



 **SUNY CANTON**

Powersports Performance and Repair
Canino School of Engineering Technology
Fall 2016 Assessment Report



Curriculum Coordinator: Christopher Mayville

Date of Presentation: 1/18/2017

Student learning outcomes list:

- **MSPT SO 1- Diagnose and Repair**
 - *Test the ability to diagnose and repair electronic management problems related to Powersports vehicles.*
- **MSPT SO 2- Mathematical and Analytical Thinking Skills**
 - *Develop mathematical and analytical thinking skills necessary to perform both electrical and engine measurement calculations.*
- **MSPT SO 3- Communication Skills**
 - *Demonstrate effective written and verbal communication skills.*
- **MSPT SO 4- Skill Mastery**
 - *Create opportunity to master techniques, skills, and modern tools used in the Powersports industry.*



Program to Course SLO Mapping:

- **MSPT SO 1**

- *AUTO 114: Outcomes 3,4,5, and 6*
- *AUTO 122: Outcomes 1 and 2*
- *MSPT 110: Outcomes 3 and 6*

- **MSPT SO 2**

- *AUTO 122: Outcomes 1,2, and 3*
- *MSPT 101: Outcomes 1 and 3*
- *MSPT 110: Outcomes 1,2,3,4,5, and 6*

- **MSPT SO 3**

- *MSPT 101: Outcome 3*
- *MSPT 120: Outcome 3*

- **MSPT SO 4**

- *MSPT 110: Outcomes 1,4, and 6*
- *MSPT 130: Outcomes 1,2, and 3*



How was the assessment accomplished?

- Student work assessed:
 - Tests and quizzes
 - Lab worksheets
- Measurement strategy:
 - Percentage of correct answers on quizzes, tests, and worksheets
- Sample size:
 - All students attending class. (8-12 students)
- Program goals



Actual assessment data

MSPT SO 1

Course	Outcome	Target	Finding
AUTO 122	A122.1	70% of students will achieve 70% or better	Met
	A122.2	70% of students will achieve 70% or better	Met
AUTO 114	A114.3	70% of students will achieve 70% or better	Met
	A114.4	70% of students will achieve 70% or better	Met
	A114.5	70% of students will achieve 70% or better	Met
	A114.6	70% of students will achieve 70% or better	Met
MSPT 110	3	70% of students will achieve 70% or better	Met
	6	70% of students will achieve 70% or better	Met



Actual assessment data cont.

MSPT SO 2

Course	Outcome	Target	Finding
AUTO 122	A122.1	70% of students will achieve 70% or better	Met
	A122.2	70% of students will achieve 70% or better	Met
	A122.3	70% of students will achieve 70% or better	Not Met
MSPT 101	1	70% of students will achieve 70% or better	Met
	3	70% of students will achieve 70% or better	Met



Actual assessment data cont.

MSPT SO 2 continued

Course	Outcome	Target	Finding
MSPT 110	1	70% of students will achieve 70% or better	Met
	2	70% of students will achieve 70% or better	Met
	3	70% of students will achieve 70% or better	Not Met
	4	70% of students will achieve 70% or better	Met
	5	70% of students will achieve 70% or better	Not Met
	6	70% of students will achieve 70% or better	Met



Actual assessment data cont.

MSPT SO 3

Course	Outcome	Target	Finding
MSPT 101	3	70% of students will achieve 70% or better	Met
MSPT 120	3	70% of students will achieve 70% or better	Met



Actual assessment data cont.

MSPT SO 4

Course	Outcome	Target	Finding
MSPT 130	1	70% of students will achieve 70% or better	Met
	2	70% of students will achieve 70% or better	Met
	3	70% of students will achieve 70% or better	Met
MSPT 110	1	70% of students will achieve 70% or better	Met
	4	70% of students will achieve 70% or better	Met
	6	70% of students will achieve 70% or better	Met



Assessment results

- We have met or exceeded our goals for all but the following SLOs under MSPT SO 2:
 - AUTO 122 outcome A122.3
 - Diagnose & service the charging, starting, and accessory systems

▼ **Measure:** Lab Activities

Direct - Other

Details/Description: The outcome will be assessed using each students lab activity average grade.

Target: 70% of the students will score 70% or better

Implementation Plan (timeline): Fall 2016

Instructor: Christopher Mayville

CRN: 10091

Findings for Lab Activities

Summary of Findings: 50% of the students achieved a grade of 70% or higher

Results: Target Achievement: Not Met



Assessment results cont.

– MSPT 110 outcome 3

- Perform dynamometer testing for torque, horsepower and emissions concerns

▼ **Measure:** Dynamometer Testing

Direct - Other

Details/Description: The students will use the lab dynamometer to measure and calculate torque and horsepower on a motorcycle.

Target: 70% of the students will complete the activity

Implementation Plan (timeline): Spring 2016

Instructor: Christopher Mayville

CRN: 20118

Findings for Dynamometer Testing

Summary of Findings: None of the students completed the task.

Results: Target Achievement: Not Met



Assessment results cont.

– MSPT 110 Outcome 5

- Calculate gear ratios related to modular powertrain assemblies

▼ **Measure:** Final test question

Direct - Other

Details/Description: The students will complete a test question calculating gear ratios.

Target: 70% of students will correctly answer the question

Implementation Plan (timeline): Spring 2016

Instructor: Christopher Mayville

CRN: 20118

Findings for Final test question

Summary of Findings: 57 percent of the students answered the question correctly

Results: Target Achievement: Not Met



Data-driven decisions

- AUTO 122- Outcome A122.3

Recommendations : Try to recruit students who have the work ethic to show up for class and turn in their assignments.

Reflections/Notes :

- One student stopped showing up the second week of class and never dropped the course.
- Another student either showed up late or not at all for the majority of the second half of the semester.
- There was also an issue with students not handing in the work or handing it in partially done.



Data-driven decisions cont.

- MSPT 110- Outcome 3

Recommendations : The dynamometer needs to be updated and running.

Reflections/Notes : Repair and updates to the dynamometer are needed along with the training to learn how to operate the dyno.



Data-driven decisions cont.

- MSPT 110- Outcome 5

Recommendations : All of the students calculated the ratio correctly but did not write the answer properly. In the future I need to stress to importance of writing the answer to the correct place value.

Reflections/Notes : In the future I would like to have the students calculate the ratio of every gear in their lab transmission.



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

- MSPT 110- Outcome 3

Recommendations : The dynamometer needs to be updated and running.

- \$2,137.52-Dynamometer repair, software, and training
- \$829.06-Desktop PC to run software
- \$299.99-Cooling fan
- Total cost: \$3266.57

