Comprehensive Program Review Report

Program Review - Industry and Technology

Program Summary

2023-2024

Prepared by: Mario Bringetto, Travis Asher, Shane Souza

What are the strengths of your area?: 1. High pass rates with an average of 96.4% pass rate during 2021-2022. For 2022-2023 it was less but still very high at 91.9%.
 The 2025 pass rate goal for IT is 78%.
2. Equity was assessed and determined to be acceptable levels of pass rate for Hispanic students at 91% with White students at 91%.
3. Strong academic cohorts, programs, and courses across multiple campuses.
4. Academic programs are strategically tied to workforce expectations. This helps ensure robust career opportunities for graduates. Recent data collection indicates approximately eighty-five percent of students are employed in the field or are continuing their education to pursue a BS.
5. Strong industry advisory board and industry relationships that ensure curriculum and instruction align to employer expectations.
6. Utilizing real world trainers creates a realistic learning atmosphere and encourages engagement.
7. Faculty coming from industry are a benefit to the program because they have been recently employed in the career they instruct.
8. Offering multiple certificate levels gives students more options on how advanced the training they receive will be.
9. Support from the student success program; students who choose to enroll in the program have support in a variety of skills like study skills, time management, and employment preparation.
10. Jumpstart Internship summer program implemented summer 2022 to expose HS students to ITEC programs.
11. AS Degree and Certificate completion rates have increased - 2022-2023- 4 AS Degrees in Industrial Automation; 6 AS degrees in Industrial Maintenance; 46 Certificates in Industrial Maintenance; 16 Certificates in Industrial Automation. There are probably more students eligible for these awards than actually applied for them. This number may increase on the certificate side when CTE Certificates are automatically awarded.
12. Enrollment has increased to 115 FTEs in 2022-2023. Courses fill quickly. FTES/FTEF has increased from 8.13 to 12.68. Although the efficiency threshold for a program of 17.5 has not been met, the ITEC courses, especially in Industrial Automation have wait lists and many students who seek that program cannot get in. Lab size limits enrollment in Industrial Automation to 24.

What improvements are needed?:

1. Enrollment has increased to 115 FTEs in 2022-2023. Courses fill quickly. FTES/FTEF has increased from 8.13 to 12.68. Although the efficiency threshold for a program of 17.5 has not been met, the ITEC courses, especially in Industrial Automation have wait lists and many students who seek that program cannot get in. Lab space does not allow us to enroll more than 24 students per section and therefore to grow the ITEC program in the area of automation, a full time faculty member is necessary. There is a need for an afternoon/evening ITEC Industrial Automation instructor to meet student and workforce demands.

2. Updated equipment and motor control areas and welding supplies and accessories for Industrial Maintenance.

3. Industrial Maintenance and Automation are two technical areas that require faculty maintain training to teach industry standards. Ongoing professional development is needed for faculty including the CBE model.

3. Apprenticeship program development between ITEC programs and local industry.

Describe any external opportunities or challenges.: PLC troubleshooting/programming basics course being offered to industry through TRC.

Locating classical vocational trainers that offer hands on training features; some have been located but there is challenge to replace older equipment.

Supply chain issues causing long delays in arrival times for controls hardware.

CBE instructional models is being adopted by the Chancellor's office to better meet student and industry needs.

Overall SLO Achievement: Industrial Automation: Out of a total of 24 SLOs for the courses of the industrial automation program, 24 SLOs have been satisfactorily achieved for the 2022 assessment cycle.

Changes Based on SLO Achievement: Industrial Automation: No changes were made to the SLOs.

Overall PLO Achievement: Industrial Automation: Out of the 3 PLOs for the industrial automation program, 3 have been satisfactorily achieved for the 2022 assessment cycle.

Changes Based on PLO Achievement: Industrial Automation: No changes were made to the PLOs.

Outcome cycle evaluation: Assessment cycle works for us in ITEC, as every two years we must assess our SLOs to maintain current assessments.

Action: 2023-2024: Increase student enrollment and meet workforce needs of local employers through additional sections of ITEC courses. Full-time instructor for Industrial Automation

Hire a new full-time faculty member to teach an evening cohort for the industrial automation program.

Leave Blank:
Implementation Timeline: 2023 - 2024
Leave Blank:
Leave Blank:
Identify related course/program outcomes:
Person(s) Responsible (Name and Position): Travis Asher
Rationale (With supporting data): FTES/FTEF is
Priority: High
Safety Issue: No
External Mandate: No
Safety/Mandate Explanation:

Resources Description

Personnel - Faculty - Industrial Automation full time faculty to double the number of student in IA program; classes will be held in the afternoon/evening. (Active)
Why is this resource required for this action?: to fund the faculty position
Notes (optional): Could be SW grant funded - under SW8
Cost of Request (Nothing will be funded over the amount listed.): 150000

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.

Action: 2023-2024 Increase student success by providing opportunities for professional development of I&T faculty (Perkins)

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Enhance professional development through attendance and participation in conferences, conventions, and training seminars, and other events related to industrial manufacturing and career technical education.

Leave Blank:
Implementation Timeline: 2023 - 2024
Leave Blank:
Leave Blank:
Identify related course/program outcomes:
Person(s) Responsible (Name and Position): Travis Asher, Industrial Automation Professor
Rationale (With supporting data):
Priority: High
Safety Issue: No
External Mandate: No
Safety/Mandate Explanation:

Action: 2024-2024; 2023-2022 Increase student access to equipment to provide equipment for a a full cohort (VTEA + Strong Workforce) to meet SLOs.

Increase student access to equipment to purchase:
1. Hydraulic trainer replacement equipment
2. Control Logic equipment for programmable logic control instruction
3. DC drives and motors
4. I/P Converters

Leave Blank:
Implementation Timeline: 2021 - 2022, 2022 - 2023, 2023 - 2024
Leave Blank:
Leave Blank:
Identify related course/program outcomes:
Person(s) Responsible (Name and Position): Shane Souza; Mario Bringetto; Travis Asher
Rationale (With supporting data): The strength of the ITEC program depends on hands on training equipment with current industrial equipment
Priority: High
Safety Issue: Yes
External Mandate: Yes
Safety/Mandate Explanation: Advisory Boards require updated equipment similar to what is used in the workforce.

Update on Action

Updates

Update Year: 2023 - 2024   09/05/2023
Status: Continue Action Next Year
DC drives and motors, IP converters have been purchased with 2023 VTEA funds.
Impact on District Objectives/Unit Outcomes (Not Required):

Resources Description

Equipment - Instructional - Motor control trainers - $54,000
Hydraulic power units - 2 - $6,000
Hydraulic actuator systems - 2 -$6,000
Control Logic PLC equipment - 6 trainers + software -$20,000
Horizontal Bandsaw -1 - $8,000
Electrical enclosures - $5,000
DC Drives and Motors - $7,000

I/P Converters - $3,000
PLC programming Cables - $500

(Active)

Why is this resource required for this action?: Updated equipment is required for student safety as several trainers are out of date.
Notes (optional): These are the equipment requests for ITEC in Tulare Annex and Hanford locations
Cost of Request (Nothing will be funded over the amount listed.): 100000

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 2.1 - 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.

Action: 2023-2024: 2022-2023 Increase enrollment in ITEC courses

Increase ITEC enrollment through HS recruitment and outreach; WIB/Employment Connection; increase underserved populations such as women in industry; increase Perkins Core Indicators
Leave Blank:
Implementation Timeline: 2021 - 2022, 2022 - 2023, 2023 - 2024
Leave Blank:
Leave Blank:
Identify related course/program outcomes: Increase enrollment; improve CTE outcomes for local students and unemployed
Person(s) Responsible (Name and Position): Jonna Schengel, CTE Dean + CTE Outreach team
Rationale (With supporting data): Data is being used to assess local high school enrollment in ITEC programs. This could be enhanced through TKCCC activities - outreach portable labs/trailers.
Priority: Medium
Safety Issue: No
External Mandate: Yes
Safety/Mandate Explanation: High wage high quality pathways in ITEC by the CCCCO/CRC and TKCCC

Update on Action

Updates

Update Year: 2023 - 2024   09/05/2023
Status: Continue Action Next Year
Jumpstart program is continuing to be held in the summer and growing the number of CTE programs participating. Mt. Whitney HS is creating industrial electricity course for AgMech electives.
Impact on District Objectives/Unit Outcomes (Not Required):

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Update Year: 2022 - 2023	08/31/2022

Status: Continue Action Next Year

Continuing effort to increase ITEC enrollment through HS outreach and marketing. Jumpstart Internship summer program has been implemented in summer of 2022 to expose local high school juniors to ITEC programs.

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

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 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.

Action: 2022-2023 Increase student employment through employer relations.

Bring together industry partners to meet prospective students and fill career openings.

Leave Blank:
Implementation Timeline: 2022 - 2023
Leave Blank:
Leave Blank:
Identify related course/program outcomes:
Person(s) Responsible (Name and Position): Mario Bringetto Instructor
Rationale (With supporting data):
Priority: Medium
Safety Issue: No
External Mandate: No
Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2023 - 2024	09/05/2023

Status: Continue Action Next Year

Ongoing effort achieve this action. Jumpstart program continuing to include more CTE programs, CTE job fair event held at TCC, Annex Meet/Greet/Eat Event held at Annex.

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

Update Year: 2022 - 2023	09/30/2022

Status: Continue Action Next Year

Pilot Jumpstart internship program run in summer 2022, will be continuing to expand program.

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

Action: Overcoming math challenges.

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Make students aware of the new math class designed for trade workers. Provide literature for students to practice and prepare for the program, to overcome supply chain and textbook issues.

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Implementation Timeline: 2022 - 2023
Leave Blank:
Leave Blank:
Identify related course/program outcomes:
Person(s) Responsible (Name and Position): Mario Bringetto Instructor
Rationale (With supporting data):
Priority: Medium
Safety Issue: No
External Mandate: No
Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2022 - 2023   09/30/2022
Status: Action Completed
Math 270 has been added to course offerings. Future goal to extend course to dual enrollment to allow students to take the course before enrolling in ITEC programs.
Impact on District Objectives/Unit Outcomes (Not Required):

Action: Expand robotics course offerings for industrial automation students and technicians working in industry.

Obtain the necessary instructor certifications through vendor-provided training.to authorize automation program faculty to teach advanced robotics courses.

Leave Blank:
Implementation Timeline: 2023 - 2024
Leave Blank:
Leave Blank:
Identify related course/program outcomes:
Person(s) Responsible (Name and Position): Travis Asher, Industrial Automation Professor
Rationale (With supporting data):
Priority: High
Safety Issue: No
External Mandate: No
Safety/Mandate Explanation: