College Mission Statement

Serve the community as an affordable, flexible, learning-centered, open-door comprehensive community college that meets the post-secondary educational needs of individuals, businesses, and the community, and Serve the Pacific Region as the primary technical training center in areas such as transportation, information technology, education, communications, construction, and public and personal services.

Program Mission Statement

The Sheet Metal & Plastics Technology program's mission is to serve the community as a learner-centered by training individuals in the basic skills of sheet metal and plastics fabrication and installation. This open door program provides technical training to meet the demands of the Sheet Metal & Plastics industry and the needs of the individual. An open-exit option allows the students to identify their career objectives and participate in program exploration.

Program Goal:

This curriculum is designed to qualify students for entry into the sheet metal industry as apprentices. They will develop skills in pattern development needed for fabrication / installation of air conditioning/ventilation ductwork; architectural metal components; basic welding and fabrication of plastics.

Part I. Quantitative Indicators for Program Review

External Demand
Labor Market & Student Applications

Available data show that the current annual jobs and projected 2005-2012 job outlook for the Sheet Metal Workers cluster are 784 and 11 or 1.4% respectively in Honolulu County…and 1000 and 18 or 2% within the State of Hawai‘i.

There were 22 applicants to Sheet Metal & Plastics program in Fall 2004, Semester. Overall, among those Fall applicants, 20 appear to have been accepted by the college and admitted to the program, while 2 or 9% appear to have cancelled applications, or been redirected etc. Among those accepted and admitted, available data show that 19 actually enrolled in the semester initially applied for.

- Overall, my sense of the labor market and its relationship with the number and enrollment yield of applicants to our program is backed by the State of Hawaii Department of Labor numbers that predict service-producing industries will account for 92 percent of the total job increase in Hawaii between 2000 and 2012, and that approximately 91 percent of those employed in Hawaii in 2012 will work in these
industries, an increase of 14 percent. Although this sector will constitute less than 4 percent of the total of those employed, more than 23.7 percent of the gain will occur because of greater employment in general maintenance and repair workers. This high demand for new technicians is the result of 18 average annual openings due to growth but do not reflect the 10 average annual openings due to separation for a total of 28 total average annual openings.

Internal Demand

Registration headcount of actively enrolled students in Fall 2004 and Spring 2005 show that the Sheet Metal & Plastics Program Major carried 22 and 18 respectively in the Applied Trades Certificate of Achievement program.

Available data show that of 22 and 18 students in the major for Fall 2004 and Spring 2005, 17 or 72% were enrolled in Department classes in Fall--and 13 or 72% enrolled in Department classes in Spring.

Program major’s enrollment in department classes generated 221 student semester hours in Fall 2004 for an average of 13 semester hours, and 130 student semester hours in Spring 2005 for an average of 10. The resulting credit hours generated equate with 14.7 and 8.7 respective Fall 2004 and Spring 2005 Full Time Equivalent (FTE) enrollments.

There were no program non-majors enrolled in Department classes in Fall 2004 and Spring 2005.

Enrollment by program majors accounted for the 221 and 130 student semester hours, generated by the department subject SMP in Fall 2004 and Spring 2005 respectively.

Overall, students under our program major enrolled for totals of 295 semester hours in Fall 2004, and 222 in Spring 2005. As mentioned above, they generated 221 and 130 ssh in Fall 2004 and Spring 2005 respectively within the department.

Then, augmenting coursework within the department, 19 Program Majors were enrolled in a total of 74 student semester hours of coursework in other departments in the Fall 2004, while 17 enrolled for 92 student semester hours outside the department in the Spring 2005 semester.

We see from additional data that program major’s coursework outside the department was primarily in the subject areas of ENG, ICS, Math and PHYS with 5, 1, 18, and 1 of our program majors enrolling for 15, 3, 52, and 4, student semester hours respectively in Fall 2004.

In Spring 2005, major’s coursework outside the department was again primarily in the BLPR, ENG, ICS, Math and SPAN subject areas, with 14, 8, 1, 8, and 1, students enrolled for 42, 22, 3, 21, and 4, student semester hours respectively.

- Our sense from comparing major’s Fall/Spring average credit hours within department classes 13 and 10 and outside the department 3.9 and 5.4 is that the college and the industry make it very clear the need for BLPR, ENG, ICS, Math. Progress toward cert/degree are reflected in students taking coursework outside the department, that expand their opportunities within their major and long after they leave HCC,
With 1.47 Full Time Equivalent (FTE) faculty in Fall 2004, and 1.27 in Spring 2005—the department offered 5 active class sections in Fall and 4 in Spring.

Average Class Size in Fall 2004 was 17, and the Class Fill Rate was 68. For Spring 2005, Average Class Size was 14, with a Class Fill Rate of 56.

The department utilized 1.5 and .7 Full Time Equivalent (FTE) BOR approved faculty in Fall 2004 and Spring 2005 respectively. There were an additional .6 Full Time Equivalent (FTE) Part Time Lecturers teaching in Fall 2004, and there were .6 for Spring 2005.

Overall In Fall 2004, Full Time BOR approved faculty delivered 100%, of the 22 course credit hours, and were associated with generating 221 student credit hours within the SMP department.

In Spring 2005, Full Time BOR approved faculty delivered 75%, of the 19 course credit hours, and were associated with generating 130 student credit hours within the department. Part Time Instructor in Spring 2005 delivered 25%, of the 9 or 47% course credit hours, and were responsible for 0% of the generated student credit hours within the department.

Based respectively on student credit hours generated and course credit hours taught, the ratio of full time student equivalents (FTSE) to full time faculty equivalents (FTFE) was 10.05% in Fall 2004, and 6.84% in Spring 2005. The ratio of program majors to FTE faculty was 15 and 14.2 respectively in Fall 2004 and Spring 2005.

- My sense of departmental operating efficiencies, being the only full-time Instructor for SMP, is that the fall reflects the 100% it should, and the spring numbers reflect the one part-time lecture brought in to teach BLPR-22.
- The data does not show are all the contact and additional Lab hours required to get students proficient in fabrication equipment operations and required safety.
- The spring semester’s class fit size could be listed to show actual continuing student population and completion, since we intake only completed fall students.
- The data shows that the program is fulfilling the primary goals of those enrolled because 100 percent of the students gain training in accordance to union standards. This, in turn, offer all students that attain the one-year SMP program certificate, union employment and entry into their apprenticeship program after graduation, 100 percent that complete are employed in the sheet metal industry, with 100 percent of them maintaining employment in the industry 6 months after graduation.

**Instructional Outcomes**

As reflected in available data for the 04/05 academic year, the department awarded 6 certificates.
Available data on student grade distribution within the department subject code indicate that of all grades awarded in Fall 2004, 13.2%-A, 27.9%-B, 41.2%-C, 0%-D, and 17.6%-F. In Spring 2005, 5.1%-A, 41%-B, 38.5%-C, 7.7%-D, and 7.7%-F.

Student Persistence within the subject code SMP from Fall 2004 to Spring 2005 was 76.5%; persistence of majors in the same period was 77.3%.

(whether enrolled in department courses or not)

**Perkins Core Indicators**

SMP has shown gains in area 1P1 *Academic achievement*, but lost ground in 1P2 AND 2P1. I’m not sure how 1P2 *Vocational skills* are calculated so I’ll hold comments till I do. I do know that in 2P1 *Degree & Certificates*, only 6 students applied for their certificate, while others opted to go directly to work and apply for their degree at the end of their apprenticeship. Our 4P numbers will be hard to make large gains on given that SMP is a construction field and the job market in Hawai‘i at this time.

<table>
<thead>
<tr>
<th>Perkins Code</th>
<th>Description</th>
<th>Core Standard 03/04</th>
<th>SMP Actual 03/04</th>
<th>Core Standard 04/05</th>
<th>SMP Actual 04/05</th>
</tr>
</thead>
<tbody>
<tr>
<td>1P1</td>
<td>Academic achievement</td>
<td>81.56%</td>
<td>68.18%</td>
<td>81.81%</td>
<td>81.82%</td>
</tr>
<tr>
<td>1P2</td>
<td>Vocational skills</td>
<td>91.53%</td>
<td>86.36%</td>
<td>90.00%</td>
<td>73.33%</td>
</tr>
<tr>
<td>2P1</td>
<td>Degree &amp; Certificates</td>
<td>35.70%</td>
<td>54.55%</td>
<td>36.00%</td>
<td>33.33%</td>
</tr>
<tr>
<td>2P1</td>
<td>completers in employment/transfers</td>
<td>70.52%</td>
<td>100.00%</td>
<td>71.00%</td>
<td>100.00%</td>
</tr>
<tr>
<td>3P1</td>
<td>retention in employment/transfers</td>
<td>90.13%</td>
<td>100.00%</td>
<td>90.00%</td>
<td>91.67%</td>
</tr>
<tr>
<td>3P2</td>
<td>non-traditional participation</td>
<td>15.94%</td>
<td>4.00%</td>
<td>14.18%</td>
<td>5.56%</td>
</tr>
<tr>
<td>4P2</td>
<td>non-traditional completers</td>
<td>14.34%</td>
<td>8.33%</td>
<td>12.86%</td>
<td>20.00%</td>
</tr>
</tbody>
</table>

- Given consideration of this data, our sense of instructional outcomes is that SMP is doing well in providing training and employment opportunities to HCC students. The listed data show our strengths and alignment toward the mission statement. Weaknesses are also listed and a few can be explained, but remain something I will need to address with a plan to HCC and the Trade Advisory Comm.

**OVERALL**

Department demand for the 04/05 academic year was calculated at 24 majors, which translates to a minimum demand status.

Department efficiency for the 04/05 academic year was calculated at 62.9, which translates to a satisfactory efficiency status.

Department Outcome for the 04/05 academic year was calculated at 6 graduates and 25 intake openings, which translates to a satisfactory outcome status.
• Given consideration of these demand, efficiency, and outcomes indicator data together, our sense of overall program health is that the SMP program is headed in the right direction, fall semester entry class enrollment is strong, and students that have the drive and ability for the trade will find a good paying job as they continue their apprenticeship training here at HCC. The current industry need has focused on the one-year certificate program. Students are now only required to complete the first year program before starting to work. The programs fall semester statistics will always reflect lower as students find that college and or the sheet metal trade is not for them. The programs second semester will truly reflect the continuing class size and students that have completed their goal and or outcomes within the SMP program.

Part II. Assessment Results for Program SLO's

The SLOs were developed by the instructor with input from the union and industry participants on the SMP Advisory Board. They represent the current standards of the sheet metal industry; therefore, they provide all the information we need to determine whether or not the student is technically employable. To measure SMP Program SLO's we opted to use data provided from the following sources: Department of Labor and Industrial Relations statistics, Perkins-mandated Program Health Indicators, University of Hawaii Management and Planning Support reports and the Honolulu Community College Incoming, Returning and Graduate Student surveys. Specific area data will be provided from class quizzes and lab outcomes as a new software evaluation system comes on-line in the SMP program.

Part III. Curriculum Revision

Courses have been reviewed and updated since FY 2000. Content has been added that is relevant to the industry today. The degree requirements have been reviewed and changes have been made via the Trade Advisory to strengthen students’ skills within the one-year certificate program area.

Part IV. Analysis of data

• An open door policy allows all students that meet the college academic pre-requisites to enter the SMP program. All courses are sequential with the prerequisites for each semester course being the successful completion of the previous semester courses. Due to this open entry/open exit policy, some students become eligible to enter the Sheet Metal Union and take Apprenticeship courses at HCC. Some are eligible to enter the Pearl Harbor Applied Trades program. Therefore, although enrollment of majors in the program is consistently high, students that apply for and receive a certificate or degree are consistently low.

• SMP’s working relationship with the sheet metal industry and apprenticeship, is our greatest strength. The working relation we have creates input and changes to the program that produces quality students that become successful within the industry.

• We are just beginning to measure the new Sloes and will reevaluate them every year to determine the degree of success. Our employers had direct impact in the creation of the Sloes, and agree that they do measure the standards in today’s Sheet Metal Industry.
• We need to find way of improving student attendance to Improving learning outcomes. When students like and want to be here at HCC teaching them is much easier.

Part V. Action plan

1. This is a one-person department; therefore, the instructor is always inundated with questions. When the instructor is working with one student, then others are sometimes waiting to ask him a question. Therefore, to improve instructional effectiveness, we would like to create digital video of all fabrication, layout, and machine operations used in the SMP program that will be placed onto DVD for student review when the instructor is not available.

2. A DVD camera, software, and one year of shooting video within SMP will be required to get under way. I would like to start shooting in Academic Year 2006-07. We will shoot, edit and burn it to a disk, so it would be available to students in fall 2007.

3. The institution would need to fund the equipment with a short-term budgetary impact for the cost of the DV camera, about $850. The program instructor, Danny Aiu will be responsible for the equipment and completion of this project.

Part VI. Budget implications

Based on the budget data shown below, the SMP program has been run fairly efficiently over the last four years. Listed below are the FY 2004-05 and FY 2003-04 SMP budget numbers, showing the percent differences of each area.

<table>
<thead>
<tr>
<th>Budget allocation</th>
<th>FY 2004-05</th>
<th>FY 2003-04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of program:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty</td>
<td>$ 46,990</td>
<td>$ 42,565</td>
</tr>
<tr>
<td>Lecturers</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Student Assistants</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Operating Costs</td>
<td>$ 6,550</td>
<td>$ 8,627</td>
</tr>
<tr>
<td>Equipment</td>
<td>$ 39,862</td>
<td>NA</td>
</tr>
<tr>
<td>Supplies</td>
<td>$ 200</td>
<td>$ 1,703</td>
</tr>
<tr>
<td>Total</td>
<td>$ 93,602</td>
<td>$ 52,895</td>
</tr>
<tr>
<td>Cost per SSH</td>
<td>$ 266.67</td>
<td>$ 107.51</td>
</tr>
</tbody>
</table>

• The 100% equipment addition in 04-05, was needed to replace a very unsafe, 35 year old mechanical press. The industry has moved toward hydraulic presses for safety concerns, and HCC has always stepped up when student safety conflicted with training needs.

• Repair and Maintenance will continue to stress the program given that equipment repairs and service have no set budget. This is normal for all equipment shared in SMP program along with the night apprenticeship program students.