill, promoting critical thinking and perseverance in problem solving, building peer camaraderie through group work in a math immersive environment.

Sample schedule for bootcamp:
3-3:15 pre-test
3:15-4:30 Groupwork on critical thinking problems
4:30-5:30 Break into focus groups for lecture and discussion (determined by pre-test)
5:30-6:15 Working Dinner with video and discussion
6:15-6:30 break
6:30-7:30 Practice/game time in focus group (practice skills learned earlier in the day)
7:30-8 post-test and debrief

2. Effectiveness Indicators/Outcomes and Benchmarks
Guidelines: Specific explanation of how project's effectiveness will be

Outcomes:
1. Students will develop a growth mindset and more positive attitude towards math.
2. Students will improve their math placement.

Benchmarks:
1. 80% of students will respond more positively on a math mind-set survey containing
questions similar to the math focused questions linked here: http://www.classroom20.com/forum/topics/motivating-students-with

2a. Students will succeed in their math courses at least 5% higher rate than historical success rate. (Students who increase placement level will be compared to historical pipeline success rate, rather than course success rate since the overall goal is to advance to degree or certificate.)

2b. 20% of Students participating in bootcamp will place into a higher course than their initial Compass placement.

3. Background Research

Guidelines: Concise explanation of background research (with citation information) for project

<table>
<thead>
<tr>
<th>Success Rate Comparison - With &quot;Boot Camp&quot; and Without</th>
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<tbody>
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<td>100.00%</td>
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<td>95.00%</td>
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"Fall semester 2006 found the West Valley Math Department faculty struggling with the too-familiar dilemma of low student success rates in the beginning and intermediate algebra courses. Professor Stan Benkoski and fellow Professor Rebecca Wong devised a one-week prep class to be offered the week prior to the start of the semester. Students attend the prep class 5 hours a day for a week, with more work required outside of class. The intensive instruction pays off; students who complete the 'Boot Camp' have posted success rates an average of 43% higher than those who have not." (West Valley College, Office of Institutional Research, Volume 1, Issue 1, November 2008)

Background Research #2:
Since Fall 2010, Lansing Community College has offered summer Math Bootcamps. More than 70% of students who take the Boot Camp obtain a Math level. Boot Camp students do better in Pre-Algebra than those who place without the refresher. (Lansing Community College, Office of Institutional Research, Volume 1, Issue 4, November 2012)
### 4. Relationship to Campus & UHCC Strategic Plans
**Guidelines:** Discussion of project's relationship to campus & UHCC strategic plans, including the following:
- Specific references to and copies of applicable sections of plans
- Brief explanation of relationship between project and referenced sections

In the Kauai CC Strategic Plan under Learning & Teaching — "To promote excellence in learning and in teaching for transfer, career technical, remedial/developmental education and lifelong learning." The Math Bootcamp 2014 project will mainly support Math 21/22 remedial/developmental students. Many of those students are going into career technical fields, such as culinary, automotive mechanics technology, and electronics. Exposing these students to twenty-hours of mathematics before Fall semester, will promote their confidence and success in learning developmental math and related mathematics knowledge in their career technical courses.

In the UHCC Strategic Plan Update (2008-2015) under Hawaii's Educational Capital, we further commit to "increase the number and percent of students who, if assigned to a developmental intervention, successfully complete that sequence and move on to degree applicable instruction" (Goal 2.3) The Math Bootcamp 2014 project is designed to move Dev Math students into a higher level math course during the summer so that they can move through their Math sequence more quickly, saving students one semester of a developmental math.

### 5. Scalability
**Guidelines:** Discussion of project's scalability (on campus and/or to other campuses)

After reviewing outcomes from this initiative, we will have a basis for deciding which students to target. Here is one possible scenario:
Assume that bootcamp was very successful for students who originally placed into pre-algebra (Math 21 or 22), but who increased their placement to Math 75 (KauCC's new non-STEM track dev math course) but it was not successful for students who increased their placement to Math 25 or Math 26.

For this scenario, we could then target all students who place into Pre-Algebra and need to take the non-STEM track. We could fully scale this initiative by changing the pre-requisite for Math 75 to include a bootcamp style course (either credit or non-credit), rather than having students spend a full semester in Pre-Algebra. This would mean that any student entering KauCC could finish a 100-level math course within a year of enrolling in the college.

We could also present our results from both the 2013 and 2014 Bootcamps in a "how to implement/lessons learned" type format at HSI so other campuses could learn from our experiences.

### 6. Sustainability
**Guidelines:** Discussion of project's sustainability (after UHCC project funding ends)

Should this project prove successful, KauCC Math Department will seek General Funding for instructor overload and peer tutors through the college's APRU process. In the past, the college has been very supportive of Math initiatives, and it seems likely this will be supported as it addresses several of the colleges Strategic Goals.

If this is an ongoing initiative, supplies such as markers and graph paper will be purchased through regular SAM Division funds. We will have enough whiteboards to accommodate up to 6 groups which should be sufficient for future bootcamps.
The relationship between the requested expenditures and the project's effectiveness indicators/outcomes and benchmarks must be addressed specifically in the project proposal.

Any change of more than ten percent (10%) of any cost item or $500 (whichever is less) in an approved budget will require the proposer to email a request for the change, prior to expenditure of funds, to the committee chair and Suzette Robinson with the following: (1) reason for the change (including the relationship between the requested change and the project's effectiveness indicators/outcomes and benchmarks); and (2) original and proposed revised budget. Committee will support, or not, the budget change request.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>BUDGET</th>
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<tbody>
<tr>
<td>PERSONNEL (Personnel costs include, but are not limited to, faculty or staff overload, student assistants, casual hires, and/or lecturer replacement. Unlike federal regulations, these funds do not require that the person doing the work be paid from this funding source. Personnel fill requests are required to be in the form of a lecturer B step.) Confirm the applicability of inclusion of fringe benefits costs and the amount of such costs with your human resources or business office. Indicate fringe benefit percentage and cost, if any, as a separate line item.</td>
<td></td>
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<tr>
<td>A1 In/out-class Student assistants, split between three students In-class student assistant #1: 22 hours at $10/hour = $220 In-class student assistant #2: 22 hours at $10/hour = $220 Out of class student assistant: 10 hours at $10/hour = $100</td>
<td>$540.00</td>
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<tr>
<td>TOTAL PERSONNEL</td>
<td>$540</td>
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<td>SUPPLIES (Supplies include, but are not limited to, office supplies, travel, conference fees, mileage, and computers.)</td>
<td>$0</td>
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<tr>
<td>TOTAL SUPPLIES</td>
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<tr>
<td>EQUIPMENT (Equipment is defined as any one item costing $5,000 or more.)</td>
<td>$0</td>
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<tr>
<td>TOTAL EQUIPMENT</td>
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<tr>
<td>TOTAL BUDGET REQUEST</td>
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Certification by Proposer

I certify that I have consulted with and submitted this proposal in a timely manner to the appropriate (A) institutional research office, (B) business office, and (C) human resources office for review of all assessment, budget, and resource commitments. Outcomes have been reviewed and are appropriate for the proposal. I understand I will have primary responsibility for monitoring any funds awarded and agree to maintain accurate and current records of expenditures consistent with the budget.

Signature: [Signature] Date: 5-12-14

Name: Loni Delaplane
Title: Mathematics Instructor

Confirmation of Support by Vice Chancellor Academic Affairs (VCAA) or Vice Chancellor Student Affairs (VCSA)

I have reviewed and support this proposal.

Signature: [Signature] Date: 5/12/14

PRINT Name: [PRINT Name]
Title: [X] Vice Chancellor Academic Affairs (VCAA) [OR] [ ] Vice Chancellor Student Affairs/DOSS (VCSA/DOSS)

Confirmation of Campus Approval by Chancellor

The campus approves the proposal and is committed to advance the amounts, if any, described in the proposal as being funded by the campus and is committed to sustaining the project if evidence of its success is warranted and funding is available.

Signature: [Signature] Date: 5/12/14
Print Name: [Print Name]
Title: Chancellor