College Mission
Honolulu Community College’s mission is to:
• 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
The Welding Technology program’s mission is to serve the community as a learning-centered, open door program that provides technical training to meet the demands of the welding industry and the needs of the individual. An open-exit option allows the students to identify their career objectives and participate in program exploration.

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 general occupational cluster welding, soldering, and brazing workers are 45 and -6 respectively in Honolulu County…and 68 and -5 within the State of Hawai‘i.

There were 71 applicants to the WELD program in fall 2004, and 27 applicants to the program for the spring 2005 Semester. Overall, among those Fall and Spring applicants, 95 appear to have been accepted by the college and admitted to the program, while 3 appear to have cancelled applications, or been redirected etc. Among those accepted and admitted available data show that 51 actually enrolled in the semester initially applied for.

• Overall, our sense of the labor market and its relationship with the number and enrollment yield of applicants to our program is that these occupational outcome data is not accurately surveying all of the occupations in which welders can be employed. Since welding is a skill used by many occupations, it is a very popular course at HCC.
Internal Demand

Registration headcount of actively enrolled students in Fall 2004 and Spring 2005 show that the WELD Program Major carried 61 majors in the Fall and 66 majors in the Spring.

Available data show that of 61 and 66 students in the major for fall 2004 and Spring 2005, 43 were enrolled in Department classes in Fall—and 45 enrolled in Department classes in Spring.

Program major’s enrollment in department classes generated 401 student semester hours in Fall 2004 for an average of 9.33 semester hours, and 504 student semester hours in Spring 2005 for an average of 11.20. The resulting credit hours generated equate with 26.7 and 33.6 respective Fall 2004 and Spring 2005 Full Time Equivalent (FTE) enrollments.

There were also program non-majors enrolled in Department classes—48 and 43 respectively in Fall 2004 and Spring 2005—generating 128 and 98 student semester hours overall respectively.

We see from available data these students are primarily from AMT, CARP, DISL, and EIMT.

Enrollment by program majors and non-majors accounted for the 529 and 602 generated by the department subject code WELD in Fall 2004 and Spring 2005 respectively.

Overall, students under our program major enrolled for totals of 674 semester hours in Fall 2004, and 751 in Spring 2005. As mentioned above, they generated 401 and 504 SSH in Fall 2004 and Spring 2005 respectively within the department.

Then, augmenting coursework within the department, 46 Program Majors were enrolled in a total of 273 student semester hours of coursework in other departments in the Fall 2004, while 42 enrolled for 247 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 BLPR, ENG, ICS, MATH, and PHYS, with 19, 17, 8, 18, and 15 of our program majors enrolling for 57, 54, 24, 53, and 60 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 PHYS subject areas with 14, 11, 7, 24, and 8 students enrolled for 42, 33, 21, 68, and 32 student semester hours respectively.
• Our sense from comparing major’s average credit hours within department classes 9.33 (Fall) and 11.20 (Spring) and outside the department 5.9 (Fall) and 5.9 (Spring) is that these numbers follow the predicted trend since the program is structured so that there are between 8-12 credits of required WELD courses for each semester (more in the Spring than in the Fall). The 5.9 average credits outside the department are due to students completing their other program requirements such as English and Math.

**Internal Efficiencies**

**Scheduling and Instructional Faculty**

With 3.20 Full Time Equivalent (FTE) faculty in Fall 2004, and 2.67 in Spring 2005—the department offered 17 active class sections in Fall and 14 in Spring.

Average Class Size in Fall 2004 was 13.6, and the Class Fill Rate was 77.8%. For Spring 2005, Average Class Size was 18.3—with a Class Fill Rate of 80.6%.

The department utilized 1.9 and 1.0 Full Time Equivalent (FTE) BOR approved faculty in Fall 2004 and Spring 2005 respectively. There were an additional 1.3 Full Time Equivalent (FTE) Part Time Lecturers teaching in Fall 2004, and 1.7 for Spring 2005.

Overall In Fall 2004, Full Time BOR approved faculty delivered 8 (47.1%), taught 29 (60.4%) course credit hours, and were associated with generating 282 (53.3%) student credit hours within the department. In Fall 2004, Part Time Instructors delivered 9 (52.9%), taught 19 (39.6%) course credit hours, and were responsible for 247 (46.7%) generated student credit hours within the department.

In Spring 2005, Full Time BOR approved faculty delivered 5 (35.7%), taught 15 (37.5%) course credit hours, and were associated with generating 220 (36.5%) student credit hours within the department. Part Time Instructors in Spring 2005 delivered 9 (64.3%), taught 25 (62.5%) course credit hours, and were responsible for 382 (63.5%) 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 11.02 in Fall 2004, and 15.05 in Spring 2005. The ratio of program majors to FTE faculty was 19.1 and 24.8 respectively in Fall 2004 and Spring 2005.
Our sense of departmental operating efficiencies from considering these
data is that the department utilizes lecturers to lessen the burden of the
教学 load given the range of demand of WELD courses across the
various on-campus programs.

**Instructional Outcomes**

As reflected in available data for the 04/05 academic year, the department
awarded 5 certificates, and 1 degree.

Available data on student grade distribution within the department subject code
indicate that of all grades awarded in Fall 2004, 62.2% A, 24.9% B, 8.0% C, 0% D,
and 0% F. In Spring 2005, 52.1% A, 27.5% B, 10.2% C, 0% D, and 0% F.

Student Persistence within the subject code WELD from Fall 2004 to Spring 2005
was 42.9%; persistence of majors in the same period (whether enrolled in
department courses or not) was 74.6%.

Review of department major’s performance on the Perkins Core Indicators indicates…..

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1P1</th>
<th>1P2</th>
<th>2P1</th>
<th>3P1</th>
<th>3P2</th>
<th>4P1</th>
<th>4P2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2003-2004 Core Standard</strong></td>
<td>81.56%</td>
<td>91.53%</td>
<td>35.7%</td>
<td>70.52%</td>
<td>90.13%</td>
<td>15.94%</td>
<td>14.34%</td>
</tr>
<tr>
<td>WELD Actual Performance 03/04</td>
<td>80.95%</td>
<td>100%</td>
<td>46.15%</td>
<td>71.43%</td>
<td>100%</td>
<td>7.69%</td>
<td>6.25%</td>
</tr>
<tr>
<td><strong>2004-2005 Core Standard</strong></td>
<td>81.81%</td>
<td>90.00%</td>
<td>36.00%</td>
<td>71.00%</td>
<td>90.00%</td>
<td>14.18%</td>
<td>12.86%</td>
</tr>
<tr>
<td>WELD Actual Performance 04/05</td>
<td>61.11%</td>
<td>100%</td>
<td>26.32%</td>
<td>75.00%</td>
<td>77.78%</td>
<td>12.90%</td>
<td>21.43%</td>
</tr>
</tbody>
</table>

Given consideration of these data, our sense of instructional outcomes is
that without any comparison data, it is difficult to determine if our number
of degrees awarded or persistence rates are above, at, or below normal
trends.

**OVERALL**

Department demand for the 04/05 academic year was calculated at 3.3, which
translates to a healthy (above satisfactory) demand status.

Department efficiency for the 04/05 academic year was calculated at 79.2, which
translates to a healthy (above satisfactory) efficiency status.

Department Outcome for the 04/05 academic year was calculated at 60.0, which
translates to a healthy (above satisfactory) outcome status.
Given consideration of these demand, efficiency, and outcomes indicator data together, our sense of overall program health is that we are a very healthy program.

**Part II: Assessment Results for Program SLOs**

We plan on using student assessment surveys to measure our outcomes according to the course SLOs. Incorporate competencies from American Welding Society (AWS) Entry Level Welder program into our curriculum to better prepare students upon exiting program.

**Part III: Curriculum Revision**

We are currently starting to upgrade our curriculum to AWS Entry Level Welder standards so upon completion of program students can be registered with the AWS national registry to include their welding certification.

**Part IV: Analysis of Data**

Some strengths of our program are:

- We train workers for many different occupations and trades so our curriculum is very flexible.
- Our program works very closely with apprenticeship in keeping our curriculum updated to meet industries ever changing needs.

Program weaknesses:

- Faculty development opportunities have been limited to training provided by local welding vendors. Work with administration closely in providing travel opportunities to trade shows, conferences, and factory training.

In the future we plan on developing a student graduate survey after students leave to better track their work history. Also to survey employers on our former students working for them and how we can better prepare them for industry.

In the students last semester they are presently working on their weld certifications according to AWS D1 Code. Students who meet the criteria for acceptance to the code will be given certifications recognized by the AWS.

Our budget for supplies and materials are always a concern for our department. Most supplies we use are consumables like electrodes, gas, steel plates, in which can be used only once. It also effects our upgrading and maintenance of our equipment which is used by both credit and apprenticeship classes. Due to the increase in steel prices our consumables like electrodes, steel, and gases like acetylene has gone up 30% in which further cuts into our budget.
Part V: Action Plan

- Working on upgrading curriculum to meet AWS standards.
- Hiring of second full time instructor.
- Upgrading of welding equipment used in the shop.
- Developing surveys to measure our SLOs so we can improve on what we teach.
- Provide opportunities for faculty training

Part VI: Budget Implications

Due to rising costs of consumables used in this program, it is of utmost importance to keep that in mind when making budget allocation decisions for this program.