Program Name
Indicate if $\square$ AA; $\square$ AS; $\square$ AA-T; $\square$ AS-T; $\boxtimes$ Certificate
Program Name: Welding (COA) Certificate of Achievement/ Welding Technology Semi-Automatic Arc Welding GMAW/FCAW (Credit)
Submitter: Roland O'Neal

# I. Program Description

In this section, programs will answer the questions "Who are we? What do we do?" The purpose of this section is to orient the reader/ reviewer to the program and provide context to the program review. This section should be kept short, a few paragraphs at the most, and include the following:

# Mission/Vision

The goal and objectives of the welding departments program is to provide students with career technical education in welding technology. This program will help meet one of the California Community College's primary missions of advancing California's economic growth and global competitiveness through education that contributes to continuous workforce improvement. This program also aligns with BCC's mission by offering career and technical education and workforce development programs and courses that give students knowledge, skills, and certificates necessary for success in the workplace. Student welder's gain the skills necessary to safely and competently weld, using various welding processes, for personal pursuits, or to gain entry level welding employment in the local economy and/or obtain the Welding Certificate's/Associate Science Degree in Welding and AWS certification.

# Description – short description only

The Welding Department staffing consists of 3 qualified adjunct Instructors teaching 10 different welding processes as well as (Weld 56 blueprint reading). Currently there is 1 Full Time IMMT faculty who is qualified to teach the welding program. The courses are offered late evenings in order to meet the needs of students and faculty teaching schedules. Two of the instructors are currently AWS certified as welding inspectors allowing BCC to offer AWS certification in D1.1 structural. Currently our program offers 5 different Certificate's and an A/S degree in Welding Technology.

# Alignment to/support of BCC Strategic Goal

The mission and vision is stated above, the program offering's prepare students in basic welding skills, career and technical education, lifelong learning opportunities, and comprehensive lower division courses that meet articulation agreements for student to have the opportunity to transfer to upper division and industry leading institutions. Partnering with local agencies, businesses, schools, and military bases to promote positive community skilled work force development and economic growth, and to support the training of skilled labor to meet the growing shortage of skilled labor in today's economy.

# II. Program Effectiveness

In this section, programs will answer the question "How is the program doing?" by reviewing and analyzing data. The purpose of this section is to evaluate the program holistically in terms of fostering student success, helping students reach their goals, and furthering the mission of BCC.

Programs will be provided with data on Students, Courses, Program, and Faculty. For each item below, review the data provided. Look for trendlines, outliers, etc., and provide a short analysis (2-3 sentences) for each. If data are not available (i.e., student satisfaction surveys), indicate that on the form. For Program Learning Outcomes Assessment data, review the eLumen Report and summarize findings in the PLO section below.

# Course Data and Analysis

Course Success Rate by

- Mode of instruction
- Scheduling
- Faculty Status (PT vs FT)

Mode of instruction: 62.5%-2019/2020 Live/Hybrid, 80.7%-2020-2021 Live/Hybrid, 79.6%- 2021/2022 Live/Hybrid

Scheduling: classes are held in the evening hours.

Faculty status / 3 adjunct instructors at start of semester. BCC's welding program is very successful.

# Retention Rate by

- Mode of instruction
- Scheduling
- Faculty Status (PT vs FT)

The Average Retention rate:

Mode of instruction: 72.5% -2019/2020 Live/Hybrid, 89.5% -2020-2021 Live/Hybrid,

94.4% -2021/2022 Live/Hybrid

Scheduling: classes are held in the evening hours.

Faculty status / 3 adjunct instructors at start of semester. BCC's welding program is very successful.

#### Section Count by

- Mode of instruction
- Schedule
- Faculty Status (PT vs FT)

Section count: Each course weld 50A thru 57B has varying numbers per student per section not identified in reports.

Mode of instruction: 2 -2019/2020 Live/Hybrid, 6 -2020-2021 Live/Hybrid, 7 -2021/2022 Live/Hybrid

Scheduling: classes are held in the evening hours.

Currently Brian Packer and Kim Lytle have been in the classroom, Joshua O'Neal (DE/Online weld 56 only) Richard Bremen and Cody Jeffers (BNSF training only)

The weld program is currently in need of a(n) Industry Experienced Full-time instructor.

## Enrollment Count by

- Mode of instruction
- Schedule
- Faculty Status (PT vs FT)

Enrollment counts: 40 - 2019/2020 – live/Hybrid, 56- 2020/2021- live/Hybrid, 103- 2021/2022 -Live/hybrid

Scheduling: classes are held in the evening hours.

Currently Brian Packer and Kim Lytle have been in the classroom, Joshua O'Neal (DE/Online weld 56 only) Richard Bremen and Cody Jeffers (BNSF training only)

# Class Size Average by

- Mode of instruction
- Schedule
- Faculty Status (PT vs FT)

Class size average: 2019/2020 - (20.00) Live/Hybrid, 2020/2021 - (9.33) Live/online, 2021/2022 - (14.71) hybrid

Scheduling: classes are held in the evening hours

Currently Brian Packer, Kim Lytle are in the classroom, Joshua O'Neal (DE/Online weld 56)

### Student Equity Data

Specifically address any equity gaps. What innovative plans or projects will help to close these gaps? The equity gap currently is the lack of a perment classroom and lab structure for continued grow and expansion of the training portion of this program. New on campus facilities would improve the equity gap.

Efficiency: WSCH, FTES

N/A

#### Curriculum – Course Outline of Record

Curriculum is updated and reviewed every semester, the COR has been updated and used to update PLO and SLO mapping.

# Overall Observation of Data on Courses

This section provides an opportunity to tie in all the data about the courses. Tell the story behind the numbers. Be sure to consider what an outsider to your program or career technical field may not know about current trends or changes. Provide an analysis of the "big picture."

Overall data indicates the weld courses are well liked with a high success and retention rates. The instructor/Faculty are all highly knowledgeable subject matter experts (SME) in their field. The course's are designed to give the student learner a fundamental knowledge of the skilled welding trades for entry level and employment opportunities. And to train students to acquire living wage employment.

Program Learning Outcomes	Assessment Results – Summary of Data	Use of Results
Apply the skills     necessary for welding     following the AWS     guidelines	2019/2020 – success 62.5% 2020/2021 – " " 80.7% 2021/2022 - " " 79.6%	BCC students are taught by industry trained welders with over 20 years experience in the field
2. Demonstrate knowledge about the required materials of the trade and can operate equipment in a safe manner.	Click or tap here to enter text.	BCC students are taught the varying aspects per process using proven technics in the lab and through industry current curriculum.
3. Demonstrate skills necessary to receive industry recognized certifications in the Semi-Automatic Arc Welding (GMAW/FCAW) processes.	Click or tap here to enter text.	BCC students are given the opportunity to qualify through AWS standardized testing for their AWS D1.1 welding test certification.
4. Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
5. Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

# Program Data and Analysis

## **Demographics**

The welding program is equity and equality minded and supports all genders, race, and ethnicities. Historically this course comprises of black, Hispanic, white, Asian/filipino, native American and pacific islander.

## **Award Count**

COA 2019/2020 - (-), COA, 2020/2021 - (-), COA, 2021/2022 -(-)

## Student Equity Data

# Specifically address any equity gaps. What innovative plans or projects will help to close these gaps?

N/A, There are no equity gaps to mention, this course is gender friendly and all inclusive. The perception that the skilled trades are male only is a falsehood, BCC encourages and welcomes female and all gender specific groups. BCC weld program has had many successful female welders come out of the program.

## Student or Program Satisfaction Survey Results

N/A, Student survey's indicates that the courses are well liked, and the instructor are extremely knowledgeable and well liked in the subject matter.

# CTE-specific data

- CTE Advisory Boards
- Labor Market data
- Program Viability

Advisory meetings are held at least once per year per discipline.

Labor market: Employment for welding technicians is expected to rise and have 1,856 annual job opening over the next five years 2018 to 2023.

There are no plans to change mode of delivery or curriculum. The program currently and has been for the past several years in need of a full time instructor to lead the program. The program has the ability to expand with the introduction of a piping program that has been shelved due to lack of experienced trainer/instructors.

#### Comparative data (compared to BCC and/or compared to other programs)

When new technology and curriculum from Industry and publisher's are released we update our adoptions to meet advisory and manufacture needs, Other institutions offer similar programs to our weld and CTE programs, however they have followed our lead as BCC offers welding, mechanical and Electrical programs. BCC has the potencial to be the preferred institution of training in the Welding, IMMT/IMEI fields, if supported and recognized.

### Overall Observation of Data on Program

This section provides an opportunity to tie in all the data about the program. Tell the story behind the numbers. Be sure to consider what an outsider to your program or career technical field may not know about current trends or changes. Provide an analysis of the "big picture."

The data indicates that our Weld program is effective in retention and success rates, and students gaining employment in living wage occupations. Due to the pandemic like all institutions we have lower

enrollment rates for 2020/2021 school year. The data needs to be used to improve quality of instruction, facilities and recognition of the faculty. I still see the same lacking issues as of 2015, better and improved facilities, industry trained experienced instructors, lack of a full time welding instructor who should be multi trades trained to cover not just welding but the CTE IMMT/IMEI trades programs.

This shouldn't be a faculty issue, the Deans, VP and President should be in collaboration with the faculty to grow and redesign this area here at BCC. Telling us to read the welding application qualifications is passing the buck at best, lets revamp the qualifications to get what best serves the students and BCC.

# Guided Pathways and Response

List the other programs that are part of your Guided Pathway

2 year plans are working and updated, SLO/PLO mapping is current, the IMEI, Welding & Safety programs are all within the pathway of the IMMT program.

Provide a summary of the collaboration with other programs in the pathway.

Examples: meetings, projects, etc.

IMMT/IMEI/Auto, these CTE programs are inclusive to the Weld program and have contributions to facilitate learning objectives within each division.

Faculty/ Program Staff Data and Analysis

Faculty Load (FTEF)

Click or tap here to enter text.

#### FT/PT Faculty Ratio

- (2) in the classroom 50% adjunct for the weld
- (1) Online only weld 56 blueprint reading

NO Full-Time Faculty

# Faculty Professional Development

CTE faculty professional development is welcomed yet never used because of scheduling, budget or professional development that lacks industry specific training opportunities for faculty or seen as useless in the field of study.

Example of useful training: Fabtech for the welding program, Skills USA for all programs etc.

#### Program Staffing and Support

CTE has one full time faculty (100%) for the IMMT/IMEI, one adjunct for the (50%) IMEI, one full time Auto instructor, three weld adjuncts, with only one currently to finish the semester Fall 2022.

## Overall Observation of Data on Faculty

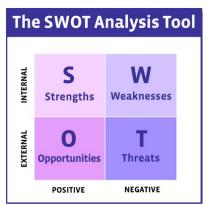
This section provides an opportunity to tie in all the data about the faculty. Tell the story behind the numbers. Be sure to consider what an outsider to your program or career technical field may not know about current trends or changes. Provide an analysis of the "big picture."

The weld program is currently being taught by Brian Packer (Adjunct) Kim Lytle (Adjunct) teaches the photo course and is booked full leaving Brian the full load in the welding department. Joshua O'Neal teaches weld 56 online only. Both Brian and Josh are NCCER ICTP trainers with Master Degree credentials and can teach multiple subjects including IMMT.

Richard Bremen and Cody Jeffers facilitate the BNSF program only, as Cody has movied back to Wyoming.

# **SWOT Analysis**

Conducting a SWOT Analysis (Strengths, Weaknesses, Opportunities, Threats) is another tool that can help areas evaluate themselves. The SWOT Analysis not only looks internally, but externally as well. The SWOT Analysis provides a way for areas to highlight their accomplishments and also identify possible gaps or issues that need to be addressed.



	Positive/ Helpful	Negative/ Harmful
Internal	STRENGTHS	WEAKNESSES
	Faculty has industry experience	No full time faculty to lead the
	in the craft. Two adjunct faculty	program
	have a combine 40 years plus	
	experience, two with Master	
	degrees in education.	
External	OPPORTUNITIES	THREATS
	The shortage of skilled labor	State funding, budget cuts, lack
	present BCC with an	of support within and not taking
	opportunity of growth within	advantage of the opportunity to
	our CTE Welding & IMMT/IMEI	grow our CTE
	programs.	Welding/IMMT/IMEI programs.
		Poor planning and management
		of resources.

# III. Program Goals

In this section, programs will answer the question "How can we improve? What do we need to meet our goals?" The purpose of this section is to use data to develop goals and objectives for the next three years.

Reflect on the responses to all the previous questions and the SWOT analysis in Section Two. As you develop goals and objectives,

- Formulate three to five Program Goals to maintain or enhance program strengths, or to address identified weaknesses.
  - Cite evidence from assessment data and/or other student achievement data, course, faculty, etc.
- Indicate how each Goal is **Aligned** with the College's <u>Strategic Priorities</u>.
- Identify explicit **Objectives** for reaching each goal.
- Develop Outcome statements and appropriate measures for each objective.

#### GOAL #1

To enhance enrollment counts

#### Objective 1

Use marketing, rebranding and outreach to stimulate student interest.

#### Actions, Tasks

Use Social media for announcements and advertising, change and develop our programs and schedules to meet our student needs.

# Outcomes, Measures, Assessment

Currently the outcomes and enrollment numbers support our welding programs success, retention and success rates to measure programs success is positive. Students are gaining living wage employment.

#### Objective 2

Maintain and or increase funding for new technology.

# Actions, Tasks

Acquire funding through grants and approvals from district.

#### Outcomes, Measures, Assessment

Improvement and additions to facilities.

#### Objective 3

To hire more full time faculty for the CTE group. A multi-discplined trades journeymen who can teach multiple subjects (Maintenance. Electrical, Instrumentation, HVAC, Welding, Construction)

#### Actions, Tasks

Obtain another full time faculty who is multi-skilled and credentialled to teach all IMMT/IMEI & welding programs.

### Outcomes, Measures, Assessment

Outcomes would be to create more flexibility and strength to our teaching and training capacity.

Alignment to BCC Strategic Priority (Select at least one but also choose all that apply – click Choose an item for the drop-down list to appear)

Strategic Priority 2: Ignite a Culture of Learning and Innovation

Strategic Priority 3: Build Community

Choose an item.

Strategic Priority 4: Achieve Sustainable Excellence in all Operations

#### GOAL #2

Replace aging welding equipment with new Lincolm machines.

### Objective 1

Acquire funding from the district to expand and replace old equipment.

#### Actions, Tasks

Acquire funding and seek professional guidance from experienced consultants and get started on construction. Studies have been done in the past and the money used for the study was a waste, as no action has been birthed from it.

#### Outcomes, Measures, Assessment

To have perment facilities that support industrial training needs.

# Objective 2

Use funding resources to maximize classroom size and space for labs.

#### Actions, Tasks

Develop and build space for both classroom lecture and a professional lab space for training and student development.

# Outcomes, Measures, Assessment

Better qualified and trained student workforce.

# *Objective 3*

Provide new equipment and technologies for the program as new technologies come forth.

# Actions, Tasks

Seek professional development programs that align with the training and curriculum of the weld programs.

#### Outcomes, Measures, Assessment

Better well trained students.

Alignment to BCC Strategic Priority (Select at least one but also choose all that apply – click Choose an item for the drop-down list to appear)

Choose an item.

Choose an item.

Choose an item.

Choose an item.

#### GOAL #3

Research how the classes could become transferable to attract more students, and to align with UC programs such as mechanical engineering, electrical engineering etc.

#### Objective 1

Contact CSU institutions to determine what direction the weld program needs to follow to provide a pathway to high educational goals such as engineering. (Mechanical, Civil, etc.)

#### Actions, Tasks

Coordinate required transferable curriculum to meet higher education requirements

# Outcomes, Measures, Assessment

Investigate the transferability of the Welding Associates degree.

#### Objective 2

Coordinate with councilors and get more engagement from administration, BOT, and other committes to recognize the viability of the CTE programs, especially for students who do not plan on attending a four year university or just need an uplift on current job skills.

#### Actions, Tasks

Bring forth to Academic senate and other campus committes, to be recognized as equal to other programs on campus. We talk about support and say we support the CTE program in general and yet no viable evidence exists to support that claim.

# Outcomes, Measures, Assessment

Student degrees in the field of Welding/IMMT/IMEI would be recognized by industry and professional societies like the IBEW, Ironworkers, Millwrights and other labor unions and institutions. We currently provide third party credentials from the NCCER.

## Objective 3

Click or tap here to enter text.

#### Actions, Tasks

Click or tap here to enter text.

## Outcomes, Measures, Assessment

Click or tap here to enter text.

Alignment to BCC Strategic Priority (Select at least one but also choose all that apply – click Choose an item for the drop-down list to appear)

Choose an item.

Choose an item.

Choose an item.

Choose an item.

# GOAL #4 Click or tap here to enter text. Objective 1 Click or tap here to enter text. Actions, Tasks Click or tap here to enter text. Outcomes, Measures, Assessment Click or tap here to enter text. Objective 2 Click or tap here to enter text. Actions, Tasks Click or tap here to enter text. Outcomes, Measures, Assessment Click or tap here to enter text. Objective 3 Click or tap here to enter text. Actions, Tasks Click or tap here to enter text. Outcomes, Measures, Assessment Click or tap here to enter text. Alignment to BCC Strategic Priority (Select at least one but also choose all that apply – click Choose an item for the drop-down list to appear) Choose an item. Choose an item. Choose an item. Choose an item. GOAL #5 Click or tap here to enter text. Objective 1 Click or tap here to enter text. Actions, Tasks Click or tap here to enter text.

Outcomes, Measures, Assessment Click or tap here to enter text.

# Objective 2 Click or tap here to enter text.

Actions, Tasks

Click or tap here to enter text.

Outcomes, Measures, Assessment

Click or tap here to enter text.

Objective 3

Click or tap here to enter text.

Actions, Tasks

Click or tap here to enter text.

Outcomes, Measures, Assessment

Click or tap here to enter text.

Alignment to BCC Strategic Priority (Select at least one but also choose all that apply – click Choose an item for the drop-down list to appear)

Choose an item.

Choose an item.

Choose an item.

Choose an item.

# IV. Resource Requests:

What does the program need to meet its goals and objectives?

Programs can submit their requests for resources by utilizing the Resource Request Form. Requests should be evidence-based and tied to goals and objectives stated above.

This form may also be updated and submitted in Years Two and Three if needed.