



 **SUNY CANTON**

Air Conditioning Engineering Tech.
Canino School of Engineering Technology
2016 Assessment Report



Curriculum Coordinator: Michael J. Newtown P.E.

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Program Goals

- PEO 1 – Ability to work in industry
- PEO 2 – Seek Advanced Education
- PEO 3 – Pursuit of Lifelong Learning

Operational Goals

- OG 1 – Increase Enrollment
- OG 2– Seek additional Faculty to teach in ACET
- OG 3 – Increase Retention Rate



What was assessed? Student outcomes list:

- SO #1. Career Knowledge
- SO #2 Applications
- SO #3. An ability to conduct, analyze and interpret experiments, and apply experimental results to improve processes
- SO #4. An ability to apply creativity in the design of systems, components, or processes
- SO #5. An ability to function effectively on teams
- SO #6. An ability to identify, analyze and solve technical problems
- SO #7. An ability to communicate effectively through written, oral, and graphic methods related to HVAC&R
- SO #8. A recognition of the need for, and an ability to engage in lifelong learning
- SO #9 Ethical, Social Responsibility and Global Issues
- SO # 10. Quality, timeliness, and Continuous Improvement



Where were outcomes assessed?

- SO #1. Career Knowledge
 - ACHP 264, ACHP 253
- SO #2 Applications
 - MECH 103, ACHP 243
- SO #3. An ability to conduct, analyze and interpret experiments, and apply experimental results to improve processes
 - ACHP 243 and ACHP 253
- SO #4. An ability to apply creativity in the design of systems, components, or processes
 - ACHP 253, ACHP254, and ACHP 243
- SO #5. An ability to function effectively on teams
 - ACHP 253, 243
- SO #6. An ability to identify, analyze and solve technical problems
 - MECH 103, ACHP 243
- SO #7. An ability to communicate effectively through written, oral, and graphic methods related to HVAC&R
 - ENGS 101 and ACHP 253
- SO #8. A recognition of the need for, and an ability to engage in lifelong learning
 - ENGS 101 and ACHP 253
- SO #9 Ethical, Social Responsibility and Global Issues
 - ENGS 101, ACHP 253
- SO # 10. Quality, timeliness, and Continuous Improvement
 - ACHP 253, ACHP254, ACHP 243, ENGS 101, and MECH 103



How was the course assessment accomplished?

- Student work assessed:
 - Homework questions
 - Calculations exams
 - Lab Reports
 - Oral presentations/ Research papers
- Measurement strategy:
 - rubrics used for oral presentations, research papers, lab reports
 - % of students who answered questions correct with a grade of C or better
- Sample size:
 - All students (1 Sophomore and 5 Freshmen students)



ABET Student Outcome for ACET

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Program Student Outcome

SO #1. Career Knowledge

ACHP 243, ACHP 253

N	Not Met	Met	Exceed	Achieved
7	0%	0%	100%	YES

SO #2 Applications

ACHP 243, ACHP 253, ACHP 264, MATH 123, MECH 103, PHYS 121, PHYS 125

16	0%	25%	75%	YES
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SO #3. ...conduct, analyze...improve processes

ACHP 243 ACHP 253, PHYS 125

7	0%	14%	86%	YES
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SO #4. ... creativity in the design of systems, components, or processes

ACHP 243, ACHP 253, ACHP254, ACHP 264

7	0%	0%	100%	YES
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SO #5. An ability to function effectively on teams

ACHP 253, 243

5	0%	20%	80%	YES
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ABET Student Outcome for ACET

Program Student Outcome	N	Not Met	Met	Exceed	Achieved
SO #6. An ability to identify, analyze and solve technical problems	14	36%	0%	64%	NO
ACHP 243, MECH 103, ELEC 261					
SO #7. An ability to communicate effectively through written, oral, and graphic methods related to HVAC&R	11	0%	27%	73%	YES
ACHP 243, ACHP 253, ENGS 101					
SO #8. A recognition of the need for, and an ability to engage in lifelong learning	1	0%	0%	100%	YES
ACHP 253					
SO #9 Ethical, Social Responsibility and Global Issues	6	17%	0%	83%	YES
ENGS 101, ACHP 253					
SO # 10. Quality, timeliness, and Continuous Improvement	7	0%	0%	100%	YES
ACHP 243, ACHP 253					



Assessment results:

- SO # 6 – An ability to identify, analyze, and solve technical problems
 - ELEC 261 did not meet its SLOs
 - This course leads to ELEC 141 which is required by ACET students to understand building and equipment controls. This is a major area graduates find work.
 - The remaining courses in ACET achieved a 70% met or exceeded.
- SO # 8 – A recognition of the need ... lifelong learning
 - Only one course directly measuring this
 - Identified by ABET as a short coming of the program



Data-driven decisions: “close the loop”

- Without dedicated faculty this program is running on cruise control and may end up stopping
- Enrollment is another issue.
- Math leveling to be admitted directly to program. Freshman class for Fall 2016 were all 001s.
- Name change may also help



Resources necessary to close the loop:

- Dedicated faculty or share resources with others
- ENGM 101 Intro to Engineering Math Applications may solve admission requirements.



What Learning Occurred Due to Assessment Process?

- Same discover as last year with program

