PCCUA ASSESSMENT FORM

Division: Applied Technology **Dean: J. St. Columbia**
Program: General Technology **Instructors: M. Shaw**
Date: 2023-24 Academic Year **Term: Fall Spring Summer**

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. intended educational (learning) outcomes should be expressed from the students' perspective and are measurable, achievable and assessable. Students take their class room lecture with the associated labs, and exams for the subject to determine competence in the subject area.

B. How are the faculty and students accomplishing the program's student learning outcomes?
By entering hands on activities associated with the current lecture class subject.

C. How is the program meeting market/industry demands and/or preparing students for advanced study?
Students are learning the required skills that industry needs to be competent at required job requirements. This will allow manufacturing to limit required training in the business and reduce training costs.

D. Do course enrollments and program graduation/completion rates justify the required resources?
Yes, without actual hands-on experience it would difficult for the student thrive in a work environment. They, in most cases, need the experience working with the required equipment.

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 take a number of conventual paper exams with hands on activities associated with the discipline.

F. What are the changes you need to make to improved student learning?
In my opinion there are no needed changes are required for these programs. These programs are a batch process where some classes in one semester work well and other classes do not.

G. What are the weak areas demonstrating a need for improvement?
Math, writing and reading skills.
Arriving in class on time.
Bringing the required materials, pencil and paper etc., to class.

Stay off their cell phones

H. What are the strengths identified through assessment?
The strength is during the assessment process the are willing to continue to learning process and gain more skills.

Program Curriculum

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. The curriculum is strong in the due to the fact that that we use materials created by working class people. Students need Skills in many areas, to be a productive employee.

A. Are program exit requirements appropriate?
They have a group of required materials to demonstrate their basic knowledge gained throughout their classes. In this course, the student must be able to exhibit a variety of technical skills and knowledge learned .

B. Are students introduced to experiences within the workplace and introduced to professionals in the field?
Students are introduced to workplace experiences. A guest speaker is invited from in Helena, to speak to them directly. They are able to ask questions and see examples of actual jobs that the agency has completed.

C. Does the program promote and support interdisciplinary initiatives?
Yes.

D. Does the program support the college STACC skill development expected of all PCCUA graduates? Explain how you know this through assessment.
Yes. HVAC/R students are required to take general education courses as well as discipline specific courses. Knowledge in language, speech, math and social sciences will help prepare them to understand, effectively communicate, and develop skills for future requirements.

E. Does the program provide respect and understanding for cultural diversity as evidenced in the curriculum, in program activities, in assignment of program responsibly and duties; in honors, awards and scholarship recognition; in recruitment?
Yes. The student learning outcomes are established in each course. The course learning goals are found in the program levels and are directly relative to the STACC.

Budget Requests Forms

Are more resources needed. If so, has there been an effort to acquire these resources through the college budgeting process?

What program requests did you make for the next year which are tied to needs related to assessment outcomes?

ASSESSMENT OF GENERAL TECHNOLOGY 2023-24

DESCRIPTION

Due to the increased mechanization and use of technology, the need for physical strength is no longer a requirement in most jobs, but rather skills and knowledge in industrial technology, operating specialized machinery, and understanding the systems and processes involved in the production of goods. American manufacturers are becoming increasingly dependent upon the use of high-tech equipment that involves multiple, integrated systems. Jobs in manufacturing usually involve planning, managing, and performing the processing of materials into intermediate or final products. It is critical that these companies be able to recruit and employ individuals who know how to operate, troubleshoot, and maintain this high-tech equipment.

PCCUA's has a state-of-the-art manufacturing lab, where students are able to learn valuable skills to prepare them for careers in industry. Embedded within the Associate of Applied Science in General Technology program are the Technical Certificate and Certificate of Proficiency in Advanced Manufacturing and the Certificate of Proficiency in HVAC

STUDENT LEARNING OUTCOMES

Students enrolled in the General Technology program will perform the following tasks.

- Students will apply concepts in advanced manufacturing and operations to analyze issues related to quality management in multiple contexts and recommend solutions.
- Students will apply manufacturing best practices and technologies to evaluate real world manufacturing problems related to testing and validation.
- Students will use standards of measurements to conduct investigations and identify errors.
- Students will address real world problem within a manufacturing company and work to develop targeted solutions that will require leadership and knowledge specific to the manufacturing environment.
- 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.
- Students will be able to analyze manufactured products to identify processes and materials used

STUDENT SUCCESS

AWARD	2023-24	2022-23	2021-22	2020-21
AAS Gen Tech	1	0	0	0
CP Ad. Manufacturing	4	12	7	16
CP HVAC	31	21	13	18
Total Awards	36	33	20	34

Note the course are integrated with CP course offerings, some of which can replace a course or be selected as a n elective.

	Course Name and No.	Assessment Method(s) and Tool(s)	Time/Frequency of Assessment	Benchmark, if known	Outcome	Actions Related to Outcomes
Students will apply concepts in advanced manufacturing and operations to analyze issues related to quality management in multiple contexts and recommend solutions.	IT 1203 Intro to Manufacturing IT 223 Principles of HVAC	Comprehensive Final Exam Demonstration with written test	Every time course is taugh	100% of the students will score 90% or higher	AAS1/1=100% CERT 34/41=82.9% Combined AAS1/1=100% CERT 24/28= 85.7%	The student seeking and AAS met the 90% benchmark Certificate students did not meet the benchmark. Oral review before the final exam will be provided to improve testing outcomes.

Students will apply manufacturing best practices and technologies to evaluate real world manufacturing problems related to testing and validation.	IT 1213 Design for Manufacturing IT 1223 Manufacturing Power Lab IT 1273 Engineering Design and Problem Solving	Basic Hands on Evaluation of Project -Rubric Problem with solution	Every time course is taught	70% of the students will score 70% or higher	AAS=100% CERT=82.9% AAS=100% CERT=85.7%	Met Benchmark Only 1 AAS student Met Benchmark Only 1 AAS student
Students will use standards of measurements to conduct investigations and identify errors.	IT 223 Manufacturing Production Processes IT 163 Basics of Blueprints and Industrial Maintenance IT 001 Industrial Electricity Lab IT 243	Test Test/Demonstration ‘ Demonstration/Rub. Test/Demo	Every time course is taught	70% of the students will score 70% or higher	AAS=100% CERT=N/A AAS=100% CERT=86% 19 AAS=100% CERT=80.7% 19 AAS=100% CERT=N/A	Met Benchmark Standard met. Met Benchmark

	Hydraulics and Pneumatics					
Students will address real world problem within a manufacturing company and work to develop targeted solutions that will require leadership and knowledge specific to the manufacturing environment.	IT 1213 Design for Manufacturing IT 1273 Engineering Design and Problem Solving IT 1231 Instrumentation Principles	Basic Hands on Evaluation Rubric	Every time course is taught	70% of the students will score 70% or higher	AAS=100% CERT=80.4% AAS=100% CERT=N/A AAS=100% CERT=N/A	Met Benchmark Met Benchmark Met Benchmark
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	IT 1203 Intro to Manufacturing IT 1233 Manufacturing Power and Equipment IT 113 Industrial Safety	Basic Hands-on Evaluation /Test Rubric Test Basic Hands-on Evaluation /Test Rubric	Every time the course is taught	70% of the students will score 70% or higher	AAS=100% CERT=80.4% AAS=100% CERT=79.4% AAS=100% CERT=N/A	Met Benchmark Met Benchmark Met Benchmark

protective equipment, and a variety of materials used in manufacturing.	and Sanitation (HVAC) IT 133 Industrial Electricity (HVAC) IT 273 Industrial Heavy Equipment	Test/Demo Operations Test			AAS=100% CERT=N/A AAS=100% CERT=79.4%	Met Benchmark Met Benchmark
Students will be able to analyze manufactured products to identify processes and materials used	IT 223 Manufacturing Production Processes	Basic Hands-on Evaluation Rubric		70% of the students will score 70% or higher	AAS=1/1 100% CERT=80.4%	Met Benchmark