PCCUA ASSESSMENT FORM

Division: Applied Technology
Program: Construction
Date: 2023-24 Academic Year

PCCUA ASSESSMENT GUIDING QUESTIONS

Please respond based on the departmental discussion of the program assessment and how those outcomes reflect what students are learning and what needs to happen to improve student learning. You may provide this in a narrative or bulleted format. However, you must respond to each question and these responses should be based on your program assessment discussions. Please respond in red font.

Program Student Learning Outcomes

A. Are the intended educational (learning) outcomes for the program appropriate and assessed appropriately?
Yes, these are appropriate. By aligning the course syllabus with the SLOs and NCCER we are teaching what we need to teach.

B. How are the faculty and students accomplishing the program's student learning outcomes?
Through discussion, demonstrations, and practical lab skills are earned.

C. How is the program meeting market/industry demands and/or preparing students for advanced study?
Many of our students join the workforce after completing the CP and TC before receiving an AAS. There are many job opportunities for our construction grads and some of them are doing construction work.

D. Do course enrollments and program graduation/completion rates justify the required resources?
Yes, the completion for an AAS is slow and sometimes students interrupt school to join the workforce. Some do not go through the stack of skills as fast as they need to in order to earn an AAS.

E. Based on the Program SLO's how well are students learning at the course and program level? Based on your assessment outcomes, how do you know this?
Students are given training and resources so they are prepared to use electrical equipment or metal work. They are also given lots of safety training.

F. What are the changes you need to make to improve student learning?
We probably need to have more technicians visit the classroom and I need to find more work sites for students to visit or intern at.

G. What are the weak areas demonstrating a need for improvement?
Many of the hand tools need replacing. We also need to keep batteries on hand for the multimeter readers. Hopefully, I will be able to develop an inventory process for tool and equipment replacement.

H. What are the strengths identified through assessment?
Our students understand an use construction terminology. This is very important in the field of repairs that sometimes requires two people to work together.

Program Curriculum

A. Is the program curriculum appropriate to meet current and future market/industry needs and/or to prepare students for advanced study? Is that reflected in the assessment outcomes?
Yes and no. The NCCER curriculum is excellent. But we need to think about revising the assessment SLOs and PLOs and make sure we can accurately measure these. But we are luck to have the NCCER resources.

B. Are program exit requirements appropriate?
Yes, students get a wide variety of experiences working with wood and metal, masonry, welding, electricity. It would be beneficial to think about more advanced HVAC opportunities.

C. Are students introduced to experiences within the workplace and introduced to professionals in the field?
No, this is one area we need to reconsider. We need more people coming from construction to talk to students and we need more visits to construction sites.

D. Does the program promote and support interdisciplinary initiatives?
Many students opt for a CP or TC because they can complete it quickly. So many of them are able to get jobs after the CP that many are interested in entering the workforce directly.

E. Does the program support the college STACC skill development expected of all PCCUA graduates? Explain how you know this through assessment.
Being able to troubleshoot and problem-solve is very important in construction, so students are given scenarios to examine. So in many ways, analytical and critical thinking are essential skills to develop. Technology utilization is important, not just in the use of equipment, but computer technology has been important as it relates to blueprints, design, construction, and every aspect of construction work. Being able to speak and write effectively is important. So much involves joint work and being able to explain a process.

F. Does the program provide respect and understanding for cultural diversity as evidenced in the curriculum, in program activities, in assignment of program responsibilities and duties; in honors, awards, and scholarship recognition; in recruitment?
Student interaction and cooperation are part of the program and we require student do that. We also recognize outstanding work.

Budget Requests Forms
Are more resources needed. If so, has there been an effort to acquire these resources through the college budgeting process?
None were made.

What program requests did you make for the next year which are tied to needs related to assessment outcomes?
I want to add heat pump certification as a requirement because it is important in construction.

STUDENT SUCCESS

DEGREE OR CERTIFICATE	2024	2023	2022	2021
AAS IN CONSTRUCTION	3	1	2	1
TC IN CONSTRUCTION	1	4	0	1
CP IN CONSTRUCTION	20	14	11	12
TOTAL CONSTRUCTION AWARDS	24		1319	14

PROGRAM LEARNING OUTCOMES

Program Student Learning Outcomes (SLOs)

The PCCUA Construction Program uses the National Center for Construction Education & Research (NCCER) curriculum.

- Use basic carpentry techniques
- Apply masonry strategies
- Demonstrate skills for basic metal working
- Understand and apply basic electrical wiring
- Demonstrate welding necessary for construction activities
- Operate heavy equipment such as a cherry picker, back hoe, and crane
- Completion a site-based construction project
- Demonstrate site layout, reinforcing materials, electrical installations and safety.
- Demonstrate use of basic safety, basic math, hand tools, power tools, blue print reading, basic rigging, basic communication skills.
- Apply basic employability skills,
- Demonstrate functional knowledge of trades, building materials, fasteners, adhesives, and site layout.
- Use advanced applications and construction methods for various types of horizontal formwork for types of elevated decks and the formwork systems and methods used in their construction

ASSESSMENT 2023-24

Course SLOs	Course(s) Tied to PLO	Program SLOs and Assessment Tools	Benchmark	Assessment
Students will demonstrate the ability to solve problems related to basic carpentry/Construction Systems (Analytical and Critical Thinking)	CC 103 Construction I	Demonstrate use of basic safety, basic math, hand tools, power tools, blue print reading, basic communication skills> Pre/Post Test Basic Hands on Evaluation Rubric	70% of the students will score 70% or higher 76.6 % was the cohort average	Met this PLO

Students will be able to apply masonry strategies	CC103 Construction I	Demonstrate functional knowledge of trades, building materials used for masonry.	70% of the students will score 70% or higher 76.6% of the cohort met this PLO	Met this PLO
Students will have a basic understand of blueprints (Analytical and Critical Thinking)	IT 163 Blueprints and Industrial Maintenance	Demonstrate use of basic safety, basic math, blue print reading, basic communication skills	70% of the students will score 70% or higher 27/30 or 90% of the students met this PLO	Met this PLO
Students will demonstrate skills for basic metal working. (Technology Utilization)	CC 113 Construction II WG 113 Basic Welding	Use advanced applications and construction methods using metals. Pre/Post Test Basic Hands on Evaluation Rubric	70% of the students will score 70% or higher 28/30 or 93% of the cohort met this PLO	Met this PLO
Understand and apply basic electrical wiring (Analytical and Critical Thinking and Reasoning)	IT 133 Basic Electricity	Identifies electrical components and forms a schematic diagram	70% of the students will score 70% or higher 83% met this PLO	Met this PLO
Demonstrate welding necessary for construction activities Technology Utilization)	WG 115 Introduction to Welding	Demonstrate site layout, reinforcing materials, electrical installations and safety	70% of the students will score 70% or higher 96.2% of the cohort were able to demonstrate this PLO	Met this PLO
Operate heavy equipment such as a cherry picker, back hoe, and crane	CC 113 Construction II CC 001 Construction Lab (Simulator)	Demonstrate with the simulator operational skills of various equipment. Hands-on experience with fork lift, back hoe and cherry picker.	70% of the students will score 90% or higher 76.6% met this PLO	Did not meet this goal but that was not the students' fault. There was not an opportunity to do much equipment operation. I will make sure there is

				more time for that in the future.
Demonstrate site layout, reinforcing materials, electrical installations and safety.	IT 113 Industrial Safety and Sanitation	Demonstrate application of electrical installation skills	80% of the students will score 80% or higher 90% or 27/30 of the cohort met this PLO	Met this PLO
Students will demonstrate knowledge of safe tool and equipment operations. (Analytical and Critical Thinking and Reasoning)	IT 113 Industrial Safety & Sanitation	Students will recognize safety hazards and potential safety issues and apply safe work practices and procedures in accordance with OSHA standards to safely handle tools, personal protective equipment, and a variety of materials used in manufacturing and construction. Pre/Post Test Basic Hands on Evaluation Rubric	100% of the students will score 90% or higher 100% of the student met this PLO	Met this PLO
Demonstrate use of basic safety, basic math, hand tools, power tools, blue print reading, basic rigging, basic communication skills.	IT 113 Industrial Safety and Sanitation IT 133 Industrial Electricity	Demonstrate use of basic safety, basic math, hand tools, power tools, blue print reading, basic communication skills.	80% of the students will score 90% or higher 93% or 28/30 of the cohort met this PLO .	Met this PLO
Apply basic employability skills,	CC 113 Construction II CC 001 Construction Lab	Apply basic employability and interpersonal communication skills	70% of the students will score 70% or higher 90% or 27/30 of the cohort met this PLO.	Met PLO
Demonstrate functional knowledge of trades, building materials, fasteners, adhesives, and site layout	CC 113 Construction II	Apply the use of building materials, fasteners, adhesives, and sit layout needs	70% of the students will score 70% or higher	Met this PLO but more work is needed to improve this outcome.

			76.6% were able to meet this standard.	
Use advanced applications and construction methods for various types of horizontal formwork for types of elevated decks and the formwork systems and methods used in their construction	IT 133 Industrial Electricity WG 125 ARC Welding WG 145 Inert Gas Welding I	Use electrical and welding skills needed for construction.	70% of the students will score 80% or higher 83% of the cohort met this PLO	Met PLO outcome
Students will understand blueprints and electrical measurements. (Analytical and Critical Thinking)	IT-163 Blueprint Reading	Demonstrate use of blue print reading needed for construction.	70% of the students will score 70% or higher 76.6% or 23/30 of the cohort met this standard.	Met this PLO outcome
Students will be able to work with clients on specific projects. (Cultural Competence).	CC 113 Construction II	Work with people from different cultural groups in a manufacturing environment	100% of the students will score 90% or higher 86.6 % met this PLO	This PLO was not met. A test is given to review his and students seem to have trouble with the test. Verbally, they seem to get the skill. It may be important to make changes or maybe a written test is not a good way to measure this.
Students will demonstrate knowledge of the maintenance procedures on the HVAC system. (Analytical and Critical Thinking)	IT 223 HVAC	Apply principles used to install and troubleshoot air conditioning, heat pumps, furnaces, and system controls.	80% of the students will score 80% or higher 86.6% or was the average 26/30 of that cohort	Met this PLO outcome

		outcome for this PLO	