



 **SUNY CANTON**

Engineering Science Program
Canino School of Engineering Technology
Fall 2016 Assessment Report



Curriculum Coordinator: Rashid Aidun (0.8 dedicated faculty)

Date of Presentation: 1/18/2017

Program mission:

Provide students with preparation in engineering fundamentals to enable them to enroll in baccalaureate degree in engineering or engineering technology with junior status, and successfully complete their baccalaureate degree.

Program outcomes (PO):

- 1- 60% of admitted students will graduate w/AS degree
- 2- 85% of graduates will enroll in BS/BT Eng. Programs
- 3- 90% of transfer graduates will affirm that their preparation in Eng. Sci. has been adequate.



Program

Student Learning Outcomes (PSLO)list:

- *PSLO 1 - Professional Competence prerequisites*
 - *Students are expected to have solid foundation in Math & Science in order to continue successfully for their Bachelor' degree in any engineering fields.*
- *PSLO 2 – Professional Competence*
 - *Students are expected to have understanding and knowledge of common engineering courses.*
- *PSLO 3 – Communication Skills*
 - *Students are expected to develop communication skills*
- *PSLO 4 – Critical Thinking*
 - *Students are expected to develop critical and analytical thinking skills*



Courses mapped to PSLOs

- **PSLO 1 - Professional Competence prerequisites**

CHEM 150

MATH 162*s

PHYS 133

CHEM 155

MATH 263*s

ENGS 205

MATH 161*s

PHYS 131*f

PHYS 137*f

PHYS 135

PHYS 136

- **PSLO 2 - Professional Competence**

ENGS 101*f

ENGS 203

ENGS 102*sf

ENGS 205*f

ENGS 201*f

ELEC 263*s

ENGS 202

- **PSLO 3 – Develop Communication Skills**

ENGL 102

CHEM 150

ENGS 101*sf

CHEM 155

ENGS 102*sf

PHYS I, II, III

- **PSLO 4 – Critical Thinking**

ENGL 102

ELEC 263*s

PHYS 131*f

ECON 103



How was the assessment accomplished?

- Student work:
 - Exams & quizzes
 - Oral presentations
 - Research papers
 - Lab reports
- Measurement strategy:
 - rubrics used for oral presentations, research papers
 - % of questions answered correctly on exams, and quizzes.
- Sample size:
 - All students/class (??)



PSOs' evaluation report based on F & S 2016 course assessments:

PSLO 1 – Professional Competence Prerequisites

<u>* # of measures</u>	<u>not met</u>	<u>met target</u>	<u>unspecified%</u>
28	0%	14%	86%

PSLO 2 – Professional Competence

<u>* # of measures</u>	<u>not met</u>	<u>met target</u>	<u>unspecified%</u>
26	15%	66%	19%

PSLO 3 – Develop Communication Skills

<u>* # of measures</u>	<u>not met</u>	<u>met target</u>	<u>unspecified%</u>
8	0%	50%	50%

PSLO 4 – Critical Thinking

<u>* # of measures</u>	<u>not met</u>	<u>met target</u>	<u>unspecified%</u>
1	0%	100%	0%



Actual assessment data

- **2013:** $n=13$; 1 BS \rightarrow BT, 1 BT, 10 BS, 1 wk \rightarrow RIT
PO1= $\frac{13}{13}$ PO2 = 100% PO3 = met
- **2014:** $n=9$; 7 BS, 1 BS \rightarrow BT, 1 BT
PO1= $\frac{9}{6}$? PO2 = 100% PO3 = met
- **2015:** $n=8$; 6 BS, 2 BT,
PO1= $\frac{8}{8}$ PO2 = 100% PO3 = ?
- **2016:** $n=8$; 5 BS, 2 BT,
PO1= $\frac{7}{8}$ PO2 = 100% PO3 = ?



Comments from CU and graduates

Short comes:

- | | |
|------------------|-------------------------------|
| 1. Electrical | AC circuits & Digital/Logic |
| 2. Chemical | Organic Chem I |
| 3. Mechanical | Thermo in place of PHY III |
| 4. Computer | Digital/Logic & prog. |
| 5. Environmental | Biology I in place of PHY III |



How the program plans to fix the issues (close the loop)

- Eliminated PHYS III as a required course
- Made ENGS 203 a program elective course
- Developed & added ENGS 264 (AC/DC lab.)
- Added 6 program electives to the program:
 1. BIOL 150
 2. CHEM 301
 3. MECH 342
 4. MKTX 215/216
 5. CITA 180
 6. CHEM 302

Effective: Fall 2017



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

- My time



What changes would you make to the Assessment Process?

Program Assessment:

Evaluate the final product (graduates)

Keep in touch with them (a few years)

Collect feedback from them

PSLOs are or are not met

