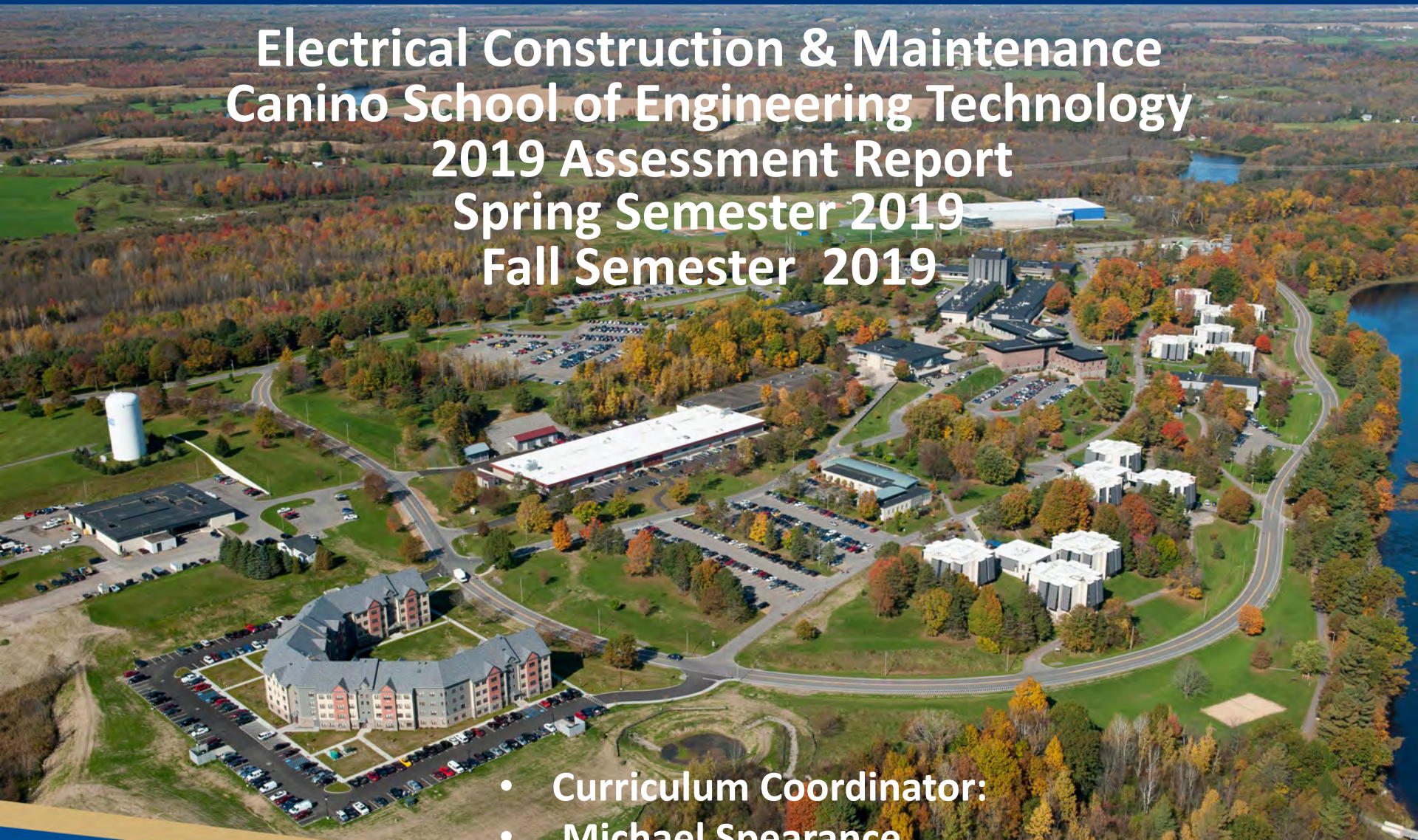
Electrical Construction & Maintenance
Canino School of Engineering Technology
2019 Assessment Report
Spring Semester 2019
Fall Semester 2019



- Curriculum Coordinator:
- Michael Spearance
- Date of Presentation: January 2020

SUNY CANTON

What was assessed? Student learning outcomes list:

- *PSLO 1* – Install Wiring Systems for Residential and Commercial Buildings
  - Assessed Spring 2019
- PSLO 2 - Connect electrical devices in accordance with the NEC (National Electrical Code)
- *PSLO 3* - Perform routine maintenance on motors and transformers
- PSLO 4 - Install motor control circuits

Rationale for Assessment

- For the 2019 academic year, the ISLO up for assessment was:

ISLO #5: Industry, Professional, Discipline Specific Knowledge and Skills.

- I chose to focus assessment on industry-identified deficiencies in the program.

Where were outcomes assessed?

- *PSLO 1* - Install Wiring Systems for Residential and Commercial Buildings
- An electrical contractor out of Syracuse, NY, DEMCO, a major employer of the program, indicated that in field placements for current graduates, the students were not doing an acceptable job at their measurements and their box-mounting skills (height and depth) were not up to their standards.
- The identified skill deficiencies are all taught in ELEC 172, so we focused our assessments there.

How was the assessment accomplished?

- Student work assessed:

  Lab 3, 4, 5 (new), and 6 (new)

  Lab 3 S1-S1-Light-Switched/Hot Receptacles

  Students, in pairs, must hand-draw a Booth Drawing, Cable and Line Diagrams, Metal Boxes, and the Box Fill. In addition, the must do a full write-up with their conclusions, identify windings for correct polarity, and then connect as per drawing in lab monitored by instructor for safety. Students are then tested individually for the same skills to ensure everyone understands how to perform accurately.

  Students individually complete lab write-up.

  Lab 4: MC (Receptacle-Receptacle-S3-S3-Light)

  Similar to Lab 3, but with a different drawing to build upon hand skill sets. Students, in pairs, must hand-draw a Booth Drawing, Cable and Line Diagrams, Metal Boxes, and the Box Fill. In addition, the must do a full write-up with their conclusions, identify windings for correct polarity, and then connect as per drawing in lab monitored by instructor for safety. Students are then tested individually for the same skills to ensure everyone understands how to perform accurately.

  Two new labs were added for Spring 2019 to reinforce these skills:

  Lab 5 MC5 (2 Bay Light-S1-Light-S3-S3 -Same Feed) and Lab 6 MC (S1-Light-S3-S4-S3-Light-2 Duplex)

  Labs 5 and 6 introduce different layouts to students, but are following and assessing the same skills as labs 3 and 4.

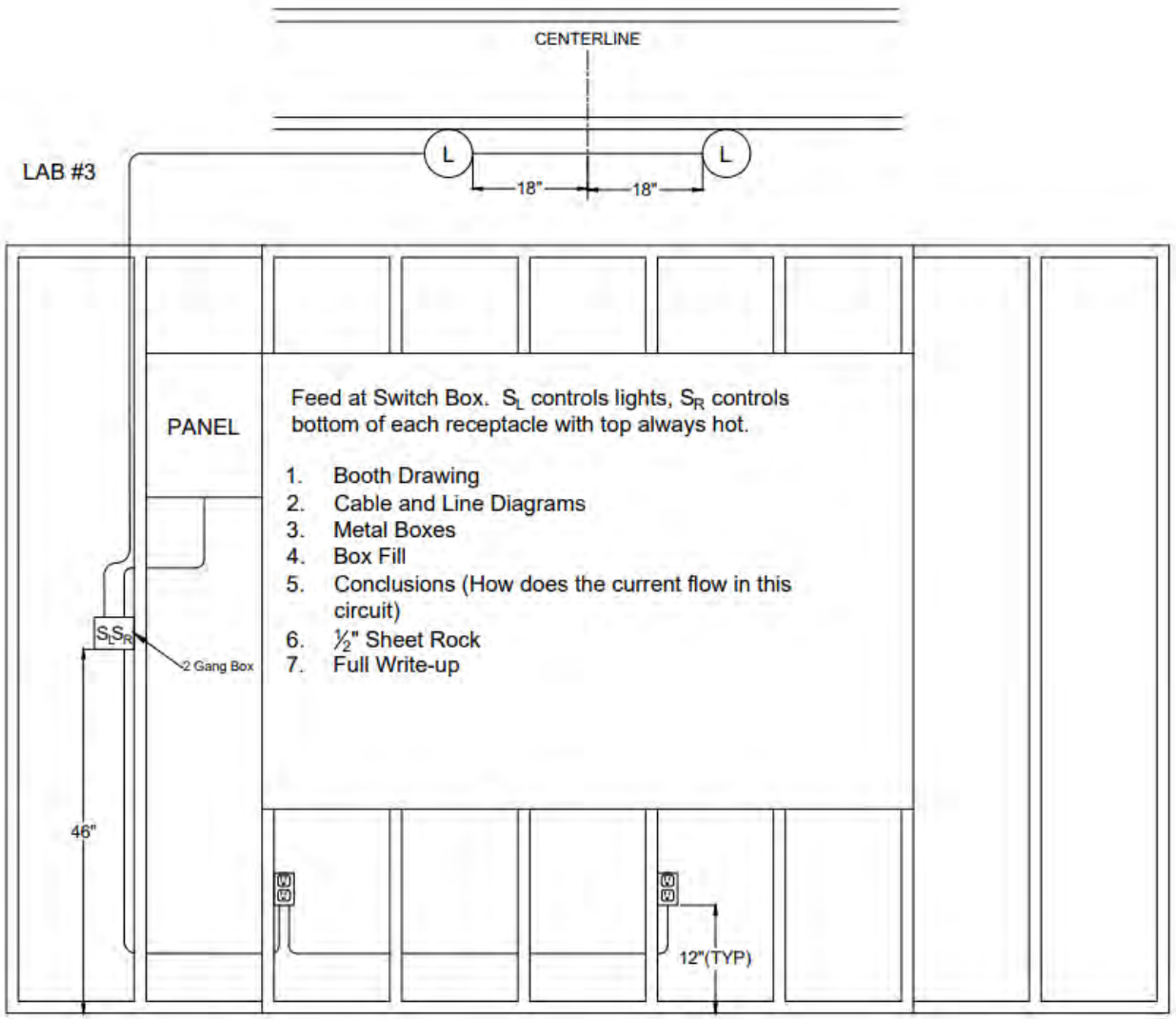
- Measurement strategy:

  Lab performance and design skills

- Sample size:

  All students in the courses - 16 for Spring 2019

Example: Lab 3



Assessment results: What have the data told us?

- *PSLO 1 – Size components then* Install motor
- power and control circuits

For the Cable Slicing Test, 71% of students scored a 70 and above on this lab – meeting my target benchmark

For the Metal-clad Cable Circuit Installation Lab, 64% of students passed the lab with a 70% and above – not meeting my target.

-Students need to improve on their box mounting because they did not have the measurement correct and the box was crooked.

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

- Additional practice on box mounting will be implemented in Spring 2020 in order to help students meet the Metal-clad Cable Circuit Installation Lab benchmark.

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

– No requests.

Attachments: 2019 SLO Findings

PSLO 1 - Assessment Findings Data

Assessment Results					
Subject	Course	Sections Participating	Total Sections	Outcome	Semester
ELEC	172	1	1	Met on 1, Did not meet on 1	Spring