

CAREER AND TECHNICAL EDUCATION – SUPPLEMENTAL QUESTIONS

CTE programs must conduct a full program review every 4 years. The full review includes answering these supplemental questions. Every two years (once between full reviews) these supplemental questions must be answered and submitted to Academic Affairs for posting on the College website.

Use labor market data, advisory committee input, institutional data, and the provided CTE 2-year Program Review data to respond to the following questions:

1. How strong is the occupational demand for the program? As you analyze demand over the past 5 years and projected demand for next 5 years, address state and local needs for the program.

The demand for welders is great. Due to the death and retirement rate of present welders, and the fact that over recent years that there has been a major push for “college” education excluding the trades, the decline in finding qualified welders is a big issue. According to the Department of Labor and Statistics:

Job Outlook, 2018-28

The projected percent change in employment from 2018 to 2028. The average growth rate for all occupations in welding is 5 percent.

| Quick Facts: Welders, Cutters, Solderers, and Brazers | |
|---|---------------------------------------|
| 2018 Median Pay | \$41,380 per year \$19.89 per hour |
| Typical Entry-Level Education | High school diploma or equivalent |
| Work Experience in a Related Occupation | None |
| On-the-job Training | Moderate-term on-the-job training |
| Number of Jobs, 2018 | 424,700 |
| Job Outlook, 2018-28 | 3% (Slower than average) |
| Employment Change, 2018-28 | 14,500 |

**Area
Title**

**Base
Projected
Change
% Change
Avg. Anl Openings**

California Welders, Cutters, Solderers, and Brazers 29,500 31,800 2,300 7.8 3,450

Welding, Soldering, and Brazing Workers

Note: The following data reflects the job market in the Compton College 7.5-mile service area.

Job Estimates - 2018: 1,985 (11% above national average in terms of job availability per area)

Percent Change in Number of Jobs from 2013-2018: +0.7% (National average: +4.5%)

Projected Change in Jobs from 2018-2022: -1.7% (National average: +4.6%)

Area Location Quotient: 1.11 (Numbers above 1.00 mean the occupation is more concentrated in the area compared to the nation. Numbers below 1.00 mean the occupation is less concentrated in the area.)

Top 10 Industries Employing Welding, Soldering, and Brazing Workers (Compton College Service Area)

| Industry | % of Occupation in Industry (2018) | % Change in Industry Jobs (2013-2018) |
|---|---|--|
| Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance | 19.1% | 0% |
| Sheet Metal Work Manufacturing | 4.7% | +11% |
| Machine Shops | 4.1% | +4% |
| Ornamental and Architectural Metal Work Manufacturing | 3.6% | -1% |
| All Other Miscellaneous Fabricated Metal Product Manufacturing | 2.5% | +25% |
| Nonferrous Forging | 2.5% | +23% |
| Temporary Help Services | 2.4% | +14% |
| Travel Trailer and Camper Manufacturing | 2.2% | +42% |
| Other Industrial Machinery Manufacturing | 2.2% | 0% |

| | | |
|----------------------------------|------|------|
| Motor Vehicle Body Manufacturing | 1.9% | +15% |
|----------------------------------|------|------|

Note: The following data reflects the job market in California.

Job Estimates - 2018: 37,335 (35% below national average in terms of availability per state)

Percent Change in Number of Jobs from 2013-2018: +9.5% (National average: +4.5%)

Projected Change in Jobs from 2018-2022: +3.9% (National average: +4.6%)

State Location Quotient: 0.65 (Numbers above 1.00 mean the occupation is more concentrated in the state compared to the nation. Numbers below 1.00 mean the occupation is less concentrated in the state.)

Top 10 Industries Employing Welding, Soldering, and Brazing Workers (California Statewide)

| Industry | % of Occupation in Industry (2018) | % Change in Industry Jobs (2013-2018) |
|---|------------------------------------|---------------------------------------|
| Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance | 10.6% | +2% |
| Sheet Metal Work Manufacturing | 4.9% | +17% |
| Machine Shops | 4.5% | +9% |
| Temporary Help Services | 4.3% | +21% |
| Framing Contractors | 2.6% | +94% |
| Fabricated Structural Metal Manufacturing | 2.2% | +16% |
| Metal Window and Door Manufacturing | 2.0% | +33% |
| Semiconductor Machinery Manufacturing | 2.0% | +39% |
| Commercial and Institutional Building Construction | 1.8% | +29% |
| Ship Building and Repairing | 1.6% | -8% |

Due to the fact that welding is such a versatile trade, meaning it is compatible with almost every other aspect of the construction trades, these numbers are not a true reflection of the mobility of having welding licensing..

- How does the program address needs that are not met by similar programs in the region?

Compton's Welding program intends to address the needs that are not met by similar programs, by first incorporating an onsite AWS Certified Testing lab, developing innovative programs such as Pipe training and also Robotic programming certifications.

- What are the completion, success, and employment rates for the students? Discuss any factors that may impact completion, success, and employment rates. If applicable, what is the program doing to improve these rates?

Due to Compton being under the accreditation of El Camino, I do not believe that these numbers are correct. Many of our students that were trained here were given credit as El Camino students. The welding program can offer classes that will benefit future students.

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Associate Degrees Awarded

| | 2014-2015 | 2015-2016 | 2016-2017 | 2017-2018 |
|---------------------------|-----------|-----------|-----------|-----------|
| Welding Technology | 1 | 2 | 1 | 2 |

Certificates Awarded

| | 2014-2015 | 2015-2016 | 2016-2017 | 2017-2018 |
|---------------------------|-----------|-----------|-----------|-----------|
| Welding Technology | 2 | 3 | 3 | 3 |

Success Rates

| | FA2015 | SP2016 | FA2016 | SP2017 | FA2017 | SP2018 |
|----------------|--------|--------|--------|--------|--------|--------|
| Welding | 65.0% | 77.2% | 80.2% | 81.8% | 69.6% | 78.0% |

Employment Rates

| | 2014-2015 | 2015-2016 | 2016-2017 | 2017-2018 |
|--|-----------|-----------|-----------|-----------|
| Welding Technology (TOP Code: 095650) | 54.6% | 59.3% | 47.6% | 66.7% |

Source: CCCC CO CTE Core Indicator Summary Report

5. If there is a licensure exam for students to work in their field of study, please list the exam and the pass rate. If there are multiple licensure exams in the program, include them all. Discuss any factors that may impact licensure exam pass rates. If applicable, what is the program doing to improve these rates?

- *AWS 3G/4G Practical exam*
- *Los Angeles City Structural Steel Certification*

In 2018, we had approximately 20 students attempt and pass both the Los Angeles City Certification test and the 3G/4G Practical exams either under an AWS or at a non AWS testing lab.

One factor that heavily impacted exam rates, was the premature closures of Compton's advanced courses over the past 4 years.

The program can only do what it is allowed to do, offer classes that the students require in order to pass the exams!

6. Is the advisory committee satisfied with the level of preparation of program graduates? How has advisory committee input been used in the past two years to ensure employer needs are met by the program? Describe any advisory committee recommendations that the program is either unable to implement or is in the process of implementing.

The advisory committee is aware of the potential that Compton's welding program has in preparing and certifying its students, noted by the past record of successes. The instructor has maintained a personal log of student completers and their employment statuses. The committee is also aware of the premature closures of classes at this campus, which hinders and has hindered success rates in the last 4 years for the program. The committee recommendations for the welding program are all possible, for example, continue equipment upgrades and attain a certified testing lab.

California Education Code 78016 requires that the review process for CTE programs includes the review and comments of a program's advisory committee. **Provide the following information:**

- a. Advisory committee membership list and credentials

- *Pamela Richardson – Welding Professor – Compton College*
- *Lisa Legohn – Lead Welding Professor – LATTC*
- *Alan Ojerio- Account Manager - Airgas*
- *Ed Campbell –Teacher's Assistant (Welding) – Compton College*
- *Greg Gayles – LA Certified Welder – Union member Local 433 Ironworkers*

- b. Meeting minutes or other documentation to demonstrate that the CTE program review process has met the above Education Code requirement.



**ADVISORY COMMITTEE MEETING
El Camino Compton Center
February 25, 2019– 11:00 am – 12:00 pm
Compton College**

MEMBERS PRESENT

- Pamela Richardson Welding Professor/ECC
 Alan Ojerio ... Account Manager/Airgas
 Edmund Campbell Tool Attendant/ECC

OTHERS ATTENDING:

Estela Rayas Welding Professor/LAUSD

Handouts

- Agenda
- Catalogs -Prospective Welding Equipment Test Lab

I. Call to Order

The meeting was called to order at 11:00 a.m. by Pamela Richardson.

II. Approval of Minutes

February 25, 2019, was approved with the following changes: Paul Anderson (moved/ seconded)

III. Welding Machine Vendors

Mr. Ojerio offered his opinion about the two major companies that supply welding machines, Lincoln and Miller, and that Miller had the best customer service. He stated that he could not tell Ms. Richardson or the college from

whom to purchase. He works with primarily Miller, and that he has found that this company offered more customer care after equipment was purchase. most Ms. Richardson stated that she wanted FCAW machines since the program would have a test site.

Mr. Ojerio then stated that he would get quotes as soon as available, once a model was chosen by the instructor.

Ms. Richardson also questioned any electrical needs that may need to be completed in order to install the equipment.

Mr. Campbell stated that once a model was chosen, he would look into what electrical needs would be required.

Mr. Ojerio made a couple suggestions regarding the models on the handouts, and Ms. Richardson and Mr. Campbell agreed on the model presently used in today's workforce.

Mr. Ojerio stated that quote would be sent out before the end of the day.

IV. New Construction/Electrical Requirements

The new machinery would require only to be connected where are already available outlets.

V RECAP

- Ms. Richardson stated there would be an additional meeting on March 15, 2019
- Mr. Ojerio requested to walk thru the shop to identify placement of the equipment.
- Mr. Ojerio will provide a detailed quote by email for Ms. Richardson by February 25, 2019.

VI Adjournment

The meeting officially adjourned at 12:20 p.m.