

Comprehensive Program Review Report



Program Review - Electrician Training

Program Summary

2023-2024

Prepared by: Shane Baesemann

What are the strengths of your area?: The strength of the Electrician Training program continues to be our enrollment, We have well over 200 students enrolled in our program. Our introductory course has an enrollment of 50. A few of our other courses have approximately 40 students per section as well. We continue to offer on average 7 of our 8 offered courses every semester. We will continue to offer as many courses as needed by our students to successfully achieve their degree requirements. We will have several students who will become our inaugural degree recipients by the end of the Spring 2024 semester.

Overall ET Pass rates have stayed strong - 89.1%. Enrollment also remains strong at 11.23 FTES/FTEF which is an increase from 8.9 FTES/FTEF in 2021-2022.

What improvements are needed?: Our program needs to improve our labs. We have been working for the past several semester to improve, but we need to continue working to have every student working individually in lab, as well as in groups. Our entry students are not prepared for a job, they lack some basic skills that must be demonstrated to be successful. We are working diligently with our Advisory council as well as our outside associates to develop better labs and tasks to help better prepare our students. We have been updating our motor control and connection lab. We have student based ladder logic and one line diagrams for the students to use to wire up our scenario. We have had successful results having every student having their own system to layout and wire. We have also focused on more individual labs in our entry course with great success. Every student receives a bender and are taught how to properly bend electrical conduit. The students are able to work together while completing the task as individuals. We start having our students bend early in their first semester so by the time our entry course is complete our students are competent at making all the bends necessary to work as an apprentice. This gives our students the advantage when applying for work, other apprenticeship programs don't start bending until later in their curriculum, we start during our students course.

Lack of counseling specific to the ET 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 Amealia Sweeney provided to Nursing and Allied Health has proven to be a best practice.)

Describe any external opportunities or challenges.: We continue to have a huge opportunity with the new energy and infrastructure deal that has been reached. Several of our students work currently work on solar projects that are going to provide sustainable power to our local grid and the western United States. We have purchased solar and motor control parts through our VTEA funding. We recognized the need to help prepare our students for the needs of the industry. We still have an awesome opportunity to prepare our students for advanced technologies that are becoming an integral part of our electrical system. We need to continue developing labs through VTEA and other grants when available. Combined with the idea of individual lab components for every student we can give the students every opportunity to succeed.

Overall SLO Achievement: I am satisfied with our SLO achievements, we are continuing to build up our hands on labs, while maintaining our SLO's. We have added several supplementary tasks to help our students. Our competency based system requires all students to pass the test that pertains to each SLO, as well as perform a hands on task that implements the lecture material into a hands on lab. Our students have been successful in achieving their program certificates, which recognizes the completion of the required SLO's.

Changes Based on SLO Achievement: Our SLO's need to stay consistent with our curriculum, and since our curriculum is predetermined we are supplementing and updating the equipment used for our SLO's with more advanced labs that pertain to the modernizing of the field. One item that does need to be addressed is increasing our students access to lab equipment. VTEA

funds are a necessity to make sure we enough lab trainers set up to support our labs to support the increasing number of students. Our motor control lab for instance needs to be able to adapt to the changing technologies, we have utilized VTEA funds through program review requests to update our motor control lab. However we need to continue to purchase and supply the equipment that the students encounter while working as an electrical apprentice. We still are sharing lab components and the students are not afforded the maximum amount of time on a given task due to our limited materials. With our increased enrollment it has become apparent our students need more lab materials, as simple as additional power tools, benders, pipe, etc., all things we need VTEA funds to help facilitate. All of our needs to increase our lab offerings are dependent on VTEA and other grants, the funding is pivotal in helping us achieve our goal of individual lab components for all of our students.

Overall PLO Achievement: 2022-2023 ET Program awarded 2 AS degrees; 15 CTE Electrical application COA; 27 Electrical Theory COA; for a total of 42 students completing 44 certificates.

Changes Based on PLO Achievement: None

Outcome cycle evaluation: We continue to offer as many courses in our department as we can. We are also working on creating new courses that will help supplement our current courses. Our labs and our lab areas have continued to improve, but I feel with our enrollment our students are far outnumbering our equipment. Our student success rate and our certificate completions continue to be among the highest they have ever been, but we need to give the students more opportunities to work individually in the lab environment. We continue to construct and develop hands on labs that challenge our students to be more prepared for the workforce.

Action: 2023-2024; 2022-2023, 2021-2022; 2020-2021 Improve student success by providing adequate number of training equipment/materials (VTEA)

Each ET student needs access to individual circuit panels, motor controls and bending equipment. The individual stations allow for skill development and improved student evaluations.

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Implementation Timeline: 2020 - 2021, 2021 - 2022, 2022 - 2023, 2023 - 2024

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Identify related course/program outcomes: All SLO from ET courses

Person(s) Responsible (Name and Position): Shane Baesemann

Rationale (With supporting data): Equipment must be provided to students to learn hands on skills required to ET. Individual lab stations are required for students to be able to demonstrate their ET skills in a timely manner.

Priority: High

Safety Issue: Yes

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2023 - 2024

09/15/2023

Status: Continue Action Next Year

Some updates for students own personal benders, we have purchased several panels, but not enough for individual stations. Progress is still needed to develop individual work stations similar to the welding lab.

Impact on District Objectives/Unit Outcomes (Not Required): Individual lab set up would increase confidence and competence of each learner to meet SLOs.

Update Year: 2022 - 2023

10/14/2022

Status: Continue Action Next Year

We have increased our number circuit panels, bending equipment, and motor control parts. We need to continue this action because we have increased our enrollment to 160 students and more of this equipment is still needed.

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

Resources Description

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Equipment - Instructional - Motor controls, automation equipment, bending materials, electrical circuits (Active)

Why is this resource required for this action?: Needed to provide students equipment for hands on learning and assessment.

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

District Objectives: 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.

Action: 2023-2024; 2022-2023, 2021-2022; 2020-2021 Improve student success through faculty development/curriculum development (VTEA)

ET faculty needs more training to finish developing new Sustainable Energy Course.

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Implementation Timeline: 2020 - 2021, 2021 - 2022, 2022 - 2023, 2023 - 2024

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Identify related course/program outcomes: SLO in ET 200.

Person(s) Responsible (Name and Position): Shane Baesemann

Rationale (With supporting data): The industry is advancing and we need to add courses that further develop our students employability in the sustainable energy market.

Priority: Medium

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2023 - 2024

09/15/2023

Status: Continue Action Next Year

Still need to develop this program. Shane has taught some electrical vehicle courses; and has attended some other courses. Needed is time to develop new courses in Coursleaf and develop new SLO for a sustainable energy courses.

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

Update Year: 2022 - 2023

10/14/2022

Status: Continue Action Next Year

Due to COVID the course that has been developed has been put on hold for further evaluation. The course Sustainable Energy is designed to be applicable for electrician training, construction technology and architecture.

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

Program Review - Electrician Training

Resources Description

Technology - Ongoing faculty development through new course development. (Active)

Why is this resource required for this action?: Ongoing faculty development

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 5000

Link Actions to District Objectives

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: 2023-2024 Increase student/faculty safety with use of scissor lift in all labs

Purchase a scissor lift to provide safe use of industry standard equipment and provide necessary training in all the trades such as ET, Welding, CT

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Implementation Timeline: 2023 - 2024

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Identify related course/program outcomes: Several course outcomes on safety;

Person(s) Responsible (Name and Position): Randy Emery, Division Chair; Shane Baesemann, ET Faculty; Jonna Schengel, Dean; Louann Waldner, Provost

Rationale (With supporting data): Currently we rent a scissor lift when necessary but with all the Industry and Trades CTE programs in the new CTE building on the Tulare campus- then purchasing one that could be shared by the various programs is more cost effective.

Priority: Medium

Safety Issue: Yes

External Mandate: No

Safety/Mandate Explanation:

Action: 2023-2024 Increase professional level skills

Students will be able to demonstrate professional level skills such as resume and describe their ET skills in a hiring event. This will include a digital portfolio.

TCC/Annex hosts a hiring event once a year and will provide a way to show employers their current skill level electronically.

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Implementation Timeline: 2023 - 2024

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Identify related course/program outcomes: Hiring is the ultimate goal for ET students - employers are requesting certificate of completion. Will work on a process that ensures this is happening.

Person(s) Responsible (Name and Position): Shane Baesemann, Jonna Schengel

Rationale (With supporting data): Hiring processes for ET students is based on providing potential employers.

Priority: Medium

Safety Issue: No

External Mandate: Yes

Safety/Mandate Explanation: NCCER requires paperwork on each student that needs to be prioritized.

Action: 2023-2024 Increase CTE completion with services provided by a "Trades" Pathway Counselor

Program Review - Electrician Training

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): ET students have rare access to a counselor who understands their program or pathway options, which are many with ET.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Resources Description

Personnel - Faculty - 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.)

(Active)

Why is this resource required for this action?: Students in the trades do not get equitable counseling specific to the CTE/industry standard pathways. Many of these programs are high wage/high demand jobs and SW funds are available to provide accurate and timely SEP and career planning.

Notes (optional):

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