

IMPERIAL VALLEY COLLEGE  
PROGRAM REVIEW COMPLIANCE FORM AND REQUEST FOR RESOURCES

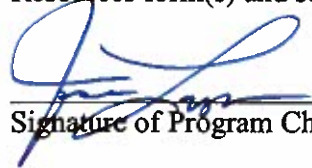
PROGRAM/DEPARTMENT Welding

ACADEMIC YR. 2011-12

Comprehensive Program Review       Annual Assessment       Request for Resources (check all that apply)

Please analyze your Program Review data as well as your SLO/SAO assessment findings in order to update to your Comprehensive Program Review report as needed. All changes to area needs and subsequent requests for additional resources must be reported at this time.

If your program is scheduled for a Comprehensive Program Review all forms are to be completed and submitted to the appropriate Dean/VP. If you are completing the annual Program Review Assessment only and have no changes to area needs, sign below and submit this form to appropriate Dean/VP. If your needs have changed as a result of your annual assessment of program review data, please complete the appropriate Request for Resources form(s) and submit to appropriate Dean/VP.

  
Signature of Program Chair/Director

3/8/2012  
Date

  
Signature of Area Dean

3/7/12  
Date

\_\_\_\_\_  
Signature of Area Vice President

\_\_\_\_\_  
Date

Please attach the following documents to this Program Review Compliance form if you are requesting additional resources:

- ✓ Comprehensive Program Review
- ✓ Data Analysis Form
- ✓ SLO/SAO Assessments
- ✓ Request for Resources Forms

Program Name: 

|         |
|---------|
| Welding |
|---------|

**A. PAST: Review of Program Performance, Objectives, and Outcomes for the Three Previous Academic Years: 2008-09, 2009-10, 2010-11**

1. List the objectives developed for this program during the last comprehensive program review.
  - Improve welding lab and facilities.
  - Promote program through linkages with local high schools through participation in career fairs, and Applied Science Expo.
  - Apply for program certification through the National Skills Standards Education.

These objectives were developed by the previous full-time faculty instructor. This individual resigned at the end of the 2009-2010 academic year which created a vacuum for the implementation of these objectives during the last year (2010-2011) of the three year cycle. The Full-time Welding Technology Faculty position was not filled for Fall of 2010 and continues vacant. The objective of improving the instructional facilities was initiated in December of 2010 by Adjunct Faculty and continues to date. The classroom was completely redesigned to make it more conducive for lecture sessions, the 16 Welding booths were equipped with (1) sheet metal ventilation hoods, (2) welding “test trees”, and (3) LED light fixtures. A cargo container was installed for Pipe Welding Equipment, and the Tool room was completely “gutted” and re-modeled to better accommodate a new “Inventory System” for the Welding Lab equipment and consumables. The ultimate “improvement of facilities” will be accomplished with the construction of the new CTE Building scheduled for opening in the Fall I 2013 semester and includes a new welding lab. The welding program participates yearly on both career day and Applied Science Expo. The direct linkages with the schools did not develop as planned. The certification of the Welding Technology Program under the American Welding Society SENSE Program (Schools Excelling through National Skills Standards Education) also did not materialized. These deficiencies can be attributed to the lack of full-time faculty to pursue these objectives to fruition.

2. Present program performance data in tabular form for the previous three years that demonstrates the program’s performance toward meeting the previous objectives. These include the following standard program performance metrics as well additional program specific metrics, if any. **NOTE: The tabular presentation of data for 2008-09, 2009-10, and 2010-11 includes data for Welding Technology courses prior to 2009-2010 when all the Welding Program curriculum were re-designed. Before 2009-2010 the program consisted of WELD 81, 130, 160, 220, 240, and 250. In the Fall of 2010 the program consisted of WELD 100, 101, 102, 103 104, and 105.**
  - a. For teaching programs this data should include at least the following: Enrollment at census, number of sections, fill rate, retention rate, success rate, and grade distribution for each course in the program, during each semester and session of the previous three academic years. In addition, the Full Time Equivalent Faculty (FTEF) and Full Time Equivalent Students (FTES) and the ratio of FTES per FTEF should be presented for the program for each semester and session.

b. For non teaching programs this data should include the following: TBD

c.

| Welding Program            |      |      |      |       |      |      |      |       |      |      |       |      |      |       |             |     |
|----------------------------|------|------|------|-------|------|------|------|-------|------|------|-------|------|------|-------|-------------|-----|
| Enrollment Count at Census |      |      |      |       |      |      |      |       |      |      |       |      |      |       |             |     |
| Course                     | Fall |      |      | Total | Spr. |      |      | Total | Sum. |      | Total | Win. |      | Total | Grand Total |     |
|                            | 2008 | 2009 | 2010 |       | 2009 | 2010 | 2011 |       | 2009 | 2010 |       | 2009 | 2010 |       |             |     |
| WELD081                    | 41   |      |      | 41    | 19   |      |      | 19    |      |      |       |      |      |       | 60          |     |
| WELD100                    |      | 45   | 34   | 79    |      | 50   | 39   | 89    |      |      |       |      |      |       | 168         |     |
| WELD101                    |      |      | 19   | 19    |      | 26   |      | 26    |      |      |       |      |      |       | 45          |     |
| WELD102                    |      | 26   | 16   | 42    |      | 30   | 19   | 49    |      |      |       |      |      |       | 91          |     |
| WELD103                    |      |      | 14   | 14    |      | 38   |      | 38    |      |      |       |      | 36   | 36    | 88          |     |
| WELD104                    |      | 42   |      | 42    |      |      | 24   | 24    |      |      |       |      |      |       | 66          |     |
| WELD105                    |      | 40   |      | 40    |      | 31   | 19   | 50    |      |      |       |      |      |       | 90          |     |
| WELD130                    | 40   |      |      | 40    | 39   |      |      | 39    |      |      |       |      |      |       | 79          |     |
| WELD160                    |      |      |      |       |      |      |      |       |      |      |       |      | 13   | 13    | 13          |     |
| WELD220                    | 19   |      |      | 19    | 27   |      |      | 27    |      |      |       |      |      |       | 46          |     |
| WELD240                    | 25   |      |      | 25    | 25   |      |      | 25    |      |      |       |      |      |       | 50          |     |
| WELD250                    |      |      |      |       |      |      |      |       |      |      |       |      | 24   | 24    | 24          |     |
| Total                      | 125  | 153  | 83   | 361   | 110  | 175  | 101  | 386   |      |      |       |      | 37   | 36    | 73          | 820 |

| Number of Sections |      |      |      |       |      |      |      |       |      |      |       |      |      |       |             |
|--------------------|------|------|------|-------|------|------|------|-------|------|------|-------|------|------|-------|-------------|
| Course             | Fall |      |      | Total | Spr. |      |      | Total | Sum. |      | Total | Win. |      | Total | Grand Total |
|                    | 2008 | 2009 | 2010 |       | 2009 | 2010 | 2011 |       | 2009 | 2010 |       | 2009 | 2010 |       |             |
| WELD081            | 2    |      |      | 2     | 1    |      |      | 1     |      |      |       |      |      |       | 3           |
| WELD100            |      | 2    | 2    | 4     |      | 2    | 2    | 4     |      |      |       |      |      |       | 8           |
| WELD101            |      |      | 1    | 1     |      | 1    |      | 1     |      |      |       |      |      |       | 2           |
| WELD102            |      | 1    | 1    | 2     |      | 1    | 1    | 2     |      |      |       |      |      |       | 4           |
| WELD103            |      |      | 1    | 1     |      | 1    |      | 1     |      |      |       |      | 1    | 1     | 3           |
| WELD104            |      | 1    |      | 1     |      |      | 1    | 1     |      |      |       |      |      |       | 2           |

|         |   |   |   |    |   |   |   |    |  |  |  |   |   |   |    |
|---------|---|---|---|----|---|---|---|----|--|--|--|---|---|---|----|
| WELD105 |   | 1 |   | 1  |   | 1 | 1 | 2  |  |  |  |   |   |   | 3  |
| WELD130 | 2 |   |   | 2  | 2 |   |   | 2  |  |  |  |   |   |   | 4  |
| WELD160 |   |   |   |    |   |   |   |    |  |  |  | 1 |   | 1 | 1  |
| WELD220 | 1 |   |   | 1  | 1 |   |   | 1  |  |  |  |   |   |   | 2  |
| WELD240 | 1 |   |   | 1  | 1 |   |   | 1  |  |  |  |   |   |   | 2  |
| WELD250 |   |   |   |    |   |   |   |    |  |  |  | 1 |   | 1 | 1  |
| Total   | 6 | 5 | 5 | 16 | 5 | 6 | 5 | 16 |  |  |  | 2 | 1 | 3 | 35 |

| Student Success Rate |       |       |       |           |       |       |       |           |      |      |           |      |       |           |         |
|----------------------|-------|-------|-------|-----------|-------|-------|-------|-----------|------|------|-----------|------|-------|-----------|---------|
| Course               | Fall  |       |       | Fall Avg. | Spr.  |       |       | Spr. Avg. | Sum. |      | Sum. Avg. | Win. |       | Win. Avg. | Average |
|                      | 2008  | 2009  | 2010  |           | 2009  | 2010  | 2011  |           | 2009 | 2010 |           | 2009 | 2010  |           |         |
| WELD081              | 73.2% |       |       | 73.2%     | 75.0% |       |       | 75.0%     |      |      |           |      |       |           | 74.1%   |
| WELD100              |       | 80.0% | 52.9% | 66.5%     |       | 72.0% | 48.7% | 60.4%     |      |      |           |      |       |           | 63.4%   |
| WELD101              |       |       | 84.2% | 84.2%     |       | 92.3% |       | 92.3%     |      |      |           |      |       |           | 88.3%   |
| WELD102              |       | 88.5% | 43.8% | 66.1%     |       | 86.7% | 84.2% | 85.4%     |      |      |           |      |       |           | 75.8%   |
| WELD103              |       |       | 71.4% | 71.4%     |       | 81.6% |       | 81.6%     |      |      |           |      | 91.7% | 91.7%     | 81.6%   |
| WELD104              |       | 85.7% |       | 85.7%     |       |       | 83.3% | 83.3%     |      |      |           |      |       |           | 84.5%   |
| WELD105              |       | 75.0% |       | 75.0%     |       | 77.4% | 84.2% | 80.8%     |      |      |           |      |       |           | 78.9%   |
| WELD130              | 80.0% |       |       | 80.0%     | 76.9% |       |       | 76.9%     |      |      |           |      |       |           | 78.5%   |
| WELD160              |       |       |       |           |       |       |       |           |      |      |           |      | 53.8% | 53.8%     | 53.8%   |
| WELD220              | 84.2% |       |       | 84.2%     | 92.6% |       |       | 92.6%     |      |      |           |      |       |           | 88.4%   |
| WELD240              | 76.0% |       |       | 76.0%     | 68.0% |       |       | 68.0%     |      |      |           |      |       |           | 72.0%   |
| WELD250              |       |       |       |           |       |       |       |           |      |      |           |      | 95.8% | 95.8%     | 95.8%   |
| >>>>                 | 78.3% | 82.3% | 63.1% | 74.6%     | 78.1% | 82.0% | 75.1% | 78.7%     |      |      |           |      | 74.8% | 91.7%     | 80.4%   |

| Student Retention Rate |       |       |       |           |       |       |       |           |      |      |           |      |      |           |         |
|------------------------|-------|-------|-------|-----------|-------|-------|-------|-----------|------|------|-----------|------|------|-----------|---------|
| Course                 | Fall  |       |       | Fall Avg. | Spr.  |       |       | Spr. Avg. | Sum. |      | Sum. Avg. | Win. |      | Win. Avg. | Average |
|                        | 2008  | 2009  | 2010  |           | 2009  | 2010  | 2011  |           | 2009 | 2010 |           | 2009 | 2010 |           |         |
| WELD081                | 95.1% |       |       | 95.1%     | 85.0% |       |       | 85.0%     |      |      |           |      |      |           | 90.1%   |
| WELD100                |       | 93.3% | 85.3% | 89.3%     |       | 84.0% | 82.1% | 83.0%     |      |      |           |      |      |           | 86.2%   |
| WELD101                |       |       | 94.7% | 94.7%     |       | 96.2% |       | 96.2%     |      |      |           |      |      |           | 95.4%   |

|         |       |       |       |       |       |       |        |        |  |  |  |  |       |       |       |       |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--|--|--|--|-------|-------|-------|-------|
| WELD102 |       | 88.5% | 81.3% | 84.9% |       | 93.3% | 94.7%  | 94.0%  |  |  |  |  |       |       |       | 89.4% |
| WELD103 |       |       | 78.6% | 78.6% |       | 89.5% |        | 89.5%  |  |  |  |  | 91.7% | 91.7% |       | 86.6% |
| WELD104 |       | 95.2% |       | 95.2% |       |       | 100.0% | 100.0% |  |  |  |  |       |       |       | 97.6% |
| WELD105 |       | 87.5% |       | 87.5% |       | 96.8% | 89.5%  | 93.1%  |  |  |  |  |       |       |       | 91.2% |
| WELD130 | 80.0% |       |       | 80.0% | 79.5% |       |        | 79.5%  |  |  |  |  |       |       |       | 79.7% |
| WELD160 |       |       |       |       |       |       |        |        |  |  |  |  | 76.9% | 76.9% |       | 76.9% |
| WELD220 | 84.2% |       |       | 84.2% | 92.6% |       |        | 92.6%  |  |  |  |  |       |       |       | 88.4% |
| WELD240 | 88.0% |       |       | 88.0% | 84.0% |       |        | 84.0%  |  |  |  |  |       |       |       | 86.0% |
| WELD250 |       |       |       |       |       |       |        |        |  |  |  |  | 95.8% | 95.8% |       | 95.8% |
| >>>>    | 86.8% | 91.1% | 85.0% | 87.6% | 85.3% | 91.9% | 91.6%  | 89.8%  |  |  |  |  | 86.4% | 91.7% | 88.1% | 88.7% |

| Grade Distribution |      |      |    |    |    |   |   |    |   |   |       |   |       |              |                |  |
|--------------------|------|------|----|----|----|---|---|----|---|---|-------|---|-------|--------------|----------------|--|
| Course             | Year | FWSS | A  | B  | C  | D | F | CR | P | I | Other | W | Total | Success Rate | Retention Rate |  |
| WELD081            | 2008 | Fall | 9  | 13 | 8  | 7 | 2 |    |   |   | 0     | 2 | 41    | 73.2%        | 95.1%          |  |
| WELD081            | 2009 | Spr. | 8  | 4  | 3  | 2 |   |    |   |   | 0     | 3 | 20    | 75.0%        | 85.0%          |  |
| WELD100            | 2009 | Fall | 7  | 21 | 8  | 1 | 5 |    |   |   | 0     | 3 | 45    | 80.0%        | 93.3%          |  |
| WELD100            | 2010 | Spr. | 1  | 3  | 32 | 6 |   |    |   |   | 0     | 8 | 50    | 72.0%        | 84.0%          |  |
| WELD100            | 2010 | Fall | 7  | 5  | 6  | 4 | 7 |    |   |   | 0     | 5 | 34    | 52.9%        | 85.3%          |  |
| WELD100            | 2011 | Spr. | 6  | 11 | 2  | 4 | 9 |    |   |   | 0     | 7 | 39    | 48.7%        | 82.1%          |  |
| WELD101            | 2010 | Spr. | 2  | 7  | 15 | 1 |   |    |   |   | 0     | 1 | 26    | 92.3%        | 96.2%          |  |
| WELD101            | 2010 | Fall |    | 12 | 4  | 2 |   |    |   |   | 0     | 1 | 19    | 84.2%        | 94.7%          |  |
| WELD102            | 2009 | Fall | 2  | 17 | 4  |   |   |    |   |   | 0     | 3 | 26    | 88.5%        | 88.5%          |  |
| WELD102            | 2010 | Spr. |    | 8  | 18 | 2 |   |    |   |   | 0     | 2 | 30    | 86.7%        | 93.3%          |  |
| WELD102            | 2010 | Fall | 1  | 4  | 2  | 3 | 3 |    |   |   | 0     | 3 | 16    | 43.8%        | 81.3%          |  |
| WELD102            | 2011 | Spr. | 1  | 6  | 9  |   | 2 |    |   |   | 0     | 1 | 19    | 84.2%        | 94.7%          |  |
| WELD103            | 2010 | Win. | 1  | 15 | 17 |   |   |    |   |   | 0     | 3 | 36    | 91.7%        | 91.7%          |  |
| WELD103            | 2010 | Spr. |    | 5  | 26 | 3 |   |    |   |   | 0     | 4 | 38    | 81.6%        | 89.5%          |  |
| WELD103            | 2010 | Fall | 2  | 6  | 2  |   | 1 |    |   |   | 0     | 3 | 14    | 71.4%        | 78.6%          |  |
| WELD104            | 2009 | Fall | 3  | 17 | 16 | 4 |   |    |   |   | 0     | 2 | 42    | 85.7%        | 95.2%          |  |
| WELD104            | 2011 | Spr. | 10 | 10 |    |   | 4 |    |   |   | 0     |   | 24    | 83.3%        | 100.0%         |  |
| WELD105            | 2009 | Fall | 4  | 16 | 10 | 5 |   |    |   |   | 0     | 5 | 40    | 75.0%        | 87.5%          |  |
| WELD105            | 2010 | Spr. |    | 10 | 14 | 6 |   |    |   |   | 0     | 1 | 31    | 77.4%        | 96.8%          |  |
| WELD105            | 2011 | Spr. | 9  | 6  | 1  |   | 1 |    |   |   | 0     | 2 | 19    | 84.2%        | 89.5%          |  |

|         |      |      |    |    |   |   |   |  |  |   |   |    |       |       |
|---------|------|------|----|----|---|---|---|--|--|---|---|----|-------|-------|
| WELD130 | 2008 | Fall | 14 | 13 | 5 |   |   |  |  | 0 | 8 | 40 | 80.0% | 80.0% |
| WELD130 | 2009 | Spr. | 5  | 17 | 8 | 1 |   |  |  | 0 | 8 | 39 | 76.9% | 79.5% |
| WELD160 | 2009 | Win. | 4  | 3  |   |   | 3 |  |  | 0 | 3 | 13 | 53.8% | 76.9% |
| WELD220 | 2008 | Fall | 9  | 6  | 1 |   |   |  |  | 0 | 3 | 19 | 84.2% | 84.2% |
| WELD220 | 2009 | Spr. |    | 17 | 8 |   |   |  |  | 0 | 2 | 27 | 92.6% | 92.6% |
| WELD240 | 2008 | Fall | 9  | 8  | 2 | 3 |   |  |  | 0 | 3 | 25 | 76.0% | 88.0% |
| WELD240 | 2009 | Spr. |    | 12 | 5 | 4 |   |  |  | 0 | 4 | 25 | 68.0% | 84.0% |
| WELD250 | 2009 | Win. | 12 | 5  | 6 |   |   |  |  | 0 | 1 | 24 | 95.8% | 95.8% |

| Full Time Equivalent Student (FTEs) |      |      |      |       |      |      |      |       |      |      |       |      |      |       |             |
|-------------------------------------|------|------|------|-------|------|------|------|-------|------|------|-------|------|------|-------|-------------|
| Course                              | Fall |      |      | Total | Spr. |      |      | Total | Sum. |      | Total | Win. |      | Total | Grand Total |
|                                     | 2008 | 2009 | 2010 |       | 2009 | 2010 | 2011 |       | 2009 | 2010 |       | 2009 | 2010 |       |             |
| WELD 081                            | 2.8  |      |      | 2.8   | 2.7  |      |      | 2.7   |      |      |       |      |      |       | 5.5         |
| WELD 100                            |      | 15.2 | 11.9 | 27.1  |      | 17.1 | 12.7 | 29.7  |      |      |       |      |      |       | 56.8        |
| WELD 101                            |      |      | 3.5  | 3.5   |      | 4.8  |      | 4.8   |      |      |       |      |      |       | 8.2         |
| WELD 102                            |      | 8.6  | 5.0  | 13.5  |      | 10.2 | 6.5  | 16.7  |      |      |       |      |      |       | 30.3        |
| WELD 103                            |      |      | 3.4  | 3.4   |      | 6.9  |      | 6.9   |      |      |       |      | 6.3  | 6.3   | 16.7        |
| WELD 104                            |      | 7.7  |      | 7.7   |      |      | 4.4  | 4.4   |      |      |       |      |      |       | 12.1        |
| WELD 105                            |      | 8.0  |      | 8.0   |      | 6.4  | 3.5  | 9.9   |      |      |       |      |      |       | 18.0        |
| WELD 130                            | 13.5 |      |      | 13.5  | 13.4 |      |      | 13.4  |      |      |       |      |      |       | 26.8        |
| WELD 160                            |      |      |      |       |      |      |      |       |      |      |       | 2.4  |      | 2.4   | 2.4         |
| WELD 220                            | 6.3  |      |      | 6.3   | 9.2  |      |      | 9.2   |      |      |       |      |      |       | 15.5        |
| WELD 240                            | 7.8  |      |      | 7.8   | 8.4  |      |      | 8.4   |      |      |       |      |      |       | 16.2        |
| WELD 250                            |      |      |      |       |      |      |      |       |      |      |       | 4.2  |      | 4.2   | 4.2         |
| >>>>                                | 30.3 | 39.5 | 23.8 | 93.5  | 33.7 | 45.4 | 27.1 | 106.1 |      |      |       | 6.6  | 6.3  | 12.9  | 212.6       |

| Full Time Equivalent Faculty (FTEf) |      |      |      |       |      |      |      |       |      |      |       |      |      |       |             |
|-------------------------------------|------|------|------|-------|------|------|------|-------|------|------|-------|------|------|-------|-------------|
| Course                              | Fall |      |      | Total | Spr. |      |      | Total | Sum. |      | Total | Win. |      | Total | Grand Total |
|                                     | 2008 | 2009 | 2010 |       | 2009 | 2010 | 2011 |       | 2009 | 2010 |       | 2009 | 2010 |       |             |
| WELD 081                            | 0.3  |      |      | 0.3   | 0.1  |      |      | 0.1   |      |      |       |      |      |       | 0.4         |
| WELD 100                            |      | 1.2  | 1.2  | 2.4   |      | 1.2  | 1.2  | 2.4   |      |      |       |      |      |       | 4.8         |
| WELD 101                            |      |      | 0.4  | 0.4   |      | 0.4  |      | 0.4   |      |      |       |      |      |       | 0.8         |

|          |     |     |     |     |     |     |     |     |  |  |     |     |     |  |      |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|--|--|-----|-----|-----|--|------|
| WELD 102 |     | 0.6 | 0.6 | 1.2 |     | 0.6 | 0.6 | 1.2 |  |  |     |     |     |  | 2.4  |
| WELD 103 |     |     | 0.4 | 0.4 |     | 0.4 |     | 0.4 |  |  |     | 0.4 | 0.4 |  | 1.2  |
| WELD 104 |     | 0.4 |     | 0.4 |     |     | 0.4 | 0.4 |  |  |     |     |     |  | 0.8  |
| WELD 105 |     | 0.4 |     | 0.4 |     | 0.4 | 0.4 | 0.8 |  |  |     |     |     |  | 1.2  |
| WELD 130 | 1.2 |     |     | 1.2 | 1.2 |     |     | 1.2 |  |  |     |     |     |  | 2.4  |
| WELD 160 |     |     |     |     |     |     |     |     |  |  | 0.3 |     | 0.3 |  | 0.3  |
| WELD 220 | 0.6 |     |     | 0.6 | 0.6 |     |     | 0.6 |  |  |     |     |     |  | 1.2  |
| WELD 240 | 0.6 |     |     | 0.6 | 0.6 |     |     | 0.6 |  |  |     |     |     |  | 1.2  |
| WELD 250 |     |     |     |     |     |     |     |     |  |  | 0.3 |     | 0.3 |  | 0.3  |
| >>>>     | 2.7 | 2.6 | 2.6 | 7.9 | 2.5 | 3.0 | 2.6 | 8.1 |  |  | 0.7 | 0.4 | 1.1 |  | 17.1 |

| FTEs per FTEf |      |      |      |          |      |      |      |          |      |      |          |      |      |          |      |
|---------------|------|------|------|----------|------|------|------|----------|------|------|----------|------|------|----------|------|
| Course        | Fall |      |      | Fall Avg | Spr. |      |      | Spr. Avg | Sum. |      | Sum. Avg | Win. |      | Win. Avg | Avg. |
|               | 2008 | 2009 | 2010 |          | 2009 | 2010 | 2011 |          | 2009 | 2010 |          | 2009 | 2010 |          |      |
| WELD 081      | 10.5 |      |      | 10.5     | 20.2 |      |      | 20.2     |      |      |          |      |      |          | 13.7 |
| WELD 100      |      | 12.7 | 9.9  | 11.3     |      | 14.2 | 10.5 | 12.4     |      |      |          |      |      |          | 11.8 |
| WELD 101      |      |      | 8.7  | 8.7      |      | 11.9 |      | 11.9     |      |      |          |      |      |          | 10.3 |
| WELD 102      |      | 14.3 | 8.3  | 11.3     |      | 17.0 | 10.9 | 13.9     |      |      |          |      |      |          | 12.6 |
| WELD 103      |      |      | 8.5  | 8.5      |      | 17.4 |      | 17.4     |      |      |          |      | 15.8 | 15.8     | 13.9 |
| WELD 104      |      | 19.2 |      | 19.2     |      |      | 11.0 | 11.0     |      |      |          |      |      |          | 15.1 |
| WELD 105      |      | 20.1 |      | 20.1     |      | 16.1 | 8.7  | 12.4     |      |      |          |      |      |          | 15.0 |
| WELD 130      | 11.2 |      |      | 11.2     | 11.1 |      |      | 11.1     |      |      |          |      |      |          | 11.2 |
| WELD 160      |      |      |      |          |      |      |      |          |      |      |          | 7.2  |      | 7.2      | 7.2  |
| WELD 220      | 10.4 |      |      | 10.4     | 15.4 |      |      | 15.4     |      |      |          |      |      |          | 12.9 |
| WELD 240      | 13.0 |      |      | 13.0     | 14.0 |      |      | 14.0     |      |      |          |      |      |          | 13.5 |
| WELD 250      |      |      |      |          |      |      |      |          |      |      |          | 12.6 |      | 12.6     | 12.6 |
| >>>>          | 11.4 | 15.2 | 9.1  | 11.9     | 13.3 | 15.1 | 10.4 | 13.1     |      |      |          | 9.9  | 15.8 | 12.1     | 12.5 |

3. Present student learning or service area outcomes data that demonstrate the program's continuous educational and/or service quality improvement. Include the following standard information and metrics as well as additional program specific metrics, if any. List the program level outcomes, goals or objectives and show how these support the Institutional Student Learning Outcomes. Identify the method(s) of assessment used for each of the program level outcomes. Provide a summary of the outcome data for the program, including course and program level data as appropriate.

| Course   | SLO's   | Cycle Assessment Completed | ISLO Linked To  |
|----------|---|----------------------------|---|
| WELD 100 | <ol style="list-style-type: none"> <li>1. Explain the legal responsibilities of Employers, Supervisors, and Welding Personnel with regard to "Right to Know" regulations.</li> <li>2. Explain the hierarchy of "Hazard Control" in a welding environment to include; Hazard Identification, Hazard Elimination, Administration Controls, Hazard Engineering Controls, and Applicable Personal Protective Equipment (PPE).</li> <li>3. Perform Oxy-Acetylene welding and cutting procedures safely to include; safe set-up of OFW and OFC equipment.</li> <li>4. Complete a written report based on information collected from a Technical Literature Review of "Welding Technology and Its Many Uses in Our World Economy."</li> <li>5. Define the physical and mechanical properties of steel and how these are influenced by Shield Metal Arc Welding.</li> </ol> | Identified                 | <ol style="list-style-type: none"> <li>1. ILO1, ILO3</li> <li>2. ILO1, ILO2, ILO3</li> <li>3. ILO1, ILO2, ILO3</li> <li>4. ILO1, ILO4, ILO5</li> <li>5. ILO1, ILO2</li> </ol> |
| WELD 101 | <ol style="list-style-type: none"> <li>1. List at least five (5) different articles of Personal Protective Equipment and explain what welding environment hazard is being addressed by each article of PPE.</li> <li>2. Demonstrate proper interpretation of a standard Material Safety Sheet (MSDS).</li> <li>3. Describe and Demonstrate the proper set-up and use of the major components and equipment used in Gas Tungsten Arc Welding (GTAW)</li> <li>4. Safely perform acceptable welds on ferrous alloys applying the weld parameters according to the given WPS.</li> <li>5. Separate acceptable and unacceptable weld samples in accordance with predetermined specifications, standards and codes.</li> </ol>  | Identified                 | <ol style="list-style-type: none"> <li>1. ILO1, ILO2</li> <li>2. ILO1, ILO2</li> <li>3. ILO1, ILO3</li> <li>4. ILO1, ILO2, ILO3</li> <li>5. ILO1, ILO2</li> </ol>             |
| WELD 102 | <ol style="list-style-type: none"> <li>1. Discuss and explain the regulations governing welding related hazards such as; Industrial noise, electrical exposure, and radiation exposure.</li> <li>2. Set up and operate equipment and components used in Shielded Metal Arc Welding (SMAW) using a 3/32 Diameter, E-6010 filler in the 1G position.</li> <li>3. Explain what parameters are influenced by the application of AWS D1.1 Specifications with regard to SMAW in Alaska in the Winter as compared to Brazil.</li> <li>4. Identify and apply the correct type, size, current settings, and technique for a given WPS.</li> <li>5. Demonstrate applicable critical thinking skills to resolve problems pertaining to lay-out and welding per D1.1 specifications.</li> </ol>  | Identified                 | <ol style="list-style-type: none"> <li>1. ILO1, ILO2, ILO3</li> <li>2. ILO1, ILO2</li> <li>3. ILO1, ILO2, ILO5</li> <li>4. ILO1, ILO2</li> <li>5. ILO1, ILO2, ILO4</li> </ol> |
| WELD 103 | <ol style="list-style-type: none"> <li>1. Explain a set of three existing hazards in the SMAW Pipe Welding environment and identify applicable standards.</li> <li>2. Describe and demonstrate preparation of welded pipe sample for a "Bend Test" method of Destructive Testing used to determine accept/reject status for SMAW Pipe weld samples.</li> <li>3. Safely perform pipe joint preparation by cutting, grinding, and layout per the parameters of the given WPS.</li> <li>4. Safely perform appropriate SMAW welding procedures for a 5G Open Root weld on 6 inch pipe using E-6010 per the parameters of the given WPS.</li> <li>5. Explain three welding details and procedures that are common to pipe welding with regard to AWS, ASME, and API Standards.</li> </ol>  | Identified                 | <ol style="list-style-type: none"> <li>1. ILO1, ILO4</li> <li>2. ILO1, ILO2</li> <li>3. ILO1, ILO2, ILO3</li> <li>4. ILO1, ILO2, ILO3</li> <li>5. ILO1, ILO2, ILO4</li> </ol> |
| WELD 104 | <ol style="list-style-type: none"> <li>1. Describe four major hazards related to GTAW on Pipe and potential abatement of these hazards as they pertain to shop safety, industrial safety, and personal safety.</li> <li>2. Explain and safely demonstrate multiple beading and application in GTAW for</li> </ol>   | Identified                 | <ol style="list-style-type: none"> <li>1. ILO1, ILO2, ILO3</li> <li>2. ILO1, ILO2, ILO3</li> <li>3. ILO1, ILO2, ILO3</li> <li>4. ILO1, ILO2, ILO3</li> </ol>                  |

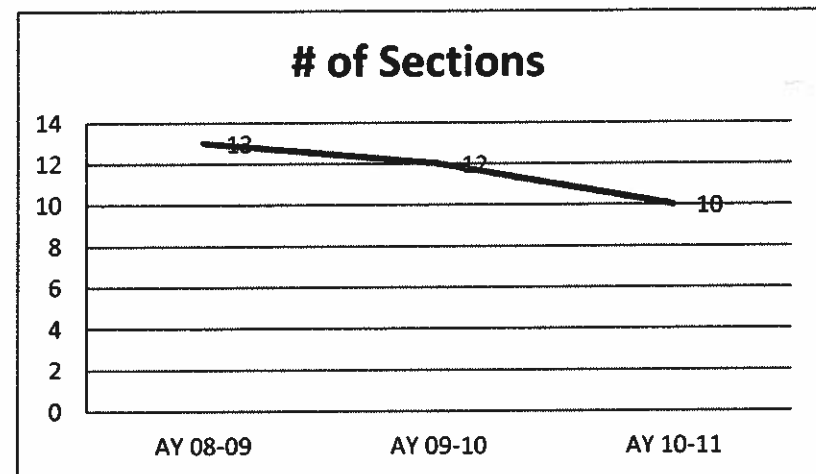
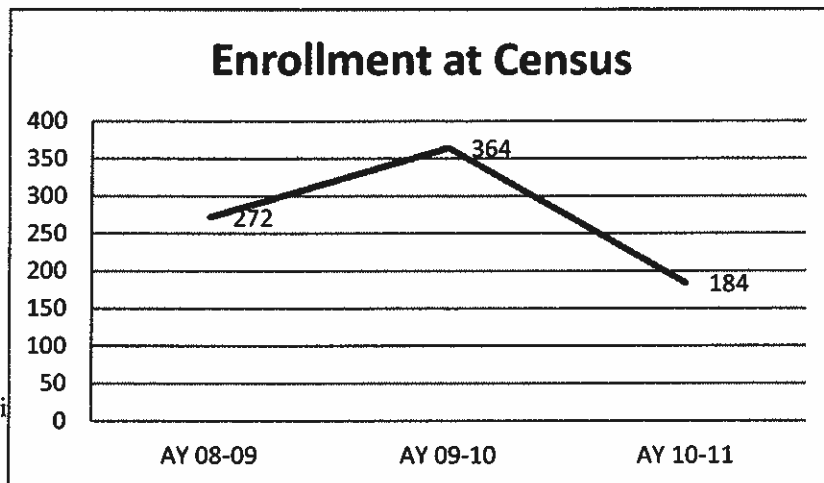


|          |  |            |   |
|----------|--|------------|---|
|          | welding on pipe and tube.<br>3. Select the proper welding filler materials for welding on various alloys as specified on the given WPS.<br>4. Identify, recognize, and safely apply the essential variables associated with pipe and tube welding using the open root technique per the given WPS.<br>5. Reference the appropriate Welding Codes (AWS, API, and/or ASME) to determine the acceptance criteria for the welding of 6 inch schedule 80 carbon steel pipe in the 5G position and safely complete one join per given WPS.   |            | 5. ILO1, ILO2, ILO3, ILO4   |
| WELD 105 | 1. Discuss three welding hazards specifically associated with the FCAW process and list potential abatement action for these hazards.<br>2. List the two most common shielding methods used in FCAW and define the advantages and disadvantages of the various shielding methods.<br>3. Set up the equipment used in FCAW, set up all parameters associated with welding ¼ inch steel plate, and safely demonstrate the adjustment of essential variables per the given WPS.<br>4. Fabricate various assigned weld joints safely demonstrating and using the forehand and backhand welding techniques per the given WPS.<br>5. Explain the relationship between a Welding Code, a Welding Standard, a Procedure Qualification Record (PQR), and a Welding Procedure Specification (WPS). | Identified | 1. ILO1, ILO2, ILO3<br>2. ILO1, ILO2<br>3. ILO1, ILO2, ILO3<br>4. ILO1, ILO2, ILO3<br>5. ILO1, ILO4 |

The SLOs for the Welding program were completed in the Fall 2011 semester. The delay in development was created by the lack of full-time faculty. The SLOs have not gone through an assessment cycle and the tools are being developed to train adjunct faculty in its implementation, measurement, and assessment.

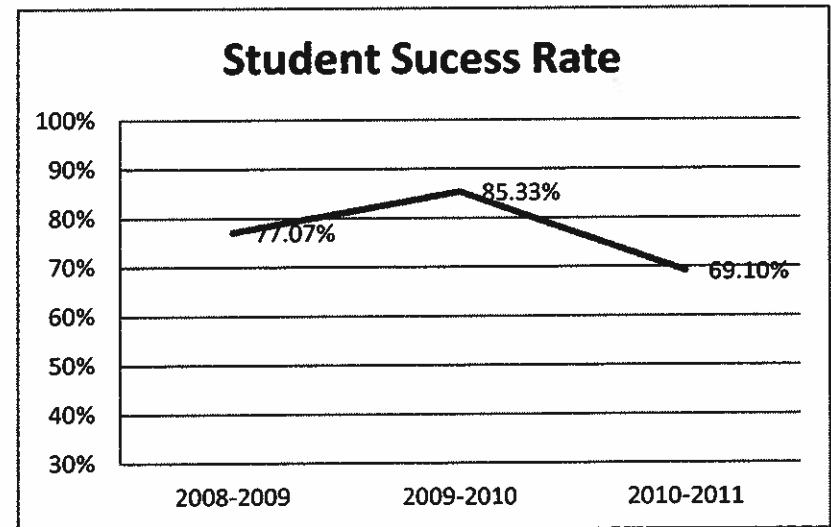
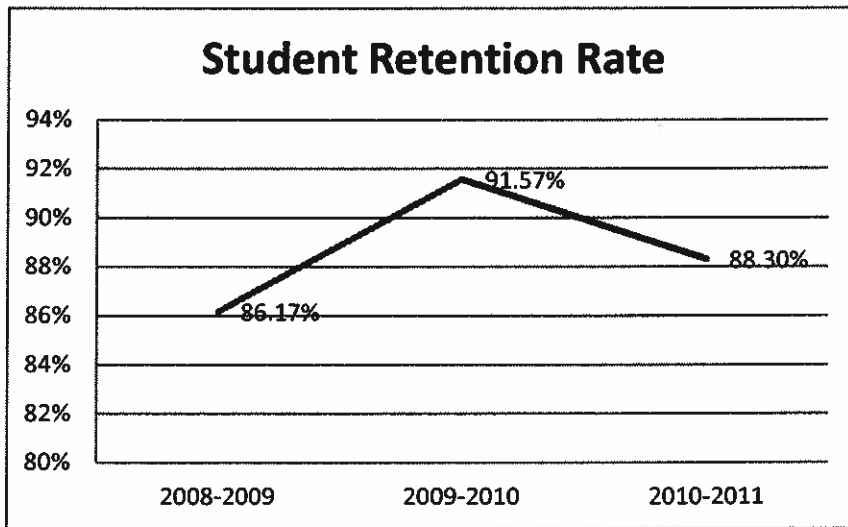
- Analyze the data presented visually (graphs, diagrams, etc.) and verbally (text) as appropriate, present any trends, anomalies, and conclusions. Explain the program's success or failure in meeting the objectives presented above in item one. Explain the ways that the program utilized the student learning or service area outcome data presented in item three to improve the program (changes to curriculum, instructional methodology, support services, etc.)

### Enrollment & Access



The above graphs reflect a decline in enrollment and sections from the 2009-2010 to 2010-2011 academic year. The “spike” in enrollment for 09-10 , in part, can be attributed to the 200% over-enrollment in two classes (one section of WELD 104 this 42 students and one section of WELD 105 with 40 students). The correction of this anomaly reflects as a decline in 10-11. Also, the decline in enrollment can be attributed to a reduction in section from 13 to 10 in academic year 2010-2011 due to overall institutional course offering reductions from the State which forced an overall reduction of courses that were pro-rated across all departments. Another factor for the reduction was the elimination of winter session which reduced enrollment and sections. Although the program has seen a steady decline in FTEs and sections, the program continues to operate at close to 100% fill rate.

**Retention & Success**



The above graphs reflect a slight decrease in student retention from 2009-2010 to 2010-2011 and a more drastic decrease in success rate. The reduction in the success rate can, *in part*, be attributed to the new adjunct faculty that are teaching the courses more in line with the American Welding Society (AWS) national standards which are more stringent and structured. The adherence to *National Standards* and expectations for students to meet these standards *has* some students; however, successful students are better prepared. As these changes are adopted by the faculty and students, we can expect the success rate to increase.

**B. PRESENT: Snapshot of the State of the Program in the Current Semester: Fall 2011**

1. Give a verbal description of the program as it exists at the present time. Include information on current staffing levels, current student enrollments, student learning or service are outcome implementation, number of majors, and/or other data as appropriate.

There are two major problems with the welding program presently. First, the full-time welding instructor that resigned at the end of the 2009-10 academic year has not been replaced. The program has operated and continues to operate with four (4) adjunct instructors. A retired CTE Dean/ Professor of Welding Technology has taken the volunteer position of lead Adjunct Faculty which has allowed the program to function with some level of continuity. Funding reductions across the State and District have not allowed the college to hire a new full-time replacement faculty member. The advantage of full-time faculty is that they can dedicate the time, resources, and interest in maintain programs at optimal levels including maintain up-to-date technology, nurture relationships with local industry and high schools, and update program and curricula as necessary. The college is currently prioritizing faculty positions and it appears that the welding position will be a high priority for the college.

Secondly, the facility currently housing the welding lab is small and inadequate to keep up with changes in technology and innovation. This situation is in the process of being mitigated. A new State-of-the-Art welding lab is planned in the new CTE building with an expected opening in Fall 2013. In designing this new lab, input and ideas were solicited from the faculty and industry representatives. The new lab will also increase capacity for students and more classes and FTEF generation is expected.

#### Student Enrollment

The existing lab currently accommodates twenty students. Due to safety regulations and equipment availability, this number cannot be exceeded. In reviewing enrollment data, the program averages about 20 students per class which demonstrates a high level of student interest capped only by physical limitations.

The program currently only has the Welding Technology Major and the Welding Technology certificate of completion. With the new welding lab, the program could be expanded to include specializations in pipe welding, structural welding, and fabrication and maintenance. The lack of full-time faculty support also had an impact on the development and implementation of SLOs and PLOs. Although all course SLOs are completed. The program will need to work on assessment cycles and data collection to improve student success.

2. Verbally describe any outside factors that are currently affecting the program. (For example: changes in job market, changing technologies, changes in transfer destinations, etc.)

The most significant external factor is the economic conditions of Imperial Valley which has the distinction of having the highest unemployment rate in the nation (28%-30%). These conditions limits opportunities for employment and students may be forced to seek workforce entry opportunities outside of Imperial County. In the welding industry, however, the upcoming renewable energy projects will open opportunities for our students.

Another major challenge is the continuous decline in funding experienced in the institution which trickles down to the welding department. Instructional supplies budgets are being reduced which can impact the quality of instruction. This program is allocated Perkins funds which alleviate the deficiency but even Perkins funds are being reduced by the Federal government. It is anticipated that Perkins will be reduced between 10%-15% next year. Instructors will need to become more austere with supplies and equipment while maintaining quality instruction.

3. List any significant issues or problems that the program is immediately facing.

The most significant issue currently is the lack of full-time faculty. The position has been prioritized by the Academic Senate but funds have not been appropriated. The program is run by four adjuncts, one of which has taken a voluntary role as lead faculty. The advantage of full-time

faculty is that they have the time, responsibility, and professional interest to ensure that curriculum, facilities, and equipment are updated to maintain industry standards. A full-time faculty member would also maintain those critical relationships with the High School feeder programs and the Universities that accept our Transfer Students. Full-Time faculty also maintain the Program Advisory Committee and partnerships with industry to not only review the program but also hire our students.

Although the Welding Lab facility is currently not fulfilling the needs of students, IVC is in the process of building a new State-of-the-Art welding lab is a as part of the new CTE building which is schedule to open in Fall 2013.

**C. FUTURE: Program Objectives for the Next Three Academic Years: 2011-12, 2012-13, 2013-14**

1. Identify the program objectives for the next three academic years, making sure these objectives are consistent with the college's Educational Master Plan goals. Include how accomplishment is to be identified or measured and identify the planned completion dates. If any objectives are anticipated to extend beyond this three-year period, identify how much is to be accomplished by the end of this review period and performance measures.

| <b>Objective</b>                  | <b>Completion Indicators</b> | <b>Completion Date</b> |
|-----------------------------------|------------------------------|------------------------|
| Hire full-time instructor         | Human Resources              | Fall 2012              |
| Improve Instructional Facility    | New Building                 | Fall 2013              |
| Expand Major by 3 specializations | Chancellor Office Approval   | Fall 2013              |
| Expand Advisory Committee         | Agendas & Minutes            | Spring 2013            |
| Become AWS/SENSE Certified        | Certification                | Spring 2014            |
| Implement and Assess SLO & PLO    | Assessment Data              | Fall 2012              |

2. Identify how student learning or service area outcomes will be expanded and fully implemented into the program. Include a progress timeline for implementation and program improvement.

Another issue is the continuous assessment and monitor of SLOs and PLOs. Full-time faculty review 10 hours per week in their contract to work on SLOs. Although the welding courses all have SLOs in the course outline of record, the continuous assessment and cycles will be more challenging without full-time faculty. To accomplish improvements in these areas, funds will need to be set-aside to compensate adjunct faculty to fully implement SLOs.

3. Identify any resources needed to accomplish these objectives. Identify any obstacles toward accomplishment and the plan to surmount these obstacles.

The fiscal crisis in California is having a significant effect on the effectiveness and quality of the program. The issues identified earlier of the lack of full-time faculty and instructional equipment and supplies will require an injection of resources by the college. However, all college departments are competing for limited resources. The new CTE building which include a new welding lab is funded out of Measure J bonds.

4. Identify any outside factors that might influence your program during the next three years.

As the budget crisis continues the college will continue to be impacted. Declining enrollment is expected which will affect FTES and revenues. The local economic conditions of Imperial Valley expected improve with renewable energy being one of the primary drivers.