

Comprehensive Program Review Report



Program Review - Industry and Technology

Program Summary

2021-2022

Prepared by: Scott Williams

- What are the strengths of your area?:**
1. High pass rates with an average of 95.4% pass rate during 2020-2021.
 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.

What improvements are needed?: 1. FTES/FTEF ratio was decreased to 8.13, which is a slight decrease from the year before, but is directly related to slight decrease in enrollment due to COVID.

2. Move to downtown Tulare Annex also decreased enrollment possible; but enrollment this Fall 2021 was 22 students, and previously it has been 26.
3. Resources to improve the instructors' ability to provide effective training and instruction in the event of an emergency distance education order. These resources should allow students some level of hands-on lab exercises that can be completed off-campus by the students and demonstrated to the instructor remotely over a virtual meeting platform. Possible resource suggestions are listed below.
 - Simulation software licensing
 - Instructor training
 - Portable lab trainers for at-home use by students
3. Updated equipment and motor control areas and welding supplies and accessories for Industrial Maintenance.
4. Automation program needs PLC hardware and electrical enclosures for capstone projects course.

Describe any external opportunities or challenges.: The COVID-19 pandemic has created added challenges for the department to effectively train students using hands-on learning methods.; even though the ITEC classes are back face to face, we continue to have issues with COVID exposures and students/faculty quarantine.

Businesses have requested training to be done by the department. Presenting curriculum and training material needs.

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

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 2021 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 2021 assessment cycle.

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

Outcome cycle evaluation:

Action: 2021-2022 Increase student access to equipment to provide equipment for a full cohort (VTEA + Strong Workforce)

Increase student access to equipment to purchase:

1. hydraulic trainer replacement equipment
2. Control Logic equipment for programmable logic control instruction

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Implementation Timeline: 2021 - 2022

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Scott Williams; 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.

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

(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

Action: 2021-2022 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

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Implementation Timeline: 2021 - 2022

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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

Priority: Medium

Safety Issue: No

External Mandate: Yes

Safety/Mandate Explanation: High wage high quality pathways in ITEC by the CCCCCO/CRC and TKCCC

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

Action: Ongoing effort to improve distance education methods and online instruction.

Transition some traditional labs to an on-line format.

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Implementation Timeline: 2020 - 2021

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Mario Bringetto Instructor

Rationale (With supporting data):

Priority: Low

Safety Issue: No

External Mandate: Yes

Safety/Mandate Explanation:

Resources Description

Equipment - Instructional - Faculty training and lab simulation products (Active)

Why is this resource required for this action?:

Notes (optional):

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

Action: Maintain and update lab equipment.

Maintain the functionality of lab equipment through the repair and/or replacement of hardware components. Update existing lab equipment with devices and components which reflect modern industry trends in mechanical and electrical technology used in manufacturing.

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Implementation Timeline: 2020 - 2021

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Travis Asher, Scott Williams, Mario Bringetto, Jonna Schengel

Rationale (With supporting data):

Priority: Medium

Safety Issue: No

External Mandate: No

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Safety/Mandate Explanation:

Action: Improve instruction of process control and instrumentation

Align process control and instrumentation curriculum and lab exercises with current industry trends .

Leave Blank:

Implementation Timeline: 2020 - 2021

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Identify related course/program outcomes: ITEC 184 Course Outcome 1: Students will be able to troubleshoot and diagnose process instrument devices and instrument loops.

Industrial Automation program PLO 1: Safely demonstrate technical skills required for employment in automation and manufacturing industries.

Person(s) Responsible (Name and Position): Travis Asher

Rationale (With supporting data):

Priority: Medium

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Resources Description

Equipment - Instructional - AB Safety Equipment (light curtains, tether pulls, emergency stops, limit switches, safety relays). (Active)

Why is this resource required for this action?: This equipment is commonly used in the industrial environment it is expected that a technician is skilled in its operation and programming.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 11000

Equipment - Instructional - Industrial Ethernet Switches (Active)

Why is this resource required for this action?: System integration is necessary to industrial automation instruction. These components help complete the comprehensive inclusion across all automation technology used in manufacturing facilities.

Notes (optional): 20000

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

Action: Improve efficiency in lab through student work.

Improve the efficiency and organization of laboratory settings and equipment usage through the utilization of student workers.

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Implementation Timeline: 2020 - 2021

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Identify related course/program outcomes: Industrial Maintenance PLO: Possess entry-level job skills necessary to program controllers in the industry.

Industrial Automation PLO: Safely demonstrate technical skills required for employment in automation and manufacturing industries.

Person(s) Responsible (Name and Position): Scott Williams, Mario Bringetto

Rationale (With supporting data):

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation: