

W E L D I N G

PROGRAM REVIEW 08-09

ONE COLLEGE WAY
BLYTHE, CA 92225

EXECUTIVE SUMMARY

WELDING

The Welding Technology program is very successful in meeting the needs of students and local businesses. The expansion plans of the program are noteworthy. The faculty has already taken effective steps to increase access to the program by working technicians. Furthermore, the faculty is looking at an Associate's Degree program and expanding to include courses and a certificate in Metal Fabrication.

Careful attention must continue to be paid to the cost of the raw materials for the program and opportunities that may exist to mitigate those costs.

PART 1: MISSION

State the purpose of program.

The purpose of the Welding Technology program is to provide students with the necessary skills to work in an ever-expanding field. To this end, the Welding program provides students with the basic, entry-level skills, professional development opportunities for working technicians, and certification options.

Certificate in Welding Technology

The certificate in Welding Technology is an 18 unit (minimum) course of study designed to prepare students to enter the workforce:

“The program of studies in Welding Technology is designed to provide comprehensive occupational training in welding methods currently used in the welding fabrication industry. Students will be taught the manipulative skills and the technical knowledge required to operate oxyacetylene, shielded electric arc, MIG, TIG, and semiautomatic flame cutting.

They will be prepared for certification as required by employment in the welding industry.”
(Catalog, Certificate in Welding Technology worksheet)

In addition to the desirability of the certificate programs, individual WEL courses provide students with practical skills.

Describe how the program supports the overall mission of the College as adopted by the Board of Trustees.

The program supports the overall mission of the Palo Verde College by providing high quality programming in a particular vocational area. WEL courses provide an opportunity for lifelong learning in that they offer the opportunity for professional development and certification to working technicians. And, by offering training that is practicable, the Welding program works toward the College’s goal, “to create better futures for our students and our community.”

Describe the unique institutional goal the program achieves.

The program satisfies a unique instructional goal by providing technical education in the trades. Without the Welding program, a key component of Vocational Education Division programs, the college would not be able to provide the necessary range of technical, vocational training to students intending to refresh their skills or enter in-demand fields.

PART 2: ACCOMPLISHMENTS IN ACHIEVING GOALS OUTLINED IN THE PREVIOUS PROGRAM REVIEW

Describe progress in achieving goals outlined in the previous program review, providing evidence documenting such achievements.

A new Program Degree is in the process of being implemented (A.S.). E-Learning opportunities are being researched with Title 3 Grant monies.

Explain modifications of goals outlined in the previous program review, providing evidence documenting such modifications.

To date, there has been no need to make significant modifications to the program.

PART 3: POPULATIONS SERVED

Describe the populations served by the program, including special populations.

The Welding program is open to all interested Palo Verde High School and Palo Verde College students. During the day, the program serves 50% high school students and 50% adult students, while during the evening; the program serves primarily adult students.

The Welding Technology program serves two important and special populations. First, the program offers credit courses to high school students who have an interest in vocational education, whether they see Palo Verde College's program as preparatory or terminal. The opportunity to gain welding skills for entry into the workforce or as part of a certificate program is not provided in the community through other agencies. Second, the program provides continuing education to working technicians. That training is not offered in the community through other agencies. In these two cases, the College serves an unmet community need.

Describe other populations that should be served by the program, and describe plans to serve them in the future.

While the Welding program does serve students of varying needs and interest, the program could enroll a greater number of working, adult students. Faculty identify that this population is currently underserved.

PART 4: CURRICULUM HISTORY

List the courses constituting the program. Of the courses constituting the program, list those courses that have not been successfully offered at least once during the preceding six (6) semesters.

CERTIFICATE IN WELDING TECHNOLOGY		
COURSE ID	COURSE NAME	UNITS
WEL 100	Oxyacetylene Gas Welding	3
WEL 101	Shielded Metal Arc Welding (ARC)	3
WEL 102	Basic Gas Metal Arc Welding (MIG)	3
WEL 103	Basic Gas Tungsten Arc Welding (TIG)	3
WEL 200	Advanced MIG Welding	3
WEL 201	Advanced TIG Welding	3
WEL 202	Advance Oxyacetylene Gas Welding	3
WEL 203	Consolidated Welding	3

Explain why such courses were not successfully offered. Provide a strategy for improving their success, or explain why they should not be removed from the program.

All classes have been successfully offered.

PART 5: COURSE SCHEDULING AND AVAILABILITY

Describe how effectively the scheduling process of classes in the program:

Optimizes class availability for day students, evening students and distance education students.

Within the Welding program, courses are scheduled at times to allow appropriate instruction methodology. At this time, day courses are scheduled in two-hour blocks. This meets the needs of the student population better than a one-hour block. The night classes are offered in two and a half hour blocks to accommodate the schedules of working technicians, the primary enrollees in these courses.

Within the Welding program, courses are adequately sequenced for both day and evening students. The Welding faculty, in developing a schedule of classes, adheres to the department's two-year plan. A core sequence of courses is offered each semester, and elective courses alternate. The careful attention to scheduling on the part of the faculty ensures that students, given good advising and appropriate preparation, will be able to complete the program within the two-year cycle.

Optimizes student learning.

The new facilities, occupied in Fall 2007, located on Palo Verde College Campus meet the needs of the Welding Technology Program.

PART 6: STUDENT LEARNING OUTCOMES

Describe the process by which the program identifies, measures and evaluates student learning outcomes at the course, program and degree levels, and provide evidence that this process is being followed.

Students completing courses in the Welding Technology program possess the skills and training to pursue various career options, such as;

- a. Meeting certification and re-certification in the welding industry.
- b. Obtaining entry level employment in the welding industry.
- c. Improving welding skills for advancement within the welding industry.

Curriculum in the Welding program is appropriate for first and second year students.

The Welding Faculty has taken measures to ensure that courses reflect the skills that working professionals need. The training offered within the program focuses on one topic per course per semester. This modular curricular organization by nature discourages duplication. While concepts are often reinforced from one class to the next, students work toward a new skill set for each class in the program.

There are no areas missing that would normally be offered to first and second year students at a trade school. The Welding program faculty strives to keep the program curriculum current with industry standards.

Describe the process by which program improvements are made, and provide evidence that this process is being followed.

Since the last Program Review the welding faculty identified prerequisites as prohibitive to working technicians who had not been trained at the College. Course outlines were revised to add more basic information at the beginning of the course to allow prerequisites to be removed. These changes have allowed access to courses by working technicians seeking refresher courses or further training in the field.

PART 7: PROGRAM AND COURSE COVERAGE

Describe how effectively courses in the program are covered by:

Full-time Faculty; Part-time (adjunct)

The Welding program is staffed by one full-time and one part-time faculty members. Additional adjunct faculty will be needed to meet future demand.

Describe ongoing or projected deficiencies in faculty coverage of courses in the program.

None.

Describe plans to improve program and course coverage, if applicable.

None.

PART 8: PROFESSIONAL DEVELOPMENT

Describe specific professional development activities in which faculty members in the program participate, and explain how such activities benefit or enhance the program and support and facilitate student learning outcomes.

Instructors routinely participate in professional development in terms of continuing professional education and seminars. Instructors attend yearly new product seminars presented by leading industry equipment manufacturers. The new cutting-edge equipment purchased for the welding shop is a direct result of faculty's attention to trends in the industry, input from the advisory committee and an ongoing commitment to providing the best equipment and techniques to our students.

Welding faculty additionally keeps current in teaching welding through constant curricular and methodological review and revision. Faculty members regularly use research gathered through the internet, advisory committee input, and industry standards as tools in planning and designing the welding courses.

Staff of the Welding Technology program regularly participates in in-service activities, including College Flex Day trainings, College seminars, and other professional growth opportunities offered on campus as time permits. This year the Welding program participated in Career Day on the Palo Verde campus, and the Palo Verde College information booth and displays at the Colorado River County Fair.

Describe areas of unmet professional development needs among faculty in the program, if applicable, and outline plans to address those needs.

No unmet professional development needs have been identified at this time.

PART 9: STUDENT PERFORMANCE AND COMPLETION

Display and comment on semester-by-semester course completions in the program over the preceding six (6) semesters. (Course completion rate = A, B, C, D, or CR divided by A, B, C, D, F, CR, NC, W, MW, IP)

SUMMER 2007-08					
Course Code	Course Title	Credit Hours	Enrollment	Successful Completion	D/E
WEL 203 1	Consolid Weld	3.00	19	84%	E
SPRING 2007-08					
Course Code	Course Title	Credit Hours	Enrollment	Successful Completion	D/E
WEL 102 1	Bas Mig Welding	3.00	20	90%	D
WEL 103 1	Bas Tig Welding	3.00	17	94%	D
WEL 103 2	Bas Tig Welding	3.00	20	100%	E
WEL 202 1	Adv Oxy Weld	3.00	18	72%	D
WEL 203 1	Consolid Weld	3.00	16	81%	D
FALL 2007-08					
Course Code	Course Title	Credit Hours	Enrollment	Successful Completion	D/E
WEL100 1	Oxy Gas Welding	3.00	21	86%	D
WEL101 1	Shield Arc Welding	3.00	18	89%	D
WEL 102 1	Bas Mig Welding	3.00	9	78%	E
WEL 200 1	Adv Mig Welding	3.00	13	92%	D
WEL 201 1	Adv Tig Welding	3.00	12	92%	D
SUMMER 2006-07					
Course Code	Course Title	Credit Hours	Enrollment	Successful Completion	D/E
No Classes Held This Semester					
SPRING 2006-07					
Course Code	Course Title	Credit Hours	Enrollment	Successful Completion	D/E
WEL 102 1	Bas Mig Welding	3.00	9	89%	D
WEL 103 1	Bas Tig Welding	3.00	8	88%	D
WEL 202 1	Adv Oxy Weld	3.00	12	100%	D
WEL 203 1	Consolid Weld	3.00	12	100%	D

FALL 2006-07					
Course Code	Course Title	Credit Hours	Enrollment	Successful Completion	D/E
WEL 100 1	Oxy Gas Welding	3.00	11	73%	D
WEL 101 1	Shield Arc Welding	3.00	9	89%	D
WEL 200 1	Adv Mig Welding	3.00	21	86%	D
WEL 201 1	Adv Tig Welding	3.00	20	90%	D

Display and comment on semester-by-semester degree or certificate completions, if applicable.

Certificate Completions		
Certificate	Semester	Completed
Welding Technology	2005-06	3
Welding Technology	2006-07	12
Welding Technology	2007-08	4

PART 10: ENROLLMENT AND FINANCIAL TRENDS

Display and comment on year-by-year enrollments in the program over the preceding five (5) years.

Year	FTE's	Headcount*	Sections
2003-04	38.80	208	29
2004-05	29.60	173	32
2005-06	21.17	132	23
2006-07	17.00	102	8
2007-08	29.94	171	10

*Duplicate headcount

Display and comment on year-by-year expenses incurred by the program over the preceding five (5) years, as to: supplies, contracts, capital outlay and other non-salary expenses.

	Salaries	Benefits	Supplies	Contracts	Capital	TOTAL			
							FTEs	Rate	Income
2007-2008	\$93,450.00	\$23,979.38	\$56,779.52	\$ 42.00	\$2,654.49	\$176,905.39	29.94	\$4,771.00	\$142,843.74
2006-2007	\$82,564.51	\$22,597.99	\$25,331.31	\$ -	\$ -	\$130,493.81	17.00	\$4,564.00	\$ 77,588.00
2005-2006	\$72,954.00	\$21,312.18	\$20,562.24	\$7,220.26	\$ 285.35	\$122,334.03	21.17	\$4,367.00	\$ 92,449.39
2004-2005	\$77,033.89	\$21,233.65	\$11,879.89	\$6,184.00	\$ 268.09	\$116,599.52	29.60	\$5,509.33	\$163,076.17
2003-2004	\$75,250.48	\$19,306.50	\$19,696.46	\$6,904.17	\$3,708.95	\$124,866.56	38.80	\$5,106.59	\$198,135.69

PART 11: FACILITIES AND EQUIPMENT

Are current facilities, such as classrooms, offices and equipment, adequate to support the program? Explain.

Yes.

Is available dedicated space adequate to support the program? Explain.

Yes.

Is available equipment adequate to support the program? Explain.

Yes.

Describe plans for future changes in support facilities or equipment.

No further plans at this time.

PART 12: STRENGTHS AND WEAKNESSES

List and comment on the major strengths of the program.

The major strengths of the department are as follows:

- Certificates are received after completing the 18 unit program.
- New classrooms and lab area.
- Program directed toward the A.W.S. D1.1 Certification.
- Updated course outlines and syllabus.
- Lecture/Lab hours enforced to meet the college standards.
- The students are ready for their certification test after completing the program.
- Student tracking program.
- Enrollments are stable.
- Looking for the best prices on supplies (material, class equipment, etc.).
- Working with the Advisory Committee for program direction (AWS Certification).
- Purchased C.D. Rom programs to update our computer technology in welding.
- Purchased new welding texts and workbooks.
- Develop work experience programs with local industries.

List and comment on the major weaknesses of the program.

Major weaknesses include recent global trends affecting material and supply costs.

PART 13: PLANS TO REMEDY WEAKNESSES

Identify specific steps to correct identified weaknesses and provide them timeline by which they are to be corrected.

Recommendations for improvement include continued attention to increasing student enrollment.

Since the last Report, the need to make continuing education available in the community became more pressing. Welding faculty revised curriculum to remove prerequisites and make instruction accessible to working professionals needing such continuing training. In addition student learning outcomes are being reviewed and modified as needed annually. Faculty intends to look for other aspects of the program that could stand revision in order to boost potential enrollment in Welding courses.

Recent global trends have increased the cost of steel 400 percent. The materials cost of this program to the College is already high, relative to supplies budgets of other programs within the Division. If supply increases go unchecked in the world market, some instruction in the Program could be impacted. Faculty are currently taking these trends into consideration and discussing some potential solutions, including purchasing scrap steel and forming a partnership with Morgan Corporation.

The program needs to establish an approved adjunct faculty pool to meet the future demands of the program and provide coverage as necessary on an emergency basis.

PART 14: PLANS TO ADVANCE THE PROGRAM

Describe other plans that will advance the program.

1. Creation of AS Degree in Welding
2. The addition of 4 fabrication classes
3. Discussions are ongoing about the fabrication classes and the possibility of a metal fabrication certificate
4. A contract with American Welding Society for Certification Testing