Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Fluid Power	110	FLP 110 12/26/2019-Fluid Power Fundamentals - II
Division	Department	Faculty Preparer
Advanced Technologies and Public Service Careers	Advanced Manufacturing	Jim Popovich
Date of Last Filed Assessment Report		

I. Review previous assessment reports submitted for this course and provide the following information.

1. Was this course previously assessed and if so, when?

   No

2. Briefly describe the results of previous assessment report(s).

   3.

4. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

   5.

II. Assessment Results per Student Learning Outcome

Outcome 1: Identify complex fluid power symbols.

- Assessment Plan
  - Assessment Tool: Departmental exam
  - Assessment Date: Fall 2022
  - Course section(s)/other population: All sections
  - Number students to be assessed: All students
  - How the assessment will be scored: Departmental exam will be scored using the answer key.
  - Standard of success to be used for this assessment: 70% of students will score 70% or higher on the outcome-related questions.

- Who will score and analyze the data: Departmental faculty will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2018	2019	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
38	35

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

All students who completed work on the final exam for FLP 110 Fluid Power Fundamentals-II were assessed (students who withdrew from the courses were not assessed).

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

The two selected sections were morning (Fall) and evening (Winter) sections. Fluid Power classes are not conducted off campus, distance learning, mixed mode or at WCC extension centers due to equipment requirements for lab exercises.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

The final exam contained 21 questions where students matched the ANSI fluid power symbols with an appropriate descriptor. The exams were scored by WCC full-time fluid power faculty.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes
31 of the 38 students (86%) were able to properly identify at least 70% of the 21 fluid power graphical symbols.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The students, for the most part, were able to identify ANSI fluid power graphical symbols. This is an important skill that employers look for - the ability to read circuit prints and schematics.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Improve the quizzes and presentation materials to properly identify components from graphical symbols.

Outcome 2: Indicate operation and purpose of intermediate level components in fluid power circuits.

- Assessment Plan
    - Assessment Tool: Departmental exam
    - Assessment Date: Fall 2022
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Departmental exam will be scored using the answer key.
    - Standard of success to be used for this assessment: 70% of students will score 70% or higher on the outcome-related questions.
    - Who will score and analyze the data: Departmental faculty will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2018	2019	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
38	36

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

All students who completed the final exam were assessed. Those who withdrew from the class or dropped it were not present for the final exam.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

An evening section and an afternoon section of FLP 110 were selected for assessment. There are no distance learning, mixed mode or extension center fluid power courses conducted due to lab equipment requirements.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Full-time fluid power instructors selected questions from the final exam that corresponded with the objective and tabulated the results for evaluation.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes
31 of the 38 students (86%) scored 70% or better, which was better than the standard of 70%.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The students were able to identify most components included as part of the assessment.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Increasing focus on retention of covered material through student feedback (quizzes, homework, etc.).

III. Course Summary and Intended Changes Based on Assessment Results

1. Based on the previous report's Intended Change(s) identified in Section I above, please discuss how effective the changes were in improving student learning.

No previous assessment.

2. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

Especially in relation to fixed displacement and pressure compensated pump, some students have difficulty defining operational and functional differences.

3. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

All department faculty teaching fluid power classes have been informed.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Course Assignments	Integrate more assignments where students identify/match component descriptors to ANSI or ISO graphical symbols.	Increasing focus on identification of symbols, which will help students with reading blueprints in more advanced classes.	2020
Course Assignments	More quizzes and assignments related to identifying graphical symbols.	Increased exposure and repetition.	2020

5. Is there anything that you would like to mention that was not already captured?

6.

III. Attached Files

FLP 110 Data
FLP 110 Fall 2018
FLP 110 Winter 2019

Faculty/Preparer: Jim Popovich **Date:** 02/28/2020

Department Chair:	Thomas Penird	**Date:**	04/13/2020
Dean:	Jimmie Baber	**Date:**	04/21/2020
Assessment Committee Chair:	Shawn Deron	**Date:**	06/16/2020