



Academic Program Review External Reviewers

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| Grant Ligon, Owner Grant Industries 7784 Hwy. 39 Marvell, AR 72366 870-830-9699 Grant.ligon@grant-ind.com | Henry D. Striplin, Instructor Welding and Cutting Technology Career and Technical Education Coahoma Community College 3240 Friars Point Road Clarksdale, MS 38614 (662) 621-4189 hstriplin@coahomacc.edu |
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**Phillips Community College of the University of Arkansas
Division of Applied Technology
Welding Technology**

**TC Welding
CP in General Welding Techniques
CP in Inert Gas Welding
CP in Mild Steel Welding
June 5, 2019**

External Reviewer's Signature

Henry D Striplin

External Reviewer's Signature

The PCCUA Institutional Program Review can be referenced at the following link.
<https://www.pccua.edu/faculty-staff/adhe-information/program-reviews>

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Lead Reviewer

Grant Ligon-Industry Reviewer

Grant Ligon is the owner of Grant Industries. The focus of his company is metal fabrication primarily in the agricultural machinery sector. The company is involved in all phases of this machinery from conceptual design to customization, installation, repair, and maintenance. Grant graduated from the University of Arkansas in Fayetteville with a bachelor's degree in Mechanical Engineering. In addition, he has expertise in welding and machining. Prior to opening his own company, Grant worked for RT Turbine (Turbine Engine Shop for Airplane Engines) and at Adams Fertilizer Equipment as their Engineering Manager.

Second Reviewer

Henry D Striplin, Higher Education Reviewer, Out of State

An instructor in Coahoma Community College's Division of Career and Technical Education, Henry Striplin enjoys extending to his students the same opportunities made available to him through Coahoma Community College.

A Coahoma Community College alumnus, Striplin received a certificate in Welding Technology from Coahoma Junior College in 1979. He has served as an instructor at Coahoma Community College in the Welding and Cutting Technology program since August 2005. He holds numerous certifications in welding which include Welding Certificate, Coahoma Junior College; 1st Class Welder Qualification Test, Mississippi Marine, Inc.; Welder Performance Qualification, ACI, Inc.; and NOCTI Certificate. He has also done additional studies at Mississippi State University.

Striplin uses his influence to encourage students to always work to the best of their ability, and he also stresses the importance of being punctual and present at work when scheduled. It is advice he also lives by in his everyday life. "I enjoy offering students a chance to learn a trade and start a career in the field of their choice," said Striplin. "It's very rewarding to see them become productive in the field that they were trained in."

PCCUA Team for the Welding Program Review

Vicki Cobb, Applied Technology Program Coordinator

Linda Killion, Director of Special Projects, Past Dean of Applied Technology Division

Dr. Deborah King, Vice Chancellor for Instruction

Tim Campbell, Welding Instructor

Daniel Whitted, Welding Instructor

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The report prepared by the External Reviewers will be used by the Arkansas Department of Higher Education (ADHE) to verify the student demand and employer need for the program, the appropriateness of the curriculum, and the adequacy of program resources. The report should not include a recommendation to ADHE on program continuation or program deletion.

The External Reviewers written report must include a summary of each area examined and should provide examples that document the conclusions. The questions below should be used by the reviewers as a guide in preparing the summary for each area. Responses to the questions should not be simply “yes or no”.

I. Review of Program Goals, Objectives and Activities

A. Are the intended educational (learning) goals for the program appropriate and assessed?

The educational goals for the welding program are indeed appropriate. These goals are laid out clearly for each course as well as for the program in general. The program assessment process (PCCUA Welding Program Review Self Study, p. 23) clearly states how PCCUA arrived at and continues to review these goals.

Some of the general skill sets required are:

- Mathematical skills
- Safety standards
- Blue print reading
- Reading and translating diagrams and flow charts
- Cutting, trimming, and fusing metal together
- Working in adverse conditions
- Learning new technologies as needed

Additional skill sets include the ability to work in teams as well as strong supervisory and managerial skills.

The welding program also incorporates the College Core Competencies referred to as STACC Skills.

- Social and Civic Responsibility - Behavior demonstrates adherence to legal/ethical standards established by society.
- Technology Utilization - Use tools of the trade to achieve a specific outcome.
- Analytical & Critical Thinking - Modes of reasoning including analyzing data, evaluating alternatives, setting priorities, and predicting outcomes.
- Communication - The interactive process through which there is an exchange of verbal and/or nonverbal information.

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- Cultural Awareness - Acknowledgement that society is diverse with groups of individuals possessing differing beliefs, values, attitudes, and customs that are shared from one generation to the next.

B. How are the faculty and students accomplishing the program’s goals and objectives?

The faculty in charge of the welding program know the importance of safety in the welding/skilled trade industry. For that reason, they greatly value safety in all courses while accomplishing these goals.

The courses laid out for the program and the sequence of the courses from easier to more difficult play a major role in the accomplishment of these goals and objectives. Each of the courses verifies the student’s achievement of knowledge in the subject as well as the skill set. Furthermore, PCCUA offers different levels of certificate of proficiencies allowing students to acquire the basic skills that they need as well as higher leveled skills. This helps them to enter a multilevel marketplace with the tools that they need to compete at all levels. The following tables were described in the site visit and included in the PCCUA Welding Program Review Self Study. The use of the CPs in General Welding, Inert Welding, and Mild Steel Welding are a foundation for the Technical Certificate. This is a “best practice” for developing strong welding skills.

| Welding Technology Technical Certificate | | |
|---|--|----------------|
| Total Number of Hours for Certificate: 34 | | |
| General Education Component – 6 Hours | | |
| Course Number | Course Title | Credits |
| EH 1013/EH 1011 | Basic Writing I or higher | 3 |
| MS 1013 | Fundamental Math or higher | 3 |
| Welding Component –28 Hours | | |
| WG 115 | Introduction to Welding | 5 |
| WG 125 | Arc Welding I | 5 |
| WG-133 or IT 163 | Welding Blueprint Reading or Basics of Blueprint | 3 |
| WG 135 | Arc Welding II | 5 |
| WG 145 | Inert Gas Welding I | 5 |
| WG-165 | Inert Gas Welding II | 5 |

| General Welding Technology Certificate of Proficiency | | |
|--|-------------------------|----------------|
| Total Number of Hours for Certificate: 15 | | |
| Course Number | Course Title | Credits |
| WG 115 | Introduction to Welding | 5 |
| WG 125 | Arc Welding I | 5 |
| WG 145 | Inert Gas Welding I | 5 |

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| Inert Gas Welding Certificate of Proficiency | | |
|--|-------------------------|---------|
| Total Number of Hours for Certificate: 15 | | |
| Course Number | Course Title | Credits |
| WG 115 | Introduction to Welding | 5 |
| WG 145 | Inert Gas Welding I | 5 |
| WG 165 | Inert Gas Welding II | 5 |

| Mild Steel Welding Certificate of Proficiency | | |
|---|-------------------------|---------|
| Total Number of Hours for Certificate: 15 | | |
| Course Number | Course Title | Credits |
| WG 115 | Introduction to Welding | 5 |
| WG 125 | Arc Welding I | 5 |
| WG 135 | Arc Welding II | 5 |

C. How is the program meeting market/industry demands and/or preparing students for advanced study?

As a business owner directly involved with the welding industry, I am seeing firsthand an increasing need for welders and skilled trade employees. Based from some studies and statistics, some of which are found in the PCCUA Welding Program Self Study as shown below, there is an increasing employment opportunity/need locally and nationally for welder positions.

| Arkansas Market Demand | | | | | | | | | |
|------------------------|-----------------|--|-----------|------|----------------|------|--------|----------------|---------------------|
| Area Name | Occupation Code | Occupation Name | Base Year | Base | Projected Year | Base | Change | Percent Change | Avg Annual Openings |
| Arkansas | 51-4121 | Welders, Cutters, Solderers, and Brazers | 2014 | 4540 | 2024 | 4850 | 310 | 6.9 | 160 |

¹ <https://www.bls.gov/ooh/production/welders-cutters-solderers-and-brazers.htm#tab-6>

¹ https://www.bls.gov/oes/2016/may/oes_ar.htm

| National Market Demand | | | | | |
|--|----------|-----------------|---------------------------|-----------------|---------|
| Occupational Title | SOC Code | Employment 2016 | Projected Employment 2026 | Change, 2016-26 | |
| | | | | Percent | Numeric |
| Welders, cutters, solders, and brazers | 51-4121 | 404,800 | 427,300 | 6 | 22,500 |

Modified Date: Tuesday, January 30, 2018

Source: U.S. Bureau of Labor Statistics

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Data about recent program graduates indicates that they were immediately employed as welders following program completion. The table below is a good testament to the student preparation resulting from this program.

| Welding Technology Student Employment | |
|--|--|
| Number of Students | Employment |
| 1 | AJR Industrial Service West Memphis, AR |
| 1 | Welding Blytheville, AR |
| 1 | Adams Fertilizer DeWitt, AR |
| 1 | Welding Shop Searcy, AR |
| 2 | Mississippi Limestone Friars Point, MS |
| 2 | SAF Holland Dumas, AR |

D. Is there sufficient student demand for the program?

As illustrated below, there has been an average enrollment of 95 students in the program for the last six years. We believe this to be an indicator of a sufficient student demand for the size and resources of the program.

| Welding Enrollment Trends 2014-2019 | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|
| 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| 34 | 47 | 39 | 62 | 43 | 54 |
| 46 | 36 | 42 | 61 | 54 | 50 |
| 80 | 83 | 81 | 123 | 97 | 104 |

E. Do course enrollments and program graduation/completion rates justify the required resources?

Yes, PCCUA has achieved an average of 54 total awards (including CPs and TCs) in the past five years. The table on the following page proves that the students are encouraged to advance their studies and complete the CPs and TCs that the program has to offer.

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| Welding Graduates 2014-2018 | | | | | |
|-----------------------------------|-----------|-----------|-----------|------------|-----------|
| | 2014 | 2015 | 2016 | 2017 | 2018 |
| Technical Certificate | | | | | |
| Welding Technology | 4 | 11 | 3 | 15 | 11 |
| Certificate of Proficiency | | | | | |
| General Welding Techniques | 9 | 7 | 9 | 41 | 10 |
| Inert Gas Welding | 9 | 16 | 12 | 15 | 17 |
| Mild Steel Welding | 8 | 9 | 7 | 42 | 15 |
| | | | | | |
| Total Welding CPs | 27 | 32 | 28 | 98 | 42 |
| | | | | | |
| Total Awards | 31 | 43 | 31 | 113 | 53 |

II. Review of Program Curriculum

A. Is the program curriculum appropriate to meet current and future market/industry needs and/or to prepare students for advanced study?

Yes, the curriculum requirements for all CPs and TC are sufficient for the industry's current and future needs. They also offer advanced courses (WG175, Certification Welding, and higher) which gives the students extra preparation for a higher skilled workplace. PCCUA also takes it a step further and requires English and math courses in its certificate requirements to create more well-rounded students which gives them an edge when seeking employment as well as maintaining employment.

B. Are institutional policies and procedures appropriate to keep the program curriculum current to meet industry standards?

The institution always references current American Welding Society (AWS) standards and procedures which is the national standard for the welding field. The program faculty are encouraged to attend conferences and seminars to learn best practices as well as emerging skills and teaching methodologies in their respective fields. This was confirmed during the site visit and is explained in the PCCUA Program Welding Review Self Study.

“PCCUA also encourages faculty to attend conferences and seminars to learn best practices as well as emerging skills and teaching methodologies in their respective disciplines. Some of the conferences attended by the instructors are: Arkansas Association of Two-Year Colleges, NCCER Instructor Certification Training, and Skills USA for Student Success. These conferences provide new and invaluable instructional tips on student engagement and cooperative learning. “

PCCUA also reaches out to the local workplaces to seek their needs for current employment. This was confirmed during the site visit and is explained in the PCCUA Welding Program Review Self Study.

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“The Department also values the input from the Grand Prairie Workforce Advisory Council, Phillips County Industrial Council, and the Southeast Arkansas Industrial Council to stay abreast of local business and industrial needs. The committees’ recommendations guide the department in providing a high-quality welding program and curriculum to better meet the needs of the service and surrounding areas.”

C. Are program exit requirements appropriate?

The program requires annual faculty reviews. During this faculty evaluation conference, the dean/chair and faculty members review student evaluations that have been conducted for courses upon course exit.

The Student Evaluation is a questionnaire regarding instructor course delivery and design methods and is administered to classes each fall and spring semester. In this student evaluation, students are also given the opportunity to anonymously provide feedback on instructor strengths and offer ways to improve teaching methods that promote student learning and student engagement. A summary of results is provided to the instructor and dean/chair of the Division. Student evaluation score averages are based on the following scale: 5-Always, 4-Usually, 3-Sometimes, 2-Rarely, 1- Never.

As outlined in the PCCUA Administrative Procedure 370.05 included in Appendix E of the PCCUA Welding Program Review Self Study, all full-time and part-time faculty members are reviewed annually on the basis of classroom effectiveness, college service, professional growth, and community service. Evidence of instructor effectiveness is provided by student evaluations each semester and a teaching portfolio. Results for the outcomes are shared with the dean/chair, faculty member, and Vice Chancellor for Instruction.

The Teaching Portfolio is submitted by faculty annually. It documents teaching effectiveness, college service, professional growth, and community service. Included in this portfolio is a collection of instructor-selected documents to validate teaching strategies and performance. Current syllabi with relevant course information, examples of revisions in course materials, and examples of evaluation methods such as tests and graded assignments are included. Each portfolio is evaluated by the division dean as well as two instructors within the division and one instructor outside the division. It is scored on scale reflecting a 5- exceptional, 4-Excellent, 3-Fully Effective, 2-Needs Improvement, 1-Unsatisfactory.

D. Does the program contain evidence of good breath/focus and currency, including consistency with good practice?

Yes, this program has very driven and passionate faculty who are the key to its success. One of this program’s larger challenges is the amount of funding required to sustain current equipment and enough material to give students the amount of lab practice they need so that they are more equipped when they enter the workforce. To help overcome this challenge, this program joined

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other programs across the state in forming the University of Arkansas Workforce Alliance. This Alliance (UACC Batesville, UACC Cossotat, East Arkansas Community College, ASU Mid South, and PCCUA) joined together to share resources and collaborate on ways to overcome their challenges. One result of this was receiving a regional workforce implementation grant from ADHE. With this grant proper steps are being taken to improve the welding program through planning, implementation, and continuation processes.

E. Are students introduced to experiences within the workplace and introduced to professionals in the field?

Yes, the faculty has recent program graduates return to campus to speak with current students to share their experiences and personal advice involving the field of study. Instructors also have local vendors come and speak with the students to expose them to up to date technology and practices in the welding field.

F. Does the program promote and support interdisciplinary initiatives?

The program greatly promotes/supports the manufacturing program offered at PCCUA. Its faculty also work closely with the math and English departments.

G. Does the program provide respect and understanding for cultural diversity as evidenced in the curriculum, in program activities, in assignment of program responsibly and duties; in honors, awards and scholarship recognition; in recruitment?

The program is heavily involved in Skills USA Arkansas. This program exposes students to many skills challenges and cultural diversities. The students are also awarded and recognized for showing their success in each of these areas. Additionally, the welding CP and TC graduates are predominately minority.

III. Review of Academic Support

A. Does the program provide appropriate quality and quantity of academic advising and mentoring of students?

PCCUA incorporates its core competencies with the context of the subjects being taught. Students are required to have a pre and post registration meeting as well as two additional required meetings with their advisors. In addition, PCCUA has numerous support systems for students in academic and social areas such as faculty-led meetings, tutoring, and food pantries on each campus. The faculty believe this is a major factor in high student retention rates in this program. The program does see challenges in the area of transportation for students to and from courses. The administration and faculty said that the plans are to provide a bus to transport students in fall of 2019.

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B. Does the program provide for retention of qualified students from term to term and support student progress toward and achievement of graduation?

PCCUA has a good retention rate. Much of this is because of the multiple student support services in place. These include but are not limited to the following services: Academic Advising, Early Alert/Warning System, Student Email Accounts, Student Support Services, Mandatory Student Orientation for New and Returning Students, Faculty Scheduled Office Hours, and Cooperative Learning Strategies. In addition, each campus has a Learning Center and access to computer labs.

IV. Review of Program Faculty

A. Do program faculty have appropriate academic credentials and/or professional licensure/certification?

Yes, please note the faculty’s certifications and credentials listed in the table below and provided in the PCCUA Welding Program Review Self Study.

| Welding Technology Courses Taught over the Last Two Academic Years | | |
|---|---|--|
| Name | Degree | Subjects Taught |
| Tim Campbell (full time) Year Hired: 1986 | Diploma, Ricebelt Technical Institute - Welding Advanced Welding, Ricebelt Technical Institute | WG 115 Intro to Welding WG 125 Arc Welding I WG 133 Welding Blueprint Reading WG 135 Arc Welding II WG 145 Inert Gas Welding I WG 165 Inert Gas Welding II WG 155 Pipe Welding WG 175 Certification Welding |
| Daniel Whitted (full time) Year Hired: 2005 | A.A.S., Phillips Community College of the University of Arkansas - Welding | WG 115 Intro to Welding WG 125 Arc Welding I WG 135 Arc Welding II WG 145 Inert Gas Welding I WG 165 Inert Gas Welding II WG 155 Pipe Welding |
| Stanley Herrington Year Hired: 2006 Adjunct: 2010 | A.A.S., Phillips Community College of the University of Arkansas – Advanced Manufacturing | WG 133 Welding Blueprint Reading |

B. Are the faculty orientation and faculty evaluation processes appropriate?

Yes, PCCUA conducts an appropriate orientation program for all new employees at the beginning of their employment. The purpose of the orientation is to welcome and introduce them to the

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college environment. Each employee and employee supervisor is given a new employee checklist, which must be completed two to three weeks after the hire date. A resource for employees is the PCCUA Policy Manual, which outlines written policies and procedures and can be accessed through Web Advisor. Responsibilities of faculty members regarding teaching loads, office hours, evaluation, and other academic issues can also be located in the policy manual.

The PCCUA faculty evaluation system is appropriate for the welding faculty and provides feedback from students, peers, and the dean/chair for the faculty member to use in improving performance. Faculty members are evaluated each semester by students through a student evaluation and annually by peers and a dean/chair through a teaching portfolio, which documents teaching effectiveness, college service, professional growth, and community service. During the annual faculty evaluation conferences, the dean/chair and faculty members review student evaluations and portfolio evaluation findings to identify ways to improve teaching effectiveness and methodologies.

C. Is the faculty workload in keeping with best practices?

Yes, all faculty must meet the same minimum requirements. Full time faculty members are required to teach a minimum of 15 hours a week. On average, each welding instructor teaches six five-hour credit courses per academic year. In 2017-18, the average number of courses taught was six, and the number of credit hours taught was thirty for full-time program faculty.

V. Review of Program Resources

A. Is there an appropriate level of institutional support for program operation?

Yes, the course instructors open up facilities and classes when able to allow for extra time for students. There is also mandatory testing and placement required by the institution. Much of the new welding equipment has been purchased through a Regional Workforce Grant (administered by ADHE) which has allowed all the instructors to upgrade welding equipment.

B. Are faculty, library, professional development and other program resources sufficient?

Yes, all texts are up to date. Computers are provided in the library to give students the resources that they need to complete course studies and research.

VI. Review of Program Effectiveness

A. Indicate areas of program strength.

The most important area of strength is that the students truly obtain the actual skills they are seeking when entering this program. Other areas of strength discussed with instructors and administrators at PCCUA during the site visit included experienced faculty, continuous improvement and updating of courses and materials, division dean/director and program coordinator commitment to academic freedom, faculty autonomy, and instructional creativity in

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the classroom. Other strengths cited are faculty commitment to professional development and enhancement of professional skills, experienced and supportive administration, a strong advising system, up-to-date equipment, adequate classroom and laboratories facilities, active Industrial Councils, variety of available scholarships for students, and day and night course offerings.

B. Indicate the program areas in need of improvement within the next 12 months; and over the next 2-5 years.

Short term improvements would include improving transportation resources for students and marketing the program to the public more.

Long term improvements would include working closer with more local businesses to collaborate on how the program could better equip its students with skills to meet the local demands, and in return the college could help provide resources to local businesses to help them expand their welding markets to create even more job opportunities for local program students.

C. Indicate areas for program development based on market/industry demands that have not been identified by the institution.

One area which has been identified but might need to be expanded is programming for incumbent workers. In addition, there could be a market for certifications for those who are already welding but lack specific certifications to do jobs which require cross welding techniques.

VII. Review of Instruction by Distance Technology (if program courses offered by distance)

A. Are the program distance technology courses offered/delivered in accordance with best practices?

N/A

B. Does the institution have appropriate procedures in place to assure the security of personal information?

N/A

C. Are technology support services appropriate for students enrolled in and faculty teaching courses/programs utilizing technology?

N/A

D. Are policies for student/faculty ratio, and faculty course load in accordance with best practices?

N/A

E. Are policies on intellectual property in accordance with best practices?

N/A

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VIII. Review of Program Research and Service

A. Are the intended research and creative outcomes for each program appropriate, assessed and results utilized?

Yes, these outcomes and results utilize plans shared at the site visit and included in the PCCUA Welding Program Review Self Study.

The Welding Technology program’s assessment process models the college plan and uses the same core competencies—social and civic responsibility, technology utilization, analytical and critical thinking, communication, and cultural awareness. All major aspects of instruction are assessed at the course and program level. The specific program and course objectives outcomes inform important program changes.

The Welding Department uses a process to accomplish these goals and includes the following steps: 1) determine what needs to be assessed, 2) select tools to measure results, 3) establish criteria to determine if concerns exist or if change is needed, 4) administer assessment tools, 5) evaluate results, and 6) develop and implement methods for improvement.

Assessment is an ongoing process. Included in the assessment is the trended data which provides tangible, measurable results that determine where improvement is needed. A Welding Technology Program Summary Sheet showing the findings for the semester and year are published on the College Assessment site.

B. Are the intended outreach/service/entrepreneurial outcomes for each program’s initiatives appropriate assessed and results utilized?

Yes, this is achieved through PCCUA’s STACC skills (core competencies) listed in the following table.

| PCCUA Applied Technology Division Core Competencies / Welding Technology | | | |
|---|--|------------------------|---|
| PCCUA Core Competencies | Applied Technology Core Competencies | Related Courses | Assessment Methods |
| Communication Skills The interactive process through which there is an exchange of verbal and/or nonverbal information. | Communication Skills Students will demonstrate the ability to communicate effectively in their chosen discipline using visual and oral media | WG 133 | Written assignments Classroom and instructor critiques |

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|---|--|---|---|
| <p>Cultural Awareness Acknowledgement that society is diverse with groups of individuals possessing differing beliefs, values, attitudes, and customs that are shared from one generation to the next.</p> | <p>Cultural Awareness Students will acknowledge the diversity of groups and demonstrate toward ideas from others.</p> | <p>WG 115 WG 125 WG 133</p> | <p>Written assignments Classroom and instructor critiques Rubrics</p> |
| <p>Analytical and Critical Thinking Modes of reasoning including analyzing data, evaluating alternatives, setting priorities, and predicting outcomes.</p> | <p>Critical Thinking Students will demonstrate ability to identify, analyze, and remediate problems critical to their chosen discipline</p> | <p>WG 115</p> | <p>Written assignments Classroom and instructor critiques Rubrics</p> |
| <p>Social and Civic Responsibility Behavior that demonstrates adherence to legal/ethical standards established by society.</p> | <p>Social and Civic Responsibility Students will demonstrate knowledge of ethics and legal issues appropriate to their chosen discipline.</p> | <p>WG 115 WG 125 WG 133</p> | <p>Written assignments Classroom and instructor critiques Rubrics</p> |
| <p>Technology Utilization Use tools of the trade to achieve a specific outcome.</p> | <p>Technical Skills: Students will demonstrate ability to perform technical operations to their chosen discipline.</p> | <p>WG 115 WG 125 WG 135 WG 145 WG 155 WG 165 WG 175</p> | <p>Written assignments Classroom and instructor critiques Rubrics</p> |

The assessment example (PCCUA Welding Program Review Self Study, p, 50) on the next page is difficult to copy, but it also verifies that course and program assessment outcomes are documented and shared. It has been included as evidence of the program's ongoing assessment.

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| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | Q | AP |
|-----|--|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|
| 1 | Division of Applied Technology Core Competencies | | | | | | | | | | | | | | | |
| 2 | Student Learning Outcomes by Individual Courses | | | | | | | | | | | | | | | |
| 3 | Spring, 2018 Welding | | | | | | | | | | | | | | | |
| 4 | | TC | DW | TC | DW | TC |
| 5 | Course Instructor | TC | DW | TC | DW | TC |
| 6 | Student Retention Rates | 100% | 100% | 93% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 75% | 97% | |
| 7 | Students enrolled | 11 | 4 | 14 | 3 | 8 | 1 | 4 | 1 | 1 | 3 | 1 | 4 | 55 | | |
| 8 | Students completed | 11 | 4 | 13 | 3 | 8 | 1 | 4 | 1 | 1 | 3 | 1 | 3 | 53 | | |
| 9 | Communication | | | | | | | | | | | | | | | |
| 10 | 1.Students will be able to read and understand blueprints | | | | | | | | | | | | | | | |
| 20 | Communication Average | | | | | | | | | | | | | | | |
| 21 | Cultural Awareness | | | | | | | | | | | | | | | |
| 22 | 1.Students will be able to work with clients on specific projects | | | | | | | | | | | | | | | |
| 26 | Cultural Awareness Average | | | | | | | | | | | | | | | |
| 27 | Social and Civic Responsibility | | | | | | | | | | | | | | | |
| 28 | 1.The student will understand basic terminology required in the operation of welding equipment. | 100 | 100 | | | | | | | | | | | | | |
| 29 | 2.Name the two types of operating adjustments found on arc welding machines. | | | 100 | 100 | | | | | | | | | | | |
| 30 | 3.Students will understand blueprint terminology | | | | | | | | | | | | | | | 100 |
| 40 | Social and Civic Responsibility | | | | | | | | | | | | | | | 100 |
| 41 | Analytical & Critical Thinking | | | | | | | | | | | | | | | |
| 42 | 1.Students will determine different welding techniques needed for specific projects | 100 | 100 | | | | | | | | | | | | | |
| 73 | Analytical & Critical Thinking | | | | | | | | | | | | | | | 100 |
| 74 | Technology Utilization | | | | | | | | | | | | | | | |
| 75 | 1. Students will demonstrate safety for handling cutting and welding equipment | 100 | 100 | | | | | | | | | | | | | |
| 76 | 2.Students will be able to cut metals with oxy fuel and plasma cutting processes | 100 | 100 | | | | | | | | | | | | | |
| 77 | 3.Students will be able to make welds with arc welding and gas metal welding equipment | 100 | 100 | | | | | | | | | | | | | |
| 78 | 4.Students will be able to construct a lap joint, tee joint, corner joint and a square butt joint in flat and horizontal positions. | | | 93 | 100 | 100 | 100 | | | | | | | | | |
| 79 | 5.Construct single vee with backup plate in the vertical and overhead positions and successfully pass bend test for those positions | | | | | 100 | 100 | | | | | | | | | |
| 80 | 6.Construct a mild steel lap joint, tee joint, corner joint and square butt joint in the flat and horizontal positions with the gas metal arc welding process | | | | | | | 100 | 100 | | | | | | | |
| 81 | 7.Construct a mild steel lap joint, tee joint, corner joint and square butt joint in the flat and horizontal positions with the gas tungsten arc welding process | | | | | | | 100 | 100 | | | | | | | |
| 82 | 8.Students will construct single vee joints (with no backup) in the flat, horizontal, vertical and overhead positions. Then progress into different piping positions. | | | | | | | | | 100 | | | | | | |
| 83 | 9.Students will demonstrate welding applications of ferrous, nonferrous, stainless steel and alloy metals in the vertical and overhead positions. | | | | | | | | | | 100 | 100 | | | | |
| 84 | 10.Students will study and practice the qualifications to take the American Welding Society performance tests. Students will demonstrate welding applications of ferrous, nonferrous, stainless steel and alloy metals in the vertical and overhead positions. | | | | | | | | | | | | | 100 | | |
| 100 | Technical Skills | | | | | | | | | | | | | | | 100 |
| 101 | Course Average | 100 | 100 | 98.5 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | | |
| 102 | Program Average | | | | | | | | | | | | | | | 100 |
| 103 | | | | | | | | | | | | | | | | |

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IX. Local Reviewer Comments

A. How is the program meeting market/industry demands and/or preparing students for advanced study?

The program is really meeting these demands because they are putting a high priority on their students actually obtaining the skills they set out to obtain. This allows the employers to immediately begin training on job specific requirements rather than the actual skill the employee will be performing the majority of the time. This alone is making the program students more desirable candidates for employment because the employees can be more efficient with their orientation processes saving time and money.

B. What program modifications are needed?

The structure of lecture and lab times could use a review to see if these could be restructured to benefit students in obtaining their skills. Additionally, program faculty could explore alternatives such as different course times, more lab projects working directly with local businesses, etc.

X. Report Summary

A. Include reviewer comments on the overall need for program graduates/completers in the local area, region and/or nation over the next 5 years.

There is a local, regional, and national need for skilled labor specifically in this program as well as others. Our current economic state is creating a demand for these types of employees, and programs like these are the most efficient way to prove to employees that the market is demanding.

B. Include reviewer comments on overall program quality, state program review process, etc.

The program as a whole is a very competitive program based on facilities (classrooms/labs), resources (equipment/materials), and faculty. They have the ability with these things to produce very qualified students that are ready for immediate employment anywhere and any place in the welding field. I personally think the program may not receive the recognition that it should and should be marketed more for what it actually is.

The state review process is pretty clear and concise once explained by faculty. The template is very well created for a well-rounded questionnaire that fits all fields of study. The reviewers would like to see some add-ons for more specific review questions that would relate to the actual program being reviewed.

Academic Program Review

External Reviewers Report Template

XI. Response to the External Reviewers' Recommendations

In this section, please copy the recommendations that the external reviewers provided in their report. Then, provide the institution/department/program response to the recommendation.

| Recommendations from External Reviewers (copied from the external review report) | Response |
|---|---|
| The structure of lecture/lab times could use a review to see if it could be restructured to benefit students in obtaining skills. | Input and recommendations from the three PCCUA Industrial Councils (Grand Prairie Workforce Advisory Council, Phillips County Industrial Council, Southeast Industrial Council) as well as Employer Survey results could help address this issue. In addition, the program will conduct a student survey to determine if restructuring of lecture/lab times would increase skill attainment as well as the likelihood of success in obtaining employment. |
| The College could explore alternatives such as different course times and more lab projects working directly with local businesses, etc. | Welding industry representatives will be contacted to examine the possibility of project-based instruction. Also, the welding department will seek input from students and industry/businesses on alternative course scheduling. |
| The Welding Department could do a better job of marketing the program. | PCCUA does a good job of marketing. However, there are untapped populations such as females, older people, and incumbent workers who could possibly be reached through advertising the program on social media, radio, newspaper, mail outs, etc. |
| The College needs to explore roles for incumbent workers to earn certifications or cross welding training. This could be a new market for the program. | As previously mentioned, incumbent workers are going to be targeted to increase their skill sets. Also, PCCUA has recently begun offering welding workshops to local industries. A schedule of workshop offerings and dates will be designed and distributed. |
| The reviewers would like to see some add-ons for more specific review questions in the review process that would relate to the actual program being reviewed. | PCCUA does not have a role in developing the External Reviewers Report Template. However, the reviewers' recommendations will be shared with the Arkansas Department of Higher Education through this report. |