

Comprehensive Program Review Report



Program Review - Construction Technology

Program Summary

2023-2024

Prepared by: Brian Unruh

What are the strengths of your area?: Growing enrollment

High demand in job market

We're expecting to move to a new facility

What improvements are needed?: Develop an optimal schedule

Higher number of completions-and track employment

Provide real world construction projects for students

Introduce instruction in commercial construction

Possible Cohort model introduced when we move into the new building

Develop a transfer degree in Construction Management

Implement soft skill training for students

New equipment for the new shop at TCC

Describe any external opportunities or challenges.: We're experiencing a lack of qualified adjunct instructors.

Habitat for Humanity has contacted me about partnering to provide workers for a new project.

Overall SLO Achievement: Overall, students met the goals. However, some students didn't attend several classes and even missed the final exam.

Changes Based on SLO Achievement: In CT 223, one SLO asks students to identify Energy star as a nationally recognized organization in energy efficiency. Students overwhelmingly identified Energy Star so more rigorous outcomes should be made at the next cycle.

Some learning outcomes were a very low bar for students to reach. Therefore, outcomes in several courses have been changed to create a higher level of achievement in these courses. Likewise, the outcomes from several courses overlapped and have been changed to reflect a specific content for each course.

Overall PLO Achievement: One of the biggest challenge the construction technology program faces is the low number of completions. The numbers of FTES in CT courses is low indicating that more outreach is needed to bolster enrollment in the new facility.

Although residential construction is a starting point for many who enter into the trade, residential construction has slowed slightly and commercial construction has become more steady. I have focused greatly on residential construction and students find it difficult to find employment building houses.

Statistics show that the number of women in the CT program is relatively low, but we have had several students attend classes due to the Women who Build workshops.

Changes Based on PLO Achievement: I'm interested in developing a cohort model for the Construction Technology program. Continued outreach is necessary at local high schools, and within the community.

Developing a Women Who Build class will be a way to offer a course for credit and aid in raising the number of women in the CT program. Attending a women in construction trade show or conference will help develop the Women who Build class.

Outcome cycle evaluation: The construction trade is always changing with technology, areas of growth, and people who fill jobs. The construction Technology program at COS must also change to keep up with the trends in the industry. Although changes have been made in the last cycle, more changes should be implemented so that students who attend the program will be effective in the job market upon completion of their degree.

Action: 2023-2024 Track Job placement

Develop pathways with industry partners which will provide job opportunities to students upon completion of their degree or certificate.

Incorporate instruction in commercial construction.

Leave Blank:

Implementation Timeline: 2023 - 2024

Leave Blank:

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Brian Unruh Professor of Construction Technology, Ashley Land Apprenticeship Director Strong Workforce

Rationale (With supporting data): Job placement upon completion will benefit students by helping students bridge the gap between school and employment. Additionally, more students will be drawn to the program for future employment opportunities.

By introducing commercial construction into already existing courses, students will be better prepared for employment with broader possibilities in the work force.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Action: 2023-2024 Higher Completion Rates in CT programs via optimal scheduling/offerings

Develop an optimal schedule which will guide students through a clear pathway to completion.

Consider introducing a Cohort model for the AS and C of A in Construction Technology program.

Introduce instruction in commercial construction.

Leave Blank:

Implementation Timeline: 2023 - 2024

Leave Blank:

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Brian Unruh Professor of Construction Technology

Rationale (With supporting data): With several skill certificates, certificates of achievement, and Associate degree, students get lost in the process and find it difficult to select classes that lead to a clear pathway to completion. Consequently, students find employment before completing their certificate or degree.

By introducing a cohort model, students will complete courses necessary to complete their degree and move into the work force in an efficient and timely way.

Developing an optimal schedule and removing unnecessary courses will provide a clear pathway to completion with fewer options that don't lead to future employment.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Action: 2023-2024; Provide CT students with real world projects

Partner with Habitat for Humanity in upcoming projects to provide real world job experience for students.

Leave Blank:

Implementation Timeline: 2023 - 2024

Leave Blank:

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Brian Unruh Professor of Construction Technology

Rationale (With supporting data): Students need experience with hands on activity that produces a completed project.

Students will benefit from actually building and completing a small house, but COS will not hold the liability of owning, building,

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and selling the finished product.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Resources Description

Equipment - Non-Instructional - Battery tools and secure tool storage boxes (jobbox) for conducting work at a remote work site. (Active)

Why is this resource required for this action?:

Notes (optional):

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

Action: 2023-2024 Develop in Curriculum platform a transfer degree in Construction Management

Develop a transfer degree for students who desire a career in construction management. The transfer degree will provide lower level courses that will lead students to Fresno State or other university to complete their degree.

Leave Blank:

Implementation Timeline: 2023 - 2024

Leave Blank:

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Brian Unruh Professor of Construction Technology

Rationale (With supporting data): The skill certificate in construction management we currently offer is too basic and doesn't lead students to future employment. By offering articulated courses with Fresno State's construction management program, students will have a pathway leading to an industry applicable degree.

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Action: 2023-2024 Provide updated tools for students to use during lab activities (VTEA)

Increase student success through the updating and addition of industry driven technology.

Leave Blank:

Implementation Timeline: 2023 - 2024

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Identify related course/program outcomes: CT 220 - Outcome #1: After completing this course students will demonstrate proper job site safety and safe use of power tools to avoid personal injury

CT 221 -Outcome #3: After completing this course, students will demonstrate proper maintenance of power tools used on classconstruction projects.

CT 250 - Outcome #3: Given a hand-held circular saw, students will be able to demonstrate its safe and proper operation and pass a safety test on circular saws with 100% accuracy.

Person(s) Responsible (Name and Position): Brian Unruh

Rationale (With supporting data): The construction industry is dependent upon specialized technology used in every area of this industry. Through discussions with my industry partners, I have identified the need for modernization and updates of industry recommended technologies.

Priority: High

Safety Issue: No

External Mandate: No

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Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2022 - 2023

08/26/2022

Status: Continue Action Next Year

Increase student learning by organizing curriculum and textbooks to streamline from one class to another. This will allow a more cohesive approach to the overall education within the program for students to advance within their education.

***Ongoing*:** This is a continuing process and I plan to continue to update each course as many are up this year for assessment. I currently use the same textbook for the four Construction Practice courses and Basic Carpentry (CT 250). Although each of the practice courses has it's own curriculum, there is a lot of overlap in content. Therefore I am working on clarifying the topics in each course which will reduce or eliminate redundancy in course topics.

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

Update Year: 2022 - 2023

08/10/2021

Status: Action Completed

New electrical outlets have been installed to offer two new miter saw stations in the wood shop. The stations are not yet complete, but will offer more availability for students during lab activities as there is always a backup as students wait for one miter saw.

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

Update Year: 2022 - 2023

09/21/2020

Status: Action Completed

Due to the demolition of the Buckeye building, a temporary classroom is being remodeled in Cedar 425 which will accommodate 22 student stations. The new classroom will have large screens and a computer at each student station that will be an upgrade from the classroom in the Buckeye building.

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

Resources Description

Equipment - Instructional - Wood lathe (Active)

Why is this resource required for this action?: Students in the Carpentry/Millwork courses need to be exposed to the operation of a wood lathe.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 6000

Equipment - Non-Instructional - flyers, brochures, banners, promotional items (Active)

Why is this resource required for this action?: Fliers, brochures, and videos are needed to provide marketing for the Construction Technology Department.

This media will be provided to High school students during campus visits, and at various outreach events. Additionally updated videos will be produced which highlight the Construction Technology department and will be uploaded to the website for promotional purposes.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 2500

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

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District Objective 2.2 - Increase the number of students who transfer to a four-year institution by 10 percent 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: 2015-2018

District Objectives - 2.2 - Increase the number of students who earn an associate degree or certificate annually.

District Objectives - 2.4 - Increase Career Technical Education course success rates and program completion annually.

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 2.2 - Increase the number of students who are transfer-ready by 15% and students who transfer to four-year institutions by 10% 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: 2022-2023 Increase completion rates in all CT courses, certificates and degree

implement an automatic award for CT certificates and degrees; prepare a banner with CT pathway outlined to be hung in the CT Lab; develop informatic to post on your CANVAS shells or add it to your syllabus

Leave Blank:

Implementation Timeline: 2022 - 2023

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Identify related course/program outcomes: Program outcomes to increase completion rate in Strategic plan and Master Plan

Person(s) Responsible (Name and Position): Brian Unruh, Lisette Conway

Rationale (With supporting data): CTE Dean has determined that automatic CTE awards would increase CT completion rates; also want to talk with students about the pathway and what classes to take; optimize the CT schedule so students can complete in a timely.

Priority: High

Safety Issue: No

External Mandate: Yes

Safety/Mandate Explanation: Master Plan and Strategic plan

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 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%

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from 2021-2025.

Action: 2022-2023 Increase enrollment In CT courses

Increase enrollment in CT programs through outreach to non-traditional students such as women in CT; Foster youth and older adults.

Work with CTE Dean/HS Liaison/Marketing to recruit and provide open house type events.

Leave Blank:

Implementation Timeline: 2022 - 2023

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Identify related course/program outcomes: N/A

Person(s) Responsible (Name and Position): Brian Unruh, Jonna Schengel, Chelsea Cushing, Lauren Fishback

Rationale (With supporting data): Enrollment and completion rate is over 80% for Hispanic males below 20. Therefore, there is capacity to reach different demographics regarding the CT courses/programs.

Priority: Medium

Safety Issue: No

External Mandate: Yes

Safety/Mandate Explanation: VTEA requires we outreach; Master Plan to reach local students

Resources Description

Equipment - Non-Instructional - Open house events; recruitment events/foster youth caravan (Active)

Why is this resource required for this action?: To provide bus ride; open house materials/food for each event

Notes (optional): Lisette is doing the Women in Trades; Ashley is hosting the CTE Foster Youth caravan ; VTEA to fund

Cost of Request (Nothing will be funded over the amount listed.): 3000

Link Actions to District Objectives

District Objectives: 2021-2025

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

Action: 2022-2023 Student workers for shop activities

In an effort to maximize lab times, I would like to hire two student workers to help with lab setup, tool inventory, and shop cleanup. Both student workers will be hired for 3 hours per week.

Leave Blank:

Implementation Timeline: 2021 - 2022, 2022 - 2023

Leave Blank:

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Identify related course/program outcomes:

Person(s) Responsible (Name and Position): Brian Unruh, Instructor of Construction Technology

Rationale (With supporting data):

Priority: High

Safety Issue: Yes

External Mandate: No

Safety/Mandate Explanation: By having a student worker in the shop to help keep floors swept and shop organized, they would help lessen trip and slip hazards.

Update on Action

Updates

Update Year: 2022 - 2023

08/26/2022

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Status: Continue Action Next Year

Last year I had one student worker, and it proved to be a success for the program and the development of the student worker. This year I have three student workers and I hope that it will prove to be as beneficial for them. Student workers help with lab setup and clean up, tool organization, and also benefit by more one on one time with the instructor and hands on learning in the wood shop.

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

Resources Description

Personnel - Classified/Confidential - Hire two student workers to work in the wood shop for 3 hour per week for shop cleanup, tool inventory, and lab setup. (Active)

Why is this resource required for this action?: This will benefit those working in the shop by helping with cleanup, organization and too checkout. Additionally the students worker will help with cleanup and lab setups which will maximize lab times.

Notes (optional):

Cost of Request (Nothing will be funded over the amount listed.): 2400

Link Actions to District Objectives

District Objectives: 2021-2025

District Objective 4.1 - Increase the effective use of data and transparency in decision making at all institutional levels from 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.

Action: 2022-2023 Syllabus equity

Alter each of the course syllabi to promote equity and increase student success.

Leave Blank:

Implementation Timeline: 2021 - 2022, 2022 - 2023

Leave Blank:

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Identify related course/program outcomes: Increase equity language to increase success in all CT courses

Person(s) Responsible (Name and Position): Brian Unruh, Instructor of Construction Technology

Rationale (With supporting data):

Priority: High

Safety Issue: No

External Mandate: No

Safety/Mandate Explanation:

Update on Action

Updates

Update Year: 2022 - 2023

08/26/2022

Status: Continue Action Next Year

This is an ongoing action that I plan to have completed this school year. I've known about the need for a revised syllabus which includes a more equitable mind set, but have neglected to complete the task. I have only begun the revision and will continue throughout the school year.

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

Link Actions to District Objectives

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