



# Heating and Plumbing Services (Cert.) Canino School of Engineering Technology 2018 Assessment Report

- Curriculum Coordinator: Paul Tod
- Date of Presentation: January 16, 2019



## Mission

Students will become competent HVAC technicians who can install plumbing, hydronic systems, furnaces with duct work for residential and commercial buildings. They will gain hands-on experience in well-equipped, small laboratory sections, and live work as available, and receive one-on-one instruction from faculty with experience in the field.



# What was assessed? Student learning outcomes list:

- *PSLO #1 – Workplace Safety*
- *PSLO #2 – Installation Skills*
- *PSLO #3 – Identify Plumbing Requirements*
- *PSLO #4 – Utilize Knowledge*



# Where were outcomes assessed?

- *PSLO #1 – ACHP 171*
- *PSLO #2 – ACHP 171*
- *PSLO #3 – ACHP 171, CONS 151*
- *PSLO #4 – ACHP 171, CONS 151*



# How was the assessment accomplished?

- Student work assessed:
  - Quizzes
  - Final exams
  - Labwork/practical exams
- Measurement strategy:
  - Applicable rubrics used for practical exams
  - % of questions answered correctly on quizzes, midterm/final exams, and assignments
- Sample size:
  - All students who take the designated assessed courses, see attachment for N for each course



# Assessment results: What have the data told us?

- *PSLO #1 – Workplace Safety*  
*Outcome Met*
- *PSLO #2 – Installation Skills*  
*Outcome Met*



# Assessment results: What have the data told us?

- PSLO #3 – Identify Plumbing Requirements

*Outcome Not Met*

Students have trouble understanding:

- Properties of fluids
- Series and parallel pipe configurations



# Assessment results: What have the data told us?

- PSLO #4 – Utilize Knowledge

*Outcome Met*





Data-driven decisions: How the program has or plans to “close the loop” based on these results.

- Continue to revise the related courses to better align with the student learning outcomes



# What resources were used or have been requested to close the loop?

- The program is in the process of being converted into a Two-year AOS with ACM&R
- For the current program and levels of enrollment, no additional funds are needed for equipment or supplies.



# Attachments: 2018 PSLO Findings



# PSLO # - Assessment Findings Data

PSLO 1 - Workplace Safety			Measures			Not Met (<70%)		Met (70% to 80%)		Exceeded (>80%)	
Method	Description	N	N	%	N	%	N	%	N	%	
ACHP 171 Quiz	Quiz 1	6	1	17%	0	0%	5	83%			
PSLO 2 - Installation Skills			Measures			Not Met (<70%)		Met (70% to 80%)		Exceeded (>80%)	
ACHP 171 Lab worksheet	Boiler Analysis Lab	6	1	17%	4	67%	1	17%			
PSLO 3 - Identify Plumbing Requirements			Measures			Not Met (<70%)		Met (70% to 80%)		Exceeded (>80%)	
ACHP 171 Exam	Exam 1	6	2	33%	2	33%	2	33%			
CONS 151 Quiz	Quiz 5 - Plumbing	11	2	18%	5	45%	4	36%			
PSLO 4 - Utilize Knowledge			Measures			Not Met (<70%)		Met (70% to 80%)		Exceeded (>80%)	
ACHP 171 Lab Practical	Perform common piping joints	6	0	0%	0	0%	6	100%			
CONS 151 Assignment	Final Project	11	3	27%	2	18%	6	55%			

