Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Auto Services	133	ASV 133 11/05/2018-Automotive Fuel
Division	Department	Faculty Preparer
Advanced Technologies and Public Service Careers	Automotive Services	Jeremiah Pfahlert
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: Recognize and demonstrate safe shop practices.

- Assessment Plan
  - Assessment Tool: Departmental exam and NATEF performance tasks
  - Assessment Date: Fall 2015
  - Course section(s)/other population: All sections
  - Number students to be assessed: All students
  - How the assessment will be scored: Common departmental exam will be scored using an answer sheet. NATEF checklist will be scored using the departmentally-developed rubric.

- Standard of success to be used for this assessment: 70% of the students will score an overall average of 70% or higher.
- Who will score and analyze the data: Departmental faculty

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)
2017	2018, 2017	

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

# of students enrolled	# of students assessed
91	37

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.

Course data was available from only three full sections over the course of two years. Centralized collection of data is a departmental issue that is being corrected. Data from each sections is not available, but enough data is present from an adequate cross section of student population to support the assessment.

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.

Available data that was used to assess is from winter of 2017 and 2018 as well as fall of 2017. These sections are both day and evening classes. All classes are face to face with both lecture and lab.

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

There is currently no tool in place to capture data to support this outcome. This is remedied for data collection for future assessment.

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: No
There is currently no tool in place to capture data to support this outcome. With the lack of student injuries, the anecdotal evidence shows that this is being

applied. Specific testing will be implemented for future assessments. The department has created a common standardized test for better data collection to assess in the future.

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

Students must understand safe practices in this program. Students must display correct usage and observance of safety policies in the laboratory and instructional settings. This outcome is for all class levels and builds off of information and techniques students learn in our basic level courses. Safety is the base of class performance to create a safe environment for each individual student and the class as a whole. The new tool will be administered in multiple courses as the student progresses through the program.

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.

The student's standard of success was not met or could not be properly assessed for outcome #1 (Recognize and demonstrate safe shop practices). Going forward, a new assessment tool will be used. For continuous improvement, course curriculum needs to continue being standardized among all sections and faculty teaching must be current and constant. Continuing to promote safety will further the continuous improvement of student's safety practices in class.

Outcome 2: Recognize and service basic fuel system components.

- Assessment Plan
    - Assessment Tool: Departmental exam and NATEF performance tasks
    - Assessment Date: Fall 2015
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Common departmental exam will be scored using an answer sheet. NATEF checklist will be scored using the departmentally-developed rubric.
    - Standard of success to be used for this assessment: 70% of the students will score an overall average of 70% or higher.
    - Who will score and analyze the data: Departmental faculty

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)
2017	2018, 2017	

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

# of students enrolled	# of students assessed
91	37

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.

Course data was available from only three full sections over the course of two years. Centralized collection of data is a departmental issue that is being corrected. Data from each sections is not available, but enough data is present from an adequate cross section of student population to support the assessment.

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.

Available data that was used to assess is from winter of 2017 and 2018 as well as fall of 2017. These sections are both day and evening classes. All classes are face to face with both lecture and lab.

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

Departmental exam or test in multiple choice form. Students are engaged in face to face contact with the instructor during lecture and labs. Instant feedback is given on their actions to help with their interpretation of the lecture material.

Common assessment for all sections using common departmental exam.

Evaluation Scale:

[5] Superior (100 - 90%)

[4] Excellent (89 - 80%)

[3] Average (79 - 70%)

[2] Below Average (69 - 60%)

[1]Incomplete N/A Not Available for viewing/evaluation (59% and below or did not complete).

Scores of 5, 4 or 3 are considered "proficient."

NATEF checklist will no longer be used due to lack of access to quantitative data from the NATEF institution. Due to not being able to use the collected specific section data from this institution, the department will recommend removing this checklist as an assessment tool for this outcome and replacing it with a departmental exam.

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

Outcome #2: Recognize and service basic fuel system components.

Based off common departmental Blackboard exam used in all sections results from common departmental exam:

[5] Superior (100 - 90%) = 23 Students

[4] Excellent (89 - 80%) = 4 Students

[3] Average (79 - 70%) = 3 Students

[2] Below Average (69 - 60%) = 3 Students

[1] Incomplete N/A Not Available for viewing/evaluation (59% and below or did not complete) = 4 Students

81% of students scored at or above 70%.

The standard of success was met for this outcome because over 70% of students scored an average of 70% (3 - average) or higher.

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

Students are required to first attend lecture and read the book material, then pass a common departmental exam on the covered material. After the successful completion to the required book work, they perform a physical exercise displaying their acquired skills on actual vehicles in the lab environment. The students seemed to outperform their written test scores when involved with the physical

lab, and in follow up testing seemed to perform better on lab-covered material. This shows the importance of lab exercises in learning.

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.

With the ever-changing fuel management systems in the automotive industry, the covered curriculum will need to be frequently updated to keep up with the current technology. Basic components are basic but do change over time as specific devices are added and removed or replaced. As needed, the educational materials will need to be updated as the technology changes with both curriculum and required tools and their usage.

Outcome 3: Recognize, diagnose and repair basic emission control components.

- Assessment Plan
    - Assessment Tool: Departmental exam and NATEF performance tasks
    - Assessment Date: Fall 2015
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Common departmental exam will be scored using an answer sheet. NATEF checklist will be scored using the departmentally-developed rubric.
    - Standard of success to be used for this assessment: 70% of the students will score an overall average of 70% or higher.
    - Who will score and analyze the data: Departmental faculty

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)
2017	2018, 2017	

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

# of students enrolled	# of students assessed
91	37

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.

Course data was available from only three full sections over the course of two years. Centralized collection of data is a departmental issue that is being corrected. Data from each section is not available, but enough data is present from an adequate cross section of student population to support the assessment.

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.

Available data that was used to assess is from winter of 2017 and 2018 as well as fall of 2017. These sections are both day and evening classes. All classes are face to face with both lecture and lab.

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

Departmental exam or test in multiple choice form. Students are engaged in face to face contact with the instructor during lecture and labs. Instant feedback is given on their actions to help with their interpretation of the lecture material.

Common assessment for all sections using common departmental exam.

Evaluation Scale:

[5] Superior (100 - 90%)

[4] Excellent (89 - 80%)

[3] Average (79 - 70%)

[2] Below Average (69 - 60%)

[1] Incomplete N/A Not Available for viewing/evaluation (59% and below or did not complete).

Scores of 5, 4 or 3 are considered "proficient."

NATEF checklist will no longer be used due to lack of access to quantitative data from the NATEF institution. Due to not being able to use the collected specific section data from this institution, the department will recommend removing this as an assessment tool for this outcome and replacing it with a departmental exam.

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
Outcome #3: Recognize, diagnose and repair basic emission control components. Based off common departmental Blackboard exam used in all sections results from common departmental exam: [5] Superior (100 - 90%) = 14 Students [4] Excellent (89 - 80%) = 6 Students [3] Average (79 - 70%) = 7 Students [2] Below Average (69 - 60%) = 2 Students [1] Incomplete N/A Not Available for viewing/evaluation (59% and below) = 8 Students 72.9% of students scored at or above 70%. The standard of success was met for this outcome because over 70% of students scored an average of 70% (3 - average) or higher.

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

Students are required to first attend lecture and read the book material, then pass a common departmental exam on the covered material. After the successful completion of the required book work, they perform a physical exercise displaying their acquired skills on actual vehicles in the lab environment. The students seemed to outperform their written test scores when involved with the physical lab, and in follow up testing seemed to perform better on lab-covered material. This shows the importance of lab exercises in learning.

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.

With the ever-changing vehicle emissions control components in the automotive industry, the covered curriculum will need to be frequently updated to keep up with the current technology. As needed, the educational materials will need to be

updated as the technology changes with both curriculum and required tools and their usage.

Outcome 4: Identify and use on-board diagnostics system II.

- Assessment Plan
    - Assessment Tool: Departmental exam and NATEF performance tasks
    - Assessment Date: Fall 2015
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Common departmental exam will be scored using an answer sheet. NATEF checklist will be scored using the departmentally-developed rubric.
    - Standard of success to be used for this assessment: 70% of the students will score an overall average of 70% or higher.
    - Who will score and analyze the data: Departmental faculty

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)
2017	2018, 2017	

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

# of students enrolled	# of students assessed
91	37

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.

Course data was available from only three full sections over the course of two years. Centralized collection of data is a departmental issue that is being corrected. Data from each sections is not available, but enough data is present from an adequate cross section of student population to support the assessment.

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.

Available data that was used to assess is from winter of 2017 and 2018 as well as fall of 2017. These sections are both day and evening classes. All classes are face to face with both lecture and lab.

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

Departmental exam or test in multiple choice form. Students are engaged in face to face contact with the instructor during lecture and labs. Instant feedback is given on their actions to help with their interpretation of the lecture material.

Common assessment for all sections using common departmental exam.

Evaluation Scale:

[5] Superior (100 - 90%)

[4] Excellent (89 - 80%)

[3] Average (79 - 70%)

[2] Below Average (69 - 60%)

[1] Incomplete N/A Not Available for viewing/evaluation (59% and below or did not complete).

Scores of 5, 4 or 3 are considered "proficient."

NATEF checklist will no longer be used due to lack of access to quantitative data from the NATEF institution. Due to not being able to use the collected specific section data from this institution, the department will recommend removing this checklist as an assessment tool for this outcome and replacing it with a departmental exam.

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

Outcome #4: Identify and use on-board diagnostics system II.

Based off common departmental Blackboard exam used in all sections results from common departmental exam:

[5] Superior (100 - 90%) = 17 Students

[4] Excellent (89 - 80%) = 9 Students

[3] Average (79 - 70%) = 3 Students

[2] Below Average (69 - 60%) = 2 Students

[1] Incomplete N/A Not Available for viewing/evaluation (59% and below) = 6 Students

78.3% of students scored at or higher than 70%.

The standard of success was met for this outcome because over 70% of students scored an average of 70% (3 - average) or higher.

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

Students are required to first attend lecture and read the book material, then pass a common departmental exam on the covered material. After successful completion of the required book work, they perform a physical exercise displaying their acquired skills on actual vehicles in the lab environment. The students seemed to outperform their written test scores when involved with the physical lab, and in follow up testing seemed to perform better on lab-covered material. This shows the importance of lab exercises in learning.

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.

Vehicle on-board diagnostic and communication systems are an important key to understanding vehicle diagnostics. The usage of new and faster bus communication systems in the automotive industry will require frequent updates to curriculum and equipment. This will keep the class up to date with the changing technology in this area. As needed, the educational materials will be updated and the curriculum will be corrected to stay current with the technology that is being used on modern vehicles.

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.

2.

3. 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?

This course seems to be imparting the appropriate knowledge to the students at the time of this assessment. This is a course with a focus on both traditional theory and current technological application; as a result the curriculum will need to be watched and changed. While theory does not change for the most part, the technology is ever-changing and we must stay current with components and equipment in this class.

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

All assessments will be discussed in departmental meetings after completion and the department chair has been an active part of the discussion during this process.

5. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	Outcome (1) Recognize and demonstrate safe shop practices. New standardized departmental safety exam will be implemented to have a written track of student understanding and progress in learning environment safety and safe practices.	Outcome (1) Recognize and demonstrate safe shop practices. Currently there is no written way for us to track the student success in our safety outcome. Safety and knowledge of safe practices is a very important part of the educational experience. This outcome is important and does not need correction itself, but the tracking of student progress in this outcome needs	2019

		better data collection. This outcome is critical to the comprehensive nature of the curriculum and a new departmental exam will be added to create assessable data.	
Assessment Tool	For outcomes 2 through 4, the NATEF check list will be removed and replaced with a standardized departmental exam.	The NATEF check list will not work as an assessment tool due to lack of access to the specific data. This will be replaced by a departmental exam.	2019

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

7.

III. Attached Files

w_18_03
w_17_01
f_17_01

Faculty/Preparer:	Jeremiah Pfahlert	**Date:** 12/03/2018
Department Chair:	Justin Morningstar	**Date:** 12/10/2018
Dean:	Brandon Tucker	**Date:** 12/11/2018
Assessment Committee Chair:	Shawn Deron	**Date:** 02/18/2019