Department Information

Overview - Directions

<table>
<thead>
<tr>
<th>Program/Discipline</th>
<th>Date Submitted to Dean (Deadline by 4/27/18)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welding Technology</td>
<td></td>
</tr>
</tbody>
</table>

List of Contributors

<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Davis</td>
<td>Faculty</td>
</tr>
</tbody>
</table>

Signature of Area Dean/Director

Please type the name of the area Dean/Director and the date they reviewed the rest of the document. They may also use this space to provide optional comments. This question has not been answered yet.
Questions Regarding Degree and Certificate Programs

A.1 Core Outcome I - Completion

Observing the number of students who got Awards in your program(s) using the Program Award Tool, compared to the College historical trends what insights can you share?

Notes: Is your program an awards producer or a “feeder” program? If you have multiple degrees and/or certificates, please analyze and compare the trends among them.

The amount of students who receive Awards/Certificates in the Weld Technology Program continues to increase as opposed to historical trends. This may be attributed to offering each of the courses in a manner that accommodates the various types of students in addition to their unique schedules. The Weld Technology Program continues to schedule each of the courses both in the day and evening, which allows students to fit the courses into their lives even if they have other obligations.

Although this program does not technically classify as a feeder program, it does open up opportunities for careers in the welding industry such as Certified Welder, Certified Welding Inspector, and Weld Engineer.

How do you inform potential students about your program? How do students know which courses they should take for your program and in what sequence?

There are many different methods of informing potential students about the Weld Technology Program. Word of mouth from students who are currently taking or have already taken various weld courses has been the most effective method of informing future students about the program or individual courses within the program. Another approach includes Hartnell College Agricultural Business and Technology Institute Open House. This event has been used to have our local community learn more about the Weld Technology Program by observing the classroom/laboratory setting as well as being able to visualize student projects. Current students are utilized to help answer questions and provide information to those interested in the program. Over the past few years approximately 200 local high school students have entered and toured the Welding Department. Instructors explain the degree/certificate program requirements in addition to each of the courses offered. It is also emphasized that the program is an excellent venue for the tactile/kinesthetic learner.

Counselors and instructors have been able to meet with interested students where they can inform the potential student as to which courses they should take in addition to the appropriate sequence. This allows the student to understand the courses needed in order to complete their degree in an expeditious manner.
A.2 Core Outcome II - Time and Units to Completion

Observing the Time & Units data, what insights do you get from the data in general?
The length of time to an AS in Welding Technology is approximately 3.4 years with approximately 74.5 units needed to get to that point. Observations regarding this data include the length of time and the amount of units necessary in order to achieve this. The current AS degree sheet shows 60 total units. The students traditionally get through the welding courses in an efficient manner but may slow somewhat with the general education courses or have to build up to the desired course, which increases their time at Hartnell College.

Observing the Subject Analysis tool, and focusing on the percentage of capacity of your program, is the college offering enough sections or too many sections of the courses in your program?
The percentage capacity of the Weld Technology Program is currently at 97% and has been in the upper 80th percentile for the past few years. The college has been offering adequate sections of the program as it continues to meet the needs of the students. Most of the courses are typically filled to capacity and at times, more sections have been opened up to accommodate students who have been waitlisted.

Does the way the courses in your degree and certificate program are scheduled enable students to take courses when they need them, plan their lives around their classes from one term to the next, and complete their program on time? If it does not, are there any obvious fixes?
The Weld Technology Program schedules their courses in a manner that accommodates the student's lives and allows flexibility in order for them to have a successful outcome. Courses are offered in a day/evening fashion from one semester to the next. An example of this would be WLD 154 Advanced Welding. In the fall it might be offered in the daytime and then in the spring, it would be offered in the evening. Summer courses are offered which include WLD 150 Introduction to Arc Welding and WLD 151 Introduction to TIG Welding. These are introductory prerequisite courses necessary in order to advance and expedite the student's time at Hartnell College. Times are varied as well in order to accommodate the full time student as well as those who want to acquire more job-related skills and those who want to take a class for personal growth.

How do you work with underprepared students? How do you share the educational resources that are available on campus with all your students? Please give examples of when these resources have worked well and when they have not.
Resources to help the underprepared student have recently been addressed by revising the units for many of the welding courses. The increase of units reflects additional learning concepts as well as more time spent welding and learning about the various equipment and tools within the weld shop, which helps the underprepared student acquire a higher skill level.
The resources at the Alisal Campus are shared through various ways. Representatives come into the classroom and present their respective resource with our students. Some who have presented are Panther Learning Lab, Strong Workforce Development, Work Experience Co-op, and Dave Gorman. These representatives have offered help in Math, English, and work-related skills as well as other areas needed for the underprepared student. Students have made positive comments pertaining to these resources.

**A.3 Core Outcome III - Transfer**

Observing the number of transfer students from the transfer volume data, what insights do you get from the data in general?

1. In and Out State Private: Transfers were captured from a series of aggregated first-time freshmen cohorts (1993-94 to present) that completed at least 12 units while in the community college system at the time of transfer. A student records match with the National Student Clearinghouse (NSC) identifies the transfer baccalaureate granting institution.

2. CSU: Transfers are any students who have matriculated at a college/university after high school and prior to matriculating at a CSU. When these students left Hartnell is unknown. Almost all these students meet the requirements for the Upper Division Transfers where they have completed at least 60 semester or 90 quarter transferrable units or awarded a California Community College Associate in Arts for Transfer or Associate in Science for Transfer degree (AA-T or AS-T Degree) before applying transfer to the CSU.

3. UC: Transfers are any students who have matriculated at a college/university after high school and prior to matriculating at a UC. When these students left Hartnell is unknown. Students must complete 60 semester (90 quarter) units of UC-transferrable credit.

What interactions do you have with students about transfer options? Please give examples.

The AS Weld Technology Degree does not meet the requirements as a transferrable degree at this time. However, instructors meet with students who are interested in furthering their studies at Hartnell, which would help propel the student to attain a Weld Engineering Degree as well as other viable options at institutions of higher learning or other types of learning institutions. Counselors are also available to further discuss possible options for the student who is interested in furthering their education. Hartnell College hosts a College Transfer Night, which allows the student to explore various options regarding their education.

How are program learning outcomes aligned with the skills and knowledge students will need to succeed in transferring to baccalaureate degree programs?

The Program Learning Outcomes offer foundational support to the student's success while at Hartnell as well as prepare the student to further their education through various venues.

**A.4 Core Outcome IV - Employment**
Observing the Employment data, what insights do you get from the data in general?
The data is somewhat dated and doesn’t reflect current trends regarding the welding profession employment data. For 2014-2015 employment after two quarters after exit was 69% and slightly decreases after four quarters exit. The median change in earnings is 50% and 43% attained a living wage. Recently in 2018, the Welding Technology Program was recognized by the California Community Colleges Chancellor's Office with a Bronze Star for a 95% increase in earnings.

How and when do you inform students about prospective employment opportunities?
The Salinas Valley has a great need for people who acquire skills through the Weld Technology Program. This has remained steady historically. Industry representatives email, call or come to Hartnell's Welding Department in order to procure new hires continually. The Agriculture Industry is a mainstay for Salinas Valley. Concepts and skills taught through the Welding Technology Program align with what is needed in this industry. Instructors post available jobs on a job board in the Welding Department. Emails are also sent to qualified students regarding possible employment. This is done on a regular and an as needed basis according to the needs of the employer.

How are program learning outcomes aligned with the skills and knowledge students will need to succeed in their future employment?
Hartnell College's Welding Program outcomes align with necessary skills and knowledge the students will successfully utilize in future employment. The students learn welding and cutting processes, various weld processes in different positions and learn to interpret and analyze fabrication prints in order to fabricate projects. The skills and knowledge will enable the student to enter into many different types of career jobs/paths: engineer, aerospace, project management, sales, education, robotics, manufacturing, automotive, agriculture, construction, inspection, artistry, etc.

A.5 - Recommendations

Reflecting on your observations and analysis from A.1 through A.4, what recommendations do you have for your program?
In order to remain a leader in the welding technology education field, I recommend that Hartnell College invest in a robotic weld trainer that will let Hartnell College Welding Technology Department remain a leader now and in the future. The cost for a small robotic weld training unit is approximately $75,000/unit.

The Welding Technology Department currently has two welding simulator/Miller Live Arc machines that could be better utilized with an updated Shielded Metal Arc Welding (SMAW) attachment. This contemporary technology would also help us to remain current in the welding profession. The approximate cost for this attachment is $17,000 for two updated units.

In order to improve the learning experience for the student is to provide enhanced visualization in order for the student to better grasp what is being demonstrated by the instructor as that instructor performs various welding processes. I would like to propose that Hartnell College purchase weld cameras that as an instructor is welding, up to 25 students are able to visually see in real time and listen as the instructor demonstrates the necessary skill. This will help increase their skill level and be
able to more fully understand appropriate and expected outcomes as techniques are demonstrated by
the instructor. The approximate cost for these specialized cameras are $10,000/unit.

Reflecting on your observations and analysis from A.1 through A.4, what commendations do you have for your program?
As mentioned previously, the Welding Technology Program was recognized by the California Community Colleges Chancellor's Office with a Bronze Star for a 95% increase in earnings. This has allowed the student to remain in and support their local community.

The Weld Technology Program strives to create and have been successful in an inclusive environment where students feel valued and engaged. They have verbalized and demonstrated the willingness to ask questions, make mistakes, and help others in a collaborative learning environment.

Real world expectations in the welding industry as well as other industries from my own experiences e.g. Hartnell trained welder, owner of weld company, weld inspector, and owner of weld inspection, and finally Weld Educator have been utilized to teach students on what realistic requirements are in order for a more successful outcome. I have been able to listen to the local, regional, state, and national industry leaders in order to align and incorporate teaching concepts and skills needed that would help the student to obtain gainful employment.

Not every student that is awarded a degree/certificate or who takes welding courses will go into or stay in the welding profession. The main goal of the Welding Technology Program is to have students become active and engaged learners.

Questions About Previous Activities

B - Questions About Previous Activities

Evaluate the success of each completed activity in Section D.1 (Previously Scheduled Activities) from your Spring 2017 PPA. What measurable outcomes were achieved? Did the activities and subsequent dialog lead to significant change in student learning or program success?
1. Increase consumables budget. Budget has been successfully increased.
Because the budget has been increased and allows the student to weld more, students have been able to demonstrate a higher skill level due to more material being available to them to learn different weld/cutting processes. This in turn leads to a more successful student learning and program outcome. The budget increase was also in preparation for unit course changes.
2. Revision of current curriculum, incorporation of new curriculum. This has recently been achieved and is now being implemented for Fall 2018. Data for this activity will begin to be made available subsequent to that semester.

3. Purchase of student tables and chairs for lecture area. This has not been achieved. The funding has not been available for this activity. Purchasing these tables and chairs would allow the student to be in an environment that simulates a shop laboratory and help them visualize more efficiently what is being presented by the instructor.

4. Purchase a metal shear. This activity has been successful. Purchase of a metal shear was successful and has been utilized to accommodate student learning by providing modern and safe equipment that is used currently in the industry. It also demonstrates a program outcome as the student uses the shear to cut pieces in order to fabricate a weld project.

5. Faculty and staff training. This activity has had limited success. Scheduling training dates/times that don't conflict with teaching times; funding. This is an ongoing activity that will effectively contribute to the student's overall learning experience as well as the professional development of faculty and staff.