

Comprehensive Program Review Report



Program Review - Welding

Program Summary

2023-2024

Prepared by: Chris Huff

What are the strengths of your area?: 1) The Welding courses have increased in student success to 81.9% in 2022-2023; this is an improvement from last year's 76.7%.

2) Another data set that has improved is the FTES/FTEF has increased to 12.29 in 2022-2023 from 11.93 in 2021-2022.

3) state of art Welding shop with updated equipment.

4) Our enhanced employer engagement continues to be a strength that will connect Welding students to industrial professionals and future employment. This employer engagement will also be critical to identify and recruit possible new welding faculty as our course offerings expand. This is growing, but is also a challenge to get more employers to engage with the COS welding program.

4) The Welding program's close connections with the American Welding Society has been a past strength and will continue to be a key factor in future program development. All welding faculty are AWS members and local Central Valley Section officers. I & T Division Chairman and Welding Department head, Randy Emery has been elected AWS District Director for Central California, as well as faculty Chris Huff, AWS Central Valley Section chairman. This will connect our welding program with educational institutions and employers from multiple regions, throughout the State of California. Mr. Emery's new position will also scale up scholarship opportunities and professional engagements between College of the Sequoias and the American Welding Society.

6) The continued support of a .5 welding shop technician has added continuity and better management of resources for the Welding program. This also helps ensure equipment is safe and operational.

7) The Welding program has been awarded increased general budget funding that will assist in continuous improvement and growth. Welding was given a budget augmentation to cover AWS online Welding fundamentals. We need to explore how many other Welding students can access this platform so that other non-cohort classes can move to OER.

8) Industry demand for skilled trade professionals continues to grow and expand. This increased demand is projected to grow industry wide and will ensure local welding programs will increase enrollment and engagement in the profession.

9) Essential Workplace Skills have been piloted with the ESP (Essential Skills Program) which is a national program. The Welding program has led the way in meeting this strategic goal.

What improvements are needed?: 1. Expand the welding lab to include welding testing. Some equipment has been purchased but additionally a microscope will be needed to examine the welds.

2. Air quality in the Welding lab is working in a substandard manner. This is a safety issue for our faculty and students. This has been reported to Facilities and will work with the Dean of I and T to find a way to make sure air quality meets educational standards. This will be addressed immediately with a Facilities request.

3. Industry outreach which is critical to the Welding program success and employment of graduates, however, there is no compensation for this type of work. The Division Chair does this as part of his .6 release time. As a result of past engagement

between the Welding program and local industry student placement opportunities have expanded. Instructor outreach must be supported and improved to maintain growth of these critical actions.

4. The greatest external challenges are the flip side of the opportunities. That is, industry expects this education program to be flexible enough to offer the changing training that they require for their employees. Flexibility continues to be a challenge. The cohort during the day provides access to 22-24 students in addition the other non cohort welding courses are full. There is a need to offer additional welding courses to increase completion rates. An optimal welding schedule needs to be developed.

5. Apprenticeship model for employers needs to be developed in welding for both cohort and non-cohort students. AWS does have apprenticeships standards.

6. Lack of counseling specific to the Welding program is problematic. Students need help with Certificate completion SEPs as well as overall career advisement. Many students do not understand this pathway; a designated Pathway Counselor for the trades would help increase our CTE completion rates. (similar position to what Amelia Sweeney provided to Nursing and Allied Health has proven to be a best practice.)

7. A testing lab is a goal of the Welding program to increase employability and this requires accreditation from AWS as ATF - Accredited Testing Facility.

Describe any external opportunities or challenges.: DOL/DAS apprenticeship is sometimes a barrier.

Overall SLO Achievement: SLOs need further assessment

Changes Based on SLO Achievement: None - courses are successful

Overall PLO Achievement: Overall PLO achievement is good with improved course success. Many students are finding employment.

15 AS Degrees were awarded; 14 CTE COA . This will improve with CTE Auto award.

Changes Based on PLO Achievement: none - other than increasing Apprenticeship opportunities.

Outcome cycle evaluation: Need further work with faculty to make sure SLO/PLO are done in a timely manner and that the assessment cycle is assessed.

Action: 2023-2024; 2022-2023 Increase course offerings for future welding students and shorten pathways to program completions.

Develop an EVENING welding program to attract students who are interested in welding and are only available for evening classes.

Leave Blank:

Implementation Timeline: 2023 - 2024

Leave Blank:

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Randy Emery, Welding Educator, I & T Division Chairman

Rationale (With supporting data):

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2023 - 2024

09/16/2023

Status: Continue Action Next Year

We have been working on adding a few welding classes such as WELD 171 and hired a new adjunct. But there is still work to be done to optimize the number of completers.

Impact on District Objectives/Unit Outcomes (Not Required):

Resources Description

Program Review - Welding

Personnel - Faculty - Due to the growing enrollment in the Welding program and all full-time faculty teaching in an overload status. This new faculty resource will be required to accomplish this action. (Active)

Why is this resource required for this action?: This resource is required for this action because qualified full-time Welding faculty will be needed to organize, develop, deliver and maintain this new EVENING PROGRAM.

Notes (optional): Based on industrial and community feedback a large number of potential welding students are working adults. These working adults are not available to take our traditional day time courses.

Cost of Request (Nothing will be funded over the amount listed.):

Related Documents:

[Wait List Demand.xlsx](#)

[WELD Fill Rate.xlsx](#)

[WELD WSCH.pdf](#)

Link Actions to District Objectives

District Objectives: 2021-2025

District Objective 1.1 - The District will increase FTES 2% from 2021 to 2025.

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.

District Objective 3.1 - Reduce equity gaps in course success rates across all departments by 40% from 2021-2025.

Action: 2023-2024; 2022-2023 Research and develop a budget and timeline to become an American Welding Society, Accredited Testing Facility. (AWS, ATF)

Begin a feasibility study to determine requirements and cost to qualify College of the Sequoias welding program as an AWS ATF.

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Implementation Timeline: 2023 - 2024

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Identify related course/program outcomes: Increase employability of students; national recognition

Person(s) Responsible (Name and Position): Randy Emery, Welding Educator, I & T Division Chairman; Chris Huff

Rationale (With supporting data):

Priority: Medium

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2023 - 2024

09/16/2023

Status: Continue Action Next Year

This was not completed; but can be done to help the COS Welding program to become national recognition to our program. This will improve employability of the students.

Impact on District Objectives/Unit Outcomes (Not Required):

Program Review - Welding

Adjustment to Base Budget - Resource will include an operation budget to maintain records, miscellaneous materials and annual audit fees. (Active)

Why is this resource required for this action?: Operating cost will be expected to maintain this action.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 10000

Related Documents:

[AWS ATF SPEC.pdf](#)

Link Actions to District Objectives

District Objectives: 2021-2025

District Objective 1.1 - The District will increase FTES 2% from 2021 to 2025.

District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.

District Objective 3.1 - Reduce equity gaps in course success rates across all departments by 40% from 2021-2025.

Action: 2023-2024; 2022-2023 Expand existing quality control laboratory capabilities with more advanced testing equipment.

Research, determine, purchase and install testing equipment needed to expand quality control training for welding students.

Leave Blank:

Implementation Timeline: 2023 - 2024

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Randy Emery, Welding Educator, I & T Division Chairman; Chris Huff

Rationale (With supporting data): increasing testing equipment will allow current courses to achieve their SLOs.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2023 - 2024

09/16/2023

Status: Continue Action Next Year

Tensile testing equipment was purchased; but further equipment needs to be purchased to add this component to the welding program.

Impact on District Objectives/Unit Outcomes (Not Required): outcomes in current Welding courses would use this updated lab immediately

Resources Description

Equipment - Instructional - Equipment for consideration will include Weld Test Stands, microscope for micro analysis of weld grain structure. (Active)

Why is this resource required for this action?: The request equipment will be required to be available for direct "hands on" training for welding students. Without these resources this action will not be possible.

Program Review - Welding

Notes (optional): In process quality control training will ensure that program completers have this hybrid training. Professional metal fabricators are expected to have beginning to advanced training in typical quality control practices. This would be eligible for SW8.

Cost of Request (Nothing will be funded over the amount listed.): 30000

Related Documents:

[Weld Quality Control Equipment.pdf](#)

Link Actions to District Objectives

District Objectives: 2018-2021

District Objective 2.1 - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

District Objectives: 2021-2025

District Objective 1.1 - The District will increase FTES 2% from 2021 to 2025.

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

District Objective 2.4 - Increase the percentage of CTE students who achieve their employment objectives by five percentage points (job closely related to field of study and attainment of a livable wage) and the number of CTE students who successfully complete 9+ CTE units in a single year by 10% from 2021-2025.

District Objective 3.1 - Reduce equity gaps in course success rates across all departments by 40% from 2021-2025.

Action: 2023-2024 Provide safe lab environment for students in the Industry and Trades courses

A scissor lift is a large piece of equipment that will help faculty/staff maintain proper lighting and safety standards in the CTE Buildings on the Tulare campus.

Leave Blank:

Implementation Timeline: 2023 - 2024

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Identify related course/program outcomes: Lab check off for Welding, Construction, Electrician training all require the use of this scissor lift.

Person(s) Responsible (Name and Position): Jonna Schengel, Randy Emery, Brian Unruh, Shane Baesemann

Rationale (With supporting data): Faculty in each area has to rent a scissor lift currently. Therefore a purchase that would reduce rental expenses.

Priority: Medium

Safety Issue: Yes

External Mandate: No

Safety/Mandate Explanation: Scissor lift is required to maintain the safe standards in the I and T division labs

Resources Description

Equipment - Non-Instructional - Scissor Lift for I and T labs to provide safe lab environment (Active)

Why is this resource required for this action?: Rental costs at different campuses is no longer necessary since all I and T programs will be on the same campus in Tulare for 2024-2025. This purchase would save the District in the long run.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 15000

Action: 2023-2024 Increase CTE completion with services provided by

Program Review - Welding

a "Trades" Pathway Counselor

Hire a designated Pathway Counselor for the trades would help increase our CTE completion rates. (similar position to what Amelia Sweeney provided to Nursing and Allied Health has proven to be a best practice.)

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Implementation Timeline: 2023 - 2024

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Jonna Schengel, Dean; Louann Waldner, Provost

Rationale (With supporting data):

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Resources Description

Personnel - Faculty - Trades Pathway counselor (Active)

Why is this resource required for this action?: to provide accurate and industry based SEP and career planning to students in the trade programs- aligns with the new programs being housed in the new Technology and Trades CTE Building at the Tulare campus opening in Fall 2024.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 125000

Action: 2022- 2023 Improve access to training resources and reduce student cost.

Secure permanent funding for AWS "Welding Fundamental of Welding" LMS.

Leave Blank:

Implementation Timeline: 2022 - 2023

Leave Blank:

Leave Blank:

Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Randy Emery, Welding Educator, I & T Division Chairman

Rationale (With supporting data):

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2023 - 2024

09/16/2023

Status: Action Completed

AWS online materials were secured through budget augmentation; will make sure all welding students have access.

Impact on District Objectives/Unit Outcomes (Not Required):

Resources Description

Technology - American Welding Society's Fundamentals of Welding, learning management system is a completely online resource available 24 / 7. (Active)

Program Review - Welding

Why is this resource required for this action?: This resource will allow students to engage in training and learning practices on a more flexible schedule. This will greatly improve student access and allow working students to become more successful in their education experiences. The inclusion of an electronic textbook within the resource will also eliminate textbook cost for enrolled students.

Notes (optional): Budget augmentation to the permanent welding department will be needed. Estimated cost will \$7,000.00 per academic year.

Cost of Request (Nothing will be funded over the amount listed.): 7000

Link Actions to District Objectives

District Objectives: 2018-2021

District Objective 1.1 - The District will increase FTES by 1.75% over the three years

District Objective 2.4 - By 2021, Increase the percentage of CTE students who achieve their employment objectives by 5 percentage points

District Objective 4.3 - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

District Objectives: 2021-2025

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

Action: 2022 - 2023 Outreach to future students

Plan, develop and increase outreach activities that will promote the COS Welding program to future students.

Leave Blank:

Implementation Timeline: 2022 - 2023

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Randy Emery and Chris Huff

Rationale (With supporting data): With the ability to attract more students our enrollment will increase and thus create more degree and certificate completions.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2023 - 2024

09/16/2023

Status: Action Completed

HS CTE Liaison has been hired and this position does outreach to all the local high schools. Darcy will reach out to Randy and Chris to help speak specifically to the students about the welding program. Trades Day has been budgeted and supported with Perkins funds, which also a significant outreach event to HS students.

Impact on District Objectives/Unit Outcomes (Not Required):

Resources Description

Equipment - Non-Instructional - A presentation trailer setup to remotely show high school and related groups the equipment and applications of the welding industry. (Active)

Why is this resource required for this action?: With the ability's to organize a presentation trailer work times would be

Program Review - Welding

greatly reduced. This would allow for more effective recruiting actions to attract future students.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 20000

Link Actions to District Objectives

District Objectives: 2018-2021

District Objective 1.1 - The District will increase FTES by 1.75% over the three years

District Objective 2.1 - Increase the percentage of students who earn an associate degree or certificate (CTE and Non-CTE) by 5 percentage points over three years

District Objective 4.3 - College of the Sequoias Board of Trustees, administration, faculty, and staff will engage in best practices and staff development to sustain effective operational systems for institutional assessment and continuous improvement.

District Objectives: 2021-2025

District Objective 1.1 - The District will increase FTES 2% from 2021 to 2025.

District Objective 2.1 - Increase the number of students who earn an associate degree or certificate (CTE and non-CTE) by 5% from 2021-2025.

Action: 2022-2023 Secure transport for industry donations and program maintenance tasks.

Purchase and maintain a truck to pick up and deliver donations from industry partners.

Leave Blank:

Implementation Timeline: 2022 - 2023

Leave Blank:

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Randy Emery, Welding Educator, I & T Division Chairman

Rationale (With supporting data):

Priority: Medium

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2023 - 2024

09/16/2023

Status: Action Discontinued

Per the Dean, one program is not going to secure a specific vehicle. However, with the new CTE building at Tulare campus, we will obtain access to a shared vehicle or one can be rented to secure donations from industry partners.

Impact on District Objectives/Unit Outcomes (Not Required):

Resources Description

Facilities - A truck capable of hauling industrial materials and equipment between the college, vendors and employer partners. (Active)

Why is this resource required for this action?: To save program operating cost employer and supporter donations need to be accepted. This will require capabilities to pick up valuable items that will benefit the Welding program.

Notes (optional): This resource will be usable by other programs, and this will improve the return on investment for this resource. AG, IM/IA would all benefit from this vehicle, especially since we are increasing program offerings in the new CTE

Program Review - Welding

building in Fall 2024.

Cost of Request (Nothing will be funded over the amount listed.): 30000

Link Actions to District Objectives

District Objectives: 2021-2025

District Objective 4.3 - Improve professional development practices District-wide for all District employees to support equity and operational effectiveness from 2021-2025.