

UNIVERSITY OF ARKANSAS PULASKI TECH

Assessment Report: 2018-2019 – Program Level

The University of Arkansas – Pulaski Technical College calls for each program (AS, AA, AAS, CP, and TC) to have an assessment plan for each academic year that includes the following:

- Program Learning Objectives
- Procedures for assessing the achievement of student learning
- Procedures for analyzing and interpreting assessment results for the continuous improvment of the program.



A primary goal for each instructional department's assessment is to include at least one direct measure of student learning, which is accomplished usually through the use of locally developed tests, student portfolios, capstone assessment measures, embedded assignments, or through licensure exams and standardized national tests. In addition to direct measures, most areas may also use indirect methods to assess student achievement. Graduation rates and graduation and employer surveys are frequently used as indirect indicators of student achievement.

This form presents template of questions that must, at minimum, be addressed by instructional departments when filing an assessment plan. While an electronic version of this form will be made available, instructional departments may include additional information not specifically addressed in this form as long as the template questions are addressed.

Other Assessment Considerations:

- The College expects programs/departments/divisions to make curriculum changes and budget requests based in part upon assessment findings. Assessment of student learning should be a catalyst for quality instruction and improvement across the college community.
- All programs will be asked to submit an annual assessment report to the Assessment Committee by October 10th of each year. (If October 10th falls on a weekend, please submit reports on the following Monday.)
- For technical and occupational programs, please consider the role of your advisory committee in your student learning objectives.

This form must be completed by October 10 of each academic year. Complete each part of this form. Please follow highlighted instructions.

Part A: Identification and Assessment Plan

1. Name of program:	Heat, Air Conditioning, Ventilation and Refrigeration			
2. Name of individual compiling report:	Robert Dixon			
3. Date of submission:	October 21, 2019			
4. Is the assessment plan				
x an initial plan for the a re program	vision of an old plan unaltered from previous year			





5. Provide a brief description of the program and its purposes, to include a description of the jobs/careers for which students are being prepared.

The Heating, Ventilation, Air Conditioning and Refrigeration Department here at UA-PTC teaches students about all aspects of Heating, cooling and refrigeration. These processes and equipment are used frequently in our day to day lives and are always in need of repair or replacement. From the technician who determines the procedure necessary to return the machine to working order, to the counter man behind the parts counter who gives him the correct part, the industry will always need trained professional people to keep our food cold and ourselves comfortable in our homes and work areas.



Part B: Student Learning Objectives, Assessment Methods, and Data Sources

In this section of the assessment plan, student learning objectives for the program will be defined. Also, assessment methods and data sources for each objective must be defined. Follow the instructions below to define and relate the program leaning objectives.

1. Complete the chart below or attach documentation of the assessment process that includes the data included below. Also attach any assessment instruments and grading rubrics used at the program level if applicable.

			Assessment Method and/or
	Program Learning Objectives	Course	Data Source
1.	Safe work practices	All	Students are required every semester to pass a safe work proctice3s exam with a score of 100 %.
2.	Apply the principles and strategies used for installation of air conditioning systems, electric furnaces, fossil fuel furnaces, heat pumps, and system controls	All	Student must prove their learning by participating in various labs.
3.	Apply the principles and strategies used to troubleshoot and service air conditioning systems, heat pump systems, electric furnaces, fossil fuel furnaces, and system controls.	All	Students will prove their proficiency by participating in various labs throughout their career here at UA-PTC
4.	Use mathematical skills to solve problems in air conditioning, electrical, heating and air distribution systems.	All	Student will be able to use mathematics to solve in field problems with HVAC equipment. proficiency will be tested with rigorous classroom testing and lab exercises
5.	Handle refrigerant by completing EPA Section 608 training and testing for type "Universal" certification	HVAC 1102	Each student will be tested based on EPA protocols and upon completing the appropriate testing will have earned type "Universal" certification (Active - Learning)
6.	Effective Communication	All	Effective communication is paramount for success in the field work our students will be expected to do upon graduation. Therefore, each must learn to communicate in writing, and verbally. By stressing these skills in our lessons each day we instill these practices daily.
7.	Critical Thinking	All	Trouble shooting HVACR units require a great deal of Critical thinking. Each student must understand the system of parts that make up a complete system. Lecture and lab contribute to this



	learning with special emphasis on
	solving installation and operational
	problems.
8.	
9.	
10.	

- 2. For each program objective, if applicable, discuss any additional data sources that may be used to gauge success (e.g. charts, graphs, surveys, rates). *ESCO Institute provides statistics that compare UA-PTC students to national statistics.*
- 3. Describe the process of analyzing the assessment data for the last academic year. *At this time there is no advisory committee for the HVAC department. Data is used to issue grades and credit for work performed. External validation is given by stakeholders as the students go to work.*
- 4. Complete the chart below or attach documentation of the assessment findings that includes the data included below.

		Assessment Findings/Conclusion	
	Program Learning Objectives		
1.	Safe work practices	All students must pass a safety test every	
		semester with a grade of 100%	
2.	Apply the principles and strategies used	All students required to pass safety test with	
	for installation of air conditioning systems,	grade of 100%	
	electric furnaces, fossil fuel furnaces, heat		
	pumps, and system controls		
З.	Apply the principles and strategies used to	Last semester assessment was carried out	
	troubleshoot and service air conditioning	on a compressor tear down lab. All students	
	systems, heat pump systems, electric	participated and diagnosed failure modes correctly	
	furnaces, fossil fuel furnaces, and system		
	controls.		
4.	Use mathematical skills to solve problems	Super heat and sub cooling calculations	
	in air conditioning, electrical, heating and	were tested with 75 percent of all students	
	air distribution systems.		
5.	Handle refrigerant by completing EPA	ESCO group figures indicate that 76% of	
	Section 608 training and testing for type	students obtain "Universal" certification.	
	"Universal" certification		
6.	Effective Communication	Assessed in an open house where each	
		student was asked to explain in detail the	
		refrigeration system. Two of the six students	
		received job offers in a matter of a week.	
7.	Critical Thinking	Has not been assessed at this time.	
8.		Click here and type comments over this text.	
9.		Click here and type comments over this text.	
10.		Click here and type comments over this text.	

5. What is the action plan for assessment for the next academic year? Explain.



EPA 608 is a national refrigerant handling certification that must be obtained by anyone in the H.V.A.C.R. profession. As such, we contract with ESCO group to allow us to give the federal test. This will not change in the foreseeable future. For all other classes, tests will continue to be given, graded and applied to final grades. Lab performance is also graded.

- 6. What changes were implemented this year based on last year's findings? I have changed my method of delivery of the curriculum in HVAC 1102. By using different techniques. I am working to increase the percentage of students who successfully obtain their universal certification. This will prove to be the trial run for a revamping of every class, in this new vane.
- 7. Please write any additional information here that you think is pertinent to the assessment process for your program that assists stakeholders (i.e. administrators and standing committees) in understanding your report.

I need to reform an advisory committee for this department. To assist in revising curriculum to better support the industry in this area.

8. What budgetary resources, if any, are needed for your program based on your assessment findings?

At this time, my budget is inadequate for operation of this department. The equipment in my main lab (rm. 156) is old, out of date and dilapidated. The roof in that room is leaking and has been for some time. The space was to be remodeled but plans for that have evidently been dropped due to budgetary constraints. I do have some donated equipment that can and will be used to replace old equipment but there are no matched systems, and very few pieces that will work with the limited electrical and Natural gas hook ups I have. Space is at a premium. I don't have a lot of room for classes in the labs. From a competitive point of view, a number of other campuses have much better facilities to teach the same subjects. I have been fortunate that I have been able to hire adjunct instructors to teach classes that I was unable to teach. A second instructor is needed so that there is a consistency in our class offering.