

PROGRAM ASSESSMENT REPORT

I. Background Information

1. Program Assessment

Program name: HVAC - Residential

Program code: CTHVRR

Division: ATP

Department: HVAD

Type of Award:  A.A.       A.S.       A.A.S.  
 Cert.       Adv. Cert.       Post-Assoc. Cert.       Cert. of Completion

2. Semester assessment was administered (check one):

- Fall 2016
- Winter 2017
- Spring/Summer 2017

3. Assessment tool(s) used (check all that apply):

- Portfolio
- Standardized test
- Other external certification/licensure exam (please describe): ESCO employment ready electricity competency test, ESCO employment ready residential gas furnace competency test and the ESCO employment ready residential air conditioning system competency test.
- Graduate Survey
- Employer Survey
- Advisory Committee Survey
- Transfer follow-up
- Externally evaluated performance or exhibit
- Externally evaluation of job performance (internship, co-op, placement, other)
- Capstone experience (please describe):
- Other (please describe):

4. Have any of these tools been used before?

- Yes (if yes, identify which tool) The ESCO exams.
- No

If yes, has this tool been altered since its last administration? If so, briefly describe changes made.

No. The test content is managed by ESCO and three versions of each of the three tests are randomly given to every student that attempts the exams.

5. Indicate the number of students assessed/total number of students enrolled in the course.

Fall 2016 – 6 Students Winter 2017 – 13 Students Spring/Summer 2017 – 12 Students.  
Total number of students 31.

6. Describe how students were selected for the assessment.

- a. Describe your sampling method. All students enrolled were assessed.
- b. Describe the population assessed (e.g. graduating students, alumni, entering students, continuing students). All enrolled students in HVA 108, which is the capstone class for the residential certificate program, were assessed.

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II. Results

1. If applicable, briefly describe the changes that were implemented in the program as a result of the previous assessment.

None – This is the first time assessment has been completed for this certificate.

2. State each outcome (verbatim) from the Program Assessment Planning or Program Proposal form for the program that was assessed.

Outcome 1- Recall principles of electricity

Outcome 2- Recall principles of residential gas furnaces

Outcome 3- Recall principles of residential air conditioning systems

3. Briefly describe assessment results based on data collected during the program assessment, demonstrating the extent to which students are achieving each of the learning outcomes listed above. ***Please attach a summary of the data collected (as a separate document).***

Unfortunately, the data available from the tool that was originally implemented during the creation of the program, which would assess each of the following outcomes, is lacking. The assessment tool for the program was implemented during the HVA 108 capstone course. We included all the data that was available which includes students that have declared APHVCR as their program of study. HVA108 is the capstone class for the CTHVRR certificate which is embedded in the APHVCR degree. The department receives only a pass or fail grade from each of the three ESCO industry exams the students are required to take. The students that score 70% or higher on any of the ESCO exams is considered as a passing grade. Using the current assessment tool, we can only see an overall result. We do have data from the ESCO test that can tell us if the students passed or failed on the first or second attempt and/or if a student attempted to retake the exam a second time.

Outcome 1 - Recall principles of electricity

Pass first attempt – 30

Passed second attempt – 1

Fail without retake - 0

Outcome 2 - Recall principles of residential gas furnaces

Pass first attempt – 28

Passed second attempt – 3

Fail without retake - 0

Outcome 3 - Recall principles of residential air conditioning systems

Pass first attempt – 24

Passed second attempt – 4

Fail without retake – 2

(One student never attempted to take the test)

Please see the attached excel document that breaks down the three ESCO exam results.

4. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success. ***Please attach the rubric/scoring guide used for the assessment (as a separate document).***

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For all of the outcomes the standard of success is that 70% of the students will achieve a score of 70% or higher on the ESCO competency exams.

Outcome 1- Recall principles of electricity

100% of the students achieved 70% or higher on the EER ESCO competency exam.

Outcome 2- Recall principles of residential gas furnaces GHER ESCO competency exam.

100% of the students achieved 70% or higher

Outcome 3- Recall principles of residential air conditioning systems ACER ESCO competency exam.

90% of the students achieved 70% or higher

5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.

Strengths: Based on the data we received from ESCO after students take the exam we see that we are achieving the standards of success.

Weaknesses: Unfortunately, we cannot flesh out the areas of strengths and weaknesses of the students in the program based on only pass or fail results.

**III. Changes influenced by assessment results**

1. If weaknesses were found (see above) or students did not meet expectations, describe the action that will be taken to address these weaknesses.

Using the ESCO exams as the only assessment tools, we are not able to efficiently evaluate student success in the program. Although the standard of success is currently being met, data that are more specific would be useful in assessing the program. We need to create new assessment tools for example Preparatory Exams embedded into the HVA 108 capstone course. These preparatory exams can provide a more accurate assessment of the student's readiness to complete the required ESCO ER (Employment Ready) exams.

2. Identify any other intended changes that will be instituted based on results of this assessment activity (check all that apply). Describe changes and give rationale for change.

a.  Outcomes/assessments from Program Assessment Planning or Program Proposal form:

b.  Program Curriculum:

course sequencing

course deletion

course addition

changes to existing program courses (specify):

other (specify):

c.  Other (specify):

Updating the program Assessment Planning Form that would utilize new assessment tools that can be embedded in the HVA 108 course. Removing the ESCO exams as the current tools.

3. What is the timeline for implementing these actions? Fall 2019

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IV. Future plans

1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this program.

Student success was met. However, the data available was not an effective measure of the program.

2. If the assessment tools were not effective, describe the changes that will be made for future assessments.

Updating the assessment tools to preparatory exams that can be included into the current courses will give better data that can be used to detail the strengths and weaknesses of the program. Using the new data will determine where improvements can be made in the course sequence of the program.

3. Which outcomes from Program Assessment Planning or Program Proposal form have been addressed in this report?

All  Selected

If "All", provide the report date for the next full review: Winter 2019

If "Selected", provide the report date for remaining outcomes: \_\_\_\_\_

Submitted by:

Name: ROBERT CARTER Robert Carter Date: 5/1/18  
Print/Signature  
 Department Chair: ROBERT CARTER Robert Carter Date: 5/1/18  
Print/Signature  
 Dean: Brandon Tucker [Signature] Date: 5/2/18  
Print/Signature

*Please return completed form to the Office of Curriculum & Assessment, SC 257.*