Kapiʻolani Community College’s STEP-UP Program
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GOALS
Kapiʻolani Community College’s STEP-UP goals are to:
1. Increase the number of students in the College’s STEM pipeline from 185 to 400.
2. Increase the number of students who have completed the Associates of Science in Natural Science (ASNS) degree from 0 to 250.
3. Increase the number of students matriculating to two collaborating four-year institutions in Hawaii from 90 to 280.
4. Institutionalize STEM initiatives and provide ongoing support for STEM students through pre-college recruitment (Summer Bridge); support of their sessions; and Undergraduate Research Experiences (URE).

STRATEGIES
Kapiʻolani Community College’s STEP-UP strategies are:
1. The Summer Bridge Program
   i. Students were taught how to use computer hardware and software and demonstrated these skills through building a brand new computer system. Installing the operating system, and improving their ability to use it efficiently for academic purposes.
   ii. Bridge was formed using white-cooking oil provided by the KapCC culinary arts program as part of the college’s sustainability efforts.
   iii. Students spent at least 3 hours consolidating their mathematical skills using an online program called ALEKS.
2. Peer Mentoring and Tutoring
   Peer mentors and student tutors were supported by STEP-UP to assist STEM students in their academic success efforts.
3. Peer-Led-Unit Study (PLUS) Sessions
   Studies were created to allow STEM students to review scientific theories and methods through problem solving activities.
4. Undergraduate Research Experience (URE)
   Students were engaged in research at the university level.
5. Intrusive Advising
   The STEM coordinator, faculty, pathway coordinators, student organizations, and counselors utilized intrusive advising to facilitate and retain STEM students.

Implementation Progress

STUDENT ENROLLMENT IN UNDERGRADUATE RESEARCH EXPERIENCE (URE) PROJECTS

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oceanography</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Geology</td>
<td>15</td>
<td>25</td>
<td>35</td>
</tr>
<tr>
<td>Biology</td>
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</tr>
<tr>
<td>Chemistry</td>
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<td>22</td>
<td>32</td>
</tr>
</tbody>
</table>

PEER MENTORS, TUTORS, AND PEER-LED-UNITS SESSION (PLUS)

In year three, 18 students were funded by STEP-UP to provide support services as peer mentors, tutors, and Peer-led-Unit leaders. This retention effort has retained 175 STEM students this year.

STUDENT PARTICIPATING IN MENTORING, TUTORING, AND PLUS ACTIVITIES

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentoring</td>
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<td>90</td>
</tr>
<tr>
<td>Tutoring</td>
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<td>60</td>
<td>80</td>
</tr>
<tr>
<td>PLUS</td>
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</tr>
</tbody>
</table>

Opportunities and Challenges

CHALLENGES
With the adoption of the URE model by many newly engaged STEM faculty, providing funding for these experiences has become a challenge in regards to sustainability and institutionalization.

MEETING THE CHALLENGES
Initiatives must be implemented at KapCC to:
- Provide financial support to students for the initial materials and supplies needed to implement the URE projects.
- Increase STEP-UP dissemination efforts to sustain the URE projects using private sector funding.
- Enhance the mathematics skills of all students whose entrance COMPASS placement is below the College math level by utilizing the STEM summer bridge model of using ALEKS online software.