Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Auto Services (new)	254	ASV 254 06/13/2023-Suspension and Steering
College	Division	Department
Advanced Technologies and Public Service Careers	Advanced Technologies and Public Service Careers	Transportation Technologies
Faculty Preparer		Michael Duff
Date of Last Filed Assessment Report		06/22/2020

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

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

   Yes

   This course was assessed on June 22, 2020.

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

   The improvement of the course's Blackboard site correlated with higher completion rates of student homework. The NATEF Checklist was identified as needing to be removed as an assessment tool.

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

   The course has only been marginally improved on Blackboard since the last assessment report and the NATEF Checklist was not yet substituted with a new assessment tool. Regarding Outcome II, the program purchased a new on-vehicle wheel bearing press fixture to help students successfully have industry standard tooling to perform a wheel bearing service. Students continue to struggle with loaded versus unloaded ball joint inspection despite an effort from the instructor to improve the instructor led demonstration on this topic. The final item for improvement was the integration of a Hunter Road Force wheel balancer to help students improve their ability to perform accurate pre-alignment inspections; this was approved via capital equipment during the Winter 23 semester and should be on-campus for use for Fall 23 semester. The redundant practical tool for Outcome 1 and 3 was rectified as well.

II. Assessment Results per Student Learning Outcome

Outcome 1: Evaluate steering and suspension system components for wear and damage.

- Assessment Plan
    - Assessment Tool: Written Exam
    - Assessment Date: Winter 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Answer key
    - Standard of success to be used for this assessment: 70% of students will score 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)
2022, 2021	2023, 2022, 2021	

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

# of students enrolled	# of students assessed
86	86

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 were assessed in these sections.

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 course only meets face-to-face on campus and includes day and evening sections.

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

The tool used to assess this outcome was two written exams administered in Blackboard. There were 10 questions targeted to assess this outcome on each exam. The questions were developed in an Automotive Service Excellence (ASE) format, which prepares students for the state and national exams. The exam was scored using an answer key.

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
On the first written exam 67 out of 86 students (77.9%) achieved a 70% or higher, and on the second written exam 65 out of 86 students (75.6%) achieved a 70% or higher. The average of these two assessments was 76.75% of students scored 70% or higher. 61/86 students (70.93%) scored 70% or higher on both exams. The standard of success was met.

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

Students continued to show excellent competency in evaluating steering and suspension system components.

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.

Students continue to struggle with loaded versus unloaded ball joints; it may be necessary to include a specific learning unit showing a better visual representation of how these components differ in the inspection process despite trying to provide better instructor led demonstrations.

Outcome 1: Evaluate steering and suspension system components for wear and damage.

- Assessment Plan
    - Assessment Tool: Practical Exam
    - Assessment Date: Winter 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Departmentally-developed rubric

- Standard of success to be used for this assessment: 70% of students will score 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)
2022, 2021	2023, 2022, 2021	

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

# of students enrolled	# of students assessed
86	86

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 in these sections were 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 course only meets face-to-face on campus and includes day and evening sections.

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

The tool used to assess this outcome was a practical exam that includes 12 outcome-related items. Students inspected suspension components examining them for damage and/or wear on vehicles which can affect vehicle tracking and driving performance. The practical exam is titled "Suspension and Steering Inspections".

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
Using this tool, 84 out of 86 (97.7%) students scored 70% or higher. Specifically these 84 students met proficiency for all 12 outcome-related items of inspections.

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

Students continued to show excellent competency in evaluating steering and suspension system components.

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.

Students continue to struggle with loaded versus unloaded ball joints; it may be necessary to include a specific learning unit showing a better visual representation of how these components differ in the inspection process despite trying to provide better instructor led demonstrations.

Outcome 2: Remove and install steering and suspension system components.

- Assessment Plan
    - Assessment Tool: Lab assignment sheets
    - Assessment Date: Winter 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Skills checklist
    - Standard of success to be used for this assessment: 70% of students will score 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)
2022, 2021	2023, 2022, 2021	

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

# of students enrolled	# of students assessed
86	86

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 from these sections were 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 course only meets face-to-face on campus and includes day and evening sections.

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

The tools used to assess this outcome were laboratory assignment sheets targeted to assess this outcome. The tasks were picked by suspension type and design from industry standards. The outcome was checked for accuracy by the instructor and test driving the vehicle on campus.

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
73 students out of 86 (84.9%) completed the lab assignment sheet and activity of replacing a rack and pinion steering component and front suspension components.

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

Students in our department generally show strong technical skill sets in this ASV 254 course as it is very visual and defined in nature. In these 6 sections of ASV 254, the trend persists and this continues to be one of the students' favorite courses due to its both technical and mechanical approach to vehicle service.

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.

New on-vehicle wheel bearing service tools improved students' ability to remove and replace wheel bearing components and students continued to accel at rack and

pinion replacement. The department, however, is still investigating new press fixtures for the off-vehicle hydraulic press.

Outcome 3: Perform vehicle pre-alignment inspection.

- Assessment Plan
    - Assessment Tool: Practical Exam
    - Assessment Date: Winter 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Departmentally-developed rubric
    - Standard of success to be used for this assessment: 70% of students will score 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)
2022, 2021	2023, 2022, 2021	

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

# of students enrolled	# of students assessed
86	68

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 in these sections were assessed. However, for outcome #3, a group of student results was inadvertently deleted (from the W21 sheet). That group was removed from the results.

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 course only meets face-to-face on campus and includes day and evening sections.

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

The tool used to assess this outcome was a practical exam that includes 10 outcome-related items. Students inspected steering and suspension components examining them for damage and/or wear on vehicles which can affect vehicle alignments.

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
65 out of 68 students (95.6%) scored 70% or higher. Prior to the deletion of the W21 data for this outcome, I had recorded that 83 out of the full 86 students (96.5%) scored a 70% or higher on this practical exam. Side note, even if all students in the missing data did not score 70% or higher, the total result would still meet the standard of success.

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

Students showed incredible competency performing the pre-alignment inspections and identifying low-tire pressure, out of specification ride height, worn or broken steering and suspension components, and inspecting vehicle loads. The past few years we have seen a staggering increase in salvage titles so the department has been focused on teaching students how to inspect these vehicles for frame/chassis damage prior to performing an alignment.

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 Road Force Wheel Balancer will be an integral tool for this course come Fall 23 semester.

Outcome 4: Perform vehicle alignments procedure.

- Assessment Plan
    - Assessment Tool: Practical Exam
    - Assessment Date: Winter 2019

- Course section(s)/other population: All sections
- Number students to be assessed: All students
- How the assessment will be scored: Departmentally-developed rubric
- Standard of success to be used for this assessment: 70% of students will score 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)
2022, 2021	2023, 2022, 2021	

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

# of students enrolled	# of students assessed
86	86

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 in these sections were 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 course only meets face to face on campus and includes day and evening sections.

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

The tool used to assess this outcome is an 8-item checklist where students complete an alignment on a vehicle using the alignment rack in the automotive lab. The checklist includes items where students demonstrate the ability to set alignment angles such as camber, caster, and toe.

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

77 students out of 86 (89.5%) performed at 70% proficiency or higher. Students are not given a score on this practical exam unless they can demonstrate 100% proficiency.

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

Our department uses Hunter alignment equipment and software which is an industry standard. The software in itself is very intuitive and user friendly so coupled with strong teaching and instructor led demonstrations, it is very difficult for the students to not be successfully performing vehicle alignments.

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.

One of the two alignment machines uses a sensor head that mounts to the rim rather than the newer updated style that mounts to the tire. The old style makes it difficult to perform rolling compensation procedures on late model vehicles. We have requested the newer style alignment system through Perkins for the 23/24 academic year.

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.

Procuring new on-vehicle wheel bearing press equipment helped students improve suspension component replacement, retaining the 85% success rate on the lab sheet.

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?

The need for the Road Force Wheel Balancer became even more evident than in the previous report as it is required to diagnose most hybrid and battery electric vehicles, but more importantly we are doing the students a disservice by not teaching it.

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

This information will be shared at the next department meeting in August 23.

4.

Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Other: Equipment	We will be adding the Hunter Road Force Wheel Balancer.	The practice of using this particular piece of equipment for pre-alignment inspections and on battery electric/hybrid vehicles is not too common place to ignore.	2023

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

No

III. Attached Files

W21
F21
W22
F22
W23

Faculty/Preparer:	Michael Duff	**Date:** 06/20/2023
Department Chair:	Rocky Roberts	**Date:** 06/20/2023
Dean:	Jimmie Baber	**Date:** 06/22/2023
Assessment Committee Chair:	Jessica Hale	**Date:** 10/22/2023

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Auto Services (new)	254	ASV 254 08/26/2021-Suspension and Steering
College	Division	Department
Advanced Technologies and Public Service Careers	Advanced Technologies and Public Service Careers	Transportation Technologies
Faculty Preparer		Michael Duff
Date of Last Filed Assessment Report		06/22/2020

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

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

   Yes

   This course was assessed through Winter 2019.

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

   Students performed very well. When students diagnosed and repaired vehicle wander, we recognized that a "Road Force Tire Balancer" would improve their learning.

   Students performed very well on the front and rear suspension service, steering and wheel alignment outcomes.

   It appeared that the course was meeting the needs of the students.

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

   It was suggested that there needed to be two changes made within the course which included:

   Evaluate online homework performance and purchase a new piece of equipment. The homework needed to be moved from a written assignment to Blackboard allowing the students to have more laboratory time as well as immediate feedback from Blackboard.

We have requested the Road Force balancer on Capital equipment and we are still waiting to receive it.

II. Assessment Results per Student Learning Outcome

Outcome 1: Evaluate steering and suspension system components for wear and damage.

- Assessment Plan
    - Assessment Tool: Written Exam
    - Assessment Date: Winter 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Answer key
    - Standard of success to be used for this assessment: 70% of students will score 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)
2020		

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

# of students enrolled	# of students assessed
16	16

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 from the Fall 2020 semester were 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 course only meets face-to-face on campus and includes day and evening sections.

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

The tool used to assess this outcome was a written exam administered in Blackboard. There were 11 questions targeted to assess this outcome The questions were developed in an Automotive Service Excellence (ASE) format, which prepares students for the state and national exams. The exam was scored using an answer key.

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
87% of the students (14 out of 16) scored 72% or higher (8 correct out of the 11) on the outcome-related questions. After reviewing the data, we need to review the number of questions used to assess this outcome or adjust the standards of success

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

Students excelled in finding damaged and worn out components.

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.

Some students struggled identifying loaded and non-loaded ball joints, which are tested differently. It would be helpful to have additional Blackboard video lecture and laboratory demonstrations on the differences and reasons for checking both types.

Outcome 1: Evaluate steering and suspension system components for wear and damage.

- Assessment Plan
    - Assessment Tool: Practical Exam
    - Assessment Date: Winter 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Departmentally-developed rubric

- Standard of success to be used for this assessment: 70% of students will score 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)
2020		

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

# of students enrolled	# of students assessed
16	16

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 from the Fall 2020 semester were 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 course only meets face-to-face on campus and includes day and evening sections.

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

The tool used to assess this outcome was a practical exam that includes 12 outcome-related items. Students inspected suspension components examining them for damage and/or wear on vehicles which can effect vehicle alignments. This was the same tool used to assess outcome number 3. Completing this assessment report identified a redundancy in inspection procedures.

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

100% of students were successful when inspecting vehicles, finding 90% of the issues that included instructor pre-identified loose or worn suspension components that would affect vehicle alignments. These are the outcome number 3 results. We will be removing this tool from the master syllabus.

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

Students excelled in finding damaged and worn out components.

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.

Some students struggled identifying loaded and non-loaded ball joints, which are tested differently. It would be helpful to have additional Blackboard video lecture and laboratory demonstrations on the differences and reasons for checking both types.

Outcome 2: Remove and install steering and suspension system components.

- Assessment Plan
    - Assessment Tool: Lab assignment sheets
    - Assessment Date: Winter 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Skills checklist
    - Standard of success to be used for this assessment: 70% of students will score 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)
2020		

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

# of students enrolled	# of students assessed
16	16

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 from the Fall 2020 semester were 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 course only meets face-to-face on campus and includes day and evening sections.

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

The tools used to assess this outcome were laboratory assignment sheets targeted to assess this outcome The tasks were picked by suspension type and design from industry standards. The outcome was checked for accuracy by the instructor and test driving the vehicle on campus.

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
85% of the students scored 100% on the first try and the remaining students scored 100% on the second attempt.

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

The students were very successful with the inspection, removal and replacement of worn or damaged suspension components related to this outcome.

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.

Some students struggled with press in wheel bearings on their first attempt. Future plans include purchasing fixtures that improve consistency of the wheel bearing hub assembly to be properly aligned using the press in the shop.

Outcome 3: Perform vehicle pre-alignment inspection.

- Assessment Plan
    - Assessment Tool: Practical Exam
    - Assessment Date: Winter 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Departmentally-developed rubric
    - Standard of success to be used for this assessment: 70% of students will score 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)
2020		

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

# of students enrolled	# of students assessed
16	16

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 from the Fall 2020 semester were 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 course only meets face-to-face on campus and includes day and evening sections.

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

The tool used to assess this outcome was a practical exam that includes 12 outcome-related items. Students inspected suspension components examining them for damage and/or wear on vehicles which can effect vehicle alignments.

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
100% of students were successful when inspecting vehicles, finding 90% of the issues that included instructor pre-identified loose or worn suspension components that would affect vehicle alignments.

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

Students were very successful at identifying component issues visually before completing a vehicle alignment. But we feel that students could be more successful at completing this task by including the use of new equipment to prepare the vehicle during inspection before aligning.

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.

This is where a Road Force tire balancer will allow the students to identify tire and wheel problems before attempting the alignment process instead of after during a drive test.

Outcome 4: Perform vehicle alignments procedure.

- Assessment Plan
    - Assessment Tool: Practical Exam
    - Assessment Date: Winter 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Departmentally-developed rubric

- Standard of success to be used for this assessment: 70% of students will score 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)
2020		

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

# of students enrolled	# of students assessed
16	16

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 from the Fall 2020 semester were 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 course only meets face to face on campus and includes day and evening sections.

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

The tool used to assess this outcome is an 8 item checklist where students complete an alignment on a vehicle using the alignment rack in the automotive lab. The checklist includes items where students demonstrate the ability to set alignment angles such as camber, caster, and toe.

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
81% of the students (13/16) were successful on their first attempt scoring higher than 75%. The remaining 19% were successful on the second attempt. We need to review the checklist or the standards of success and make changes that are attainable.

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

Students performed well completing alignment procedures using the proper shop equipment and getting the vehicle in the required specifications. Students had some issues diagnosing tire and wheel problems, previously mentioned, which cannot be corrected properly by completing a vehicle alignment.

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.

Students met the standards of success but the alignment software will need to be updated to meet current vehicles built after 2021.

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.

The added video and manufacture specific training information integrated with Blackboard has allowed more time for practical (lab) learning experiences and skill building.

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?

The assessment supports the need for training on new equipment to better prepare students. The road force balancer is standard equipment now in the service industry.

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

The information will be shared at the next department meeting as well as the next advisory board meeting.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	We will be removing the	We found the vehicle component	2022

	practical exam (inspection) from outcome number 1. The correct sequence for inspection should come before the alignment procedure.	and the pre-alignment vehicle inspections to be redundant. Vehicles needing alignments will always receive the inspection in the correct sequence. Inspecting components for inspections' sake is useless. When replacing suspension components aligning a vehicle is always best practice.	
Course Assignments	With the added content and videos accessible within Blackboard, students are able to spend more time on practical hand-on skills development on campus.	During the Global pandemic we recorded lectures and added video links to support learning with great success.	2022
Other: Equipment	Findings from this assessment and last assessment indicate that a Road Force tire balancer will help students identify vehicle steering pulls due to radial tire pull and not confuse the students to suspension alignment problems.	Equipment designed to isolate the tire and wheel from suspension concerns will allow students to achieve the outcomes with less frustration and achieve greater student success sooner. The Road force balancer is used in most if not all career opportunities the student would be employed at.	2021

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

6.

III. Attached Files

ASV 254 Summary Data

Faculty/Preparer:	Michael Duff	**Date:**	09/09/2021
Department Chair:	Michael Duff	**Date:**	09/09/2021
Dean:	Jimmie Baber	**Date:**	09/20/2021
Assessment Committee Chair:	Shawn Deron	**Date:**	11/22/2021

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Auto Services (inactive)	254	ASV 254 06/11/2019-Suspension and Steering
Division	Department	Faculty Preparer
Advanced Technologies and Public Service Careers	Automotive Services	Jeremiah Pfahlert
Date of Last Filed Assessment Report		11/27/2017

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

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

   Yes

   This course was previously assessed in 2017.

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

   Student performance was excellent in the previous report, and some changes were indicated.

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

   It was noted that some students were not completing the homework. It was also noted that the purchase of a "Road Force Tire Balancer" could improve student learning.

   The homework issue has been addressed by the use of a Blackboard site. This allows the instructor to more closely monitor the student's homework progress in real time with alerts. A "Road Force Tire Balancer" was never purchased.

II. Assessment Results per Student Learning Outcome

Outcome 1: Evaluate steering and suspension system components for wear and damage.

- Assessment Plan
  - Assessment Tool: Written Exam
  - Assessment Date: Winter 2019

- Course section(s)/other population: All sections
- Number students to be assessed: All students
- How the assessment will be scored: Answer key
- Standard of success to be used for this assessment: 70% of students will score 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)
2018, 2017	2019	

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

# of students enrolled	# of students assessed
53	53

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 from the Fall of '17, Fall of '18 and Winter of '19 are being 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.

Full sections of students are being assessed from face-to-face classes only. Both morning and evening classes are represented in this sample.

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

[5] Superior (100-90%) [4] Excellent (89-70%) [3] Average (69-60%) [2] Below Average (59% and below)

[1] Incomplete N/A Not Available for viewing/Evaluation or did not complete assessment tool.

The standard of success for this outcome is at least 70% of students will score an average of 70% or higher.

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

[5] Superior (100-90%) = 19 students

[4] Excellent (89-70%) = 23 students

[3] Average (69-60%) = 8 students

[2] Below Average (59% and below) = 1 students

[1] Incomplete N/A Not Available for viewing/Evaluation or did not complete assessment tool. = 2 students

The standard of success was met for this outcome, as 79.24% of students scored 70% 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 able to identify defective parts on the vehicle as well as identify their symptoms on written tests.

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.

Students are currently performing well in this area. In the future the NATEF checklist will be removed as an assessment tool due to lack of information sharing by NATEF.

Outcome 1: Evaluate steering and suspension system components for wear and damage.

- Assessment Plan
    - Assessment Tool: Practical Exam

- Assessment Date: Winter 2019
- Course section(s)/other population: All sections
- Number students to be assessed: All students
- How the assessment will be scored: Departmentally-developed rubric
- Standard of success to be used for this assessment: 70% of students will score 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)
2018, 2017	2019	

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

# of students enrolled	# of students assessed
53	53

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 from Fall of '17, Fall of '18 and Winter of '19 are being 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.

Full sections of students are being assessed from face-to-face classes only. Both morning and evening classes are represented in this sample.

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

[1] Pass [2] Fail - Incomplete N/A Not Available for viewing/Evaluation or did not complete assessment tool. The standard of success for this outcome is at least 70% of students will score an average of 70% or higher.

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
[1] Pass = 46 Students [2] Fail - Incomplete N/A Not Available for viewing/Evaluation or did not complete assessment tool. = 7 students The standard of success was met for this outcome, as 86.79% of students scored 70% 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 able to identify defective parts on the vehicle as well as identify their symptoms on written tests.

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.

Students are currently performing well in this area. In the future the NATEF checklist will be removed as an assessment tool due to lack of information sharing by NATEF.

Outcome 2: Remove and install steering and suspension system components.

- Assessment Plan
    - Assessment Tool: Lab assignment sheets
    - Assessment Date: Winter 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Skills checklist
    - Standard of success to be used for this assessment: 70% of students will score 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)
2018, 2017	2019	

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

# of students enrolled	# of students assessed
53	53

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 from Fall of '17, Fall of '18 and Winter of '19 are being 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.

Full sections of students are being assessed from face-to-face classes only. Both morning and evening classes are represented in this sample.

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

[1] Pass [2] Fail - Incomplete N/A Not Available for viewing/Evaluation or did not complete assessment tool. The standard of success for this outcome is at least 70% of students will score an average of 70% or higher.

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
[1] Pass = 48 students [2] Fail - Incomplete N/A Not Available for viewing/Evaluation or did not complete assessment tool. = 5 students

The standard of success was met for this outcome, as 90.56% of students scored 70% 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 currently showing proficiency in the removal and replacement of suspension components.

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.

Students are currently performing well in this area. In the future the NATEF checklist will be removed as an assessment tool due to lack of information sharing by NATEF.

Outcome 3: Perform vehicle pre-alignment inspection.

- Assessment Plan
    - Assessment Tool: Practical Exam
    - Assessment Date: Winter 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Departmentally-developed rubric
    - Standard of success to be used for this assessment: 70% of students will score 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)
2018, 2017	2019	

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

# of students enrolled	# of students assessed
53	53

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 from Fall of '17, Fall of '18 and Winter of '19 are being 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.

Full sections of students are being assessed from face-to-face classes only. Both morning and evening classes are represented in this sample.

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

[1] Pass [2] Fail - Incomplete N/A Not Available for viewing/Evaluation or did not complete assessment tool. The standard of success for this outcome is at least 70% of students will score an average of 70% or higher.

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
[1] Pass = 43 students [2] Fail - Incomplete N/A Not Available for viewing/Evaluation or did not complete assessment tool. = 10 students The standard of success was met for this outcome, as 81.13% of students scored 70% 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 currently showing proficiency in the pre-alignment inspection of suspension components.

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.

Students are currently performing well in this area. In the future the NATEF checklist will be removed as an assessment tool due to lack of information sharing by NATEF.

Outcome 4: Perform vehicle alignments procedure.

- Assessment Plan
    - Assessment Tool: Practical Exam
    - Assessment Date: Winter 2019
    - Course section(s)/other population: All sections
    - Number students to be assessed: All students
    - How the assessment will be scored: Departmentally-developed rubric
    - Standard of success to be used for this assessment: 70% of students will score 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)
2018, 2017	2019	

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

# of students enrolled	# of students assessed
53	53

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 from Fall of '17, Fall of '18 and Winter of '19 are being 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.

Full sections of students are being assessed from face-to-face classes only. Both morning and evening classes are represented in this sample.

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

[1] Pass

[2] Fail - Incomplete N/A Not Available for viewing/Evaluation or did not complete assessment tool.

The standard of success for this outcome is at least 70% of students will score an average of 70% or higher.

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

[1] Pass = 43 students

[2] Fail - Incomplete N/A Not Available for viewing/Evaluation or did not complete assessment tool. = 10 students

The standard of success was met for this outcome, as 81.13% of students scored 70% 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 currently showing proficiency in the execution of a calibrated alignment of suspension components.

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.

Students are currently performing well in this area. In the future the NATEF checklist will be removed as an assessment tool due to lack of information sharing by NATEF.

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.

Student's homework completion rate was improved due to the use of the use of the blackboard site.

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?

At this time this course seems to be meeting the student's needs. Students' grades are acceptable in both the book and hands-on aspects of this class. Going forward the assessment tool will be realigned to remove the NATEF checklist.

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

This report will be reviewed by the department chair and discussed in a department meeting.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	The NTEF checklist will be removed from the assessment tool.	NATEF has changed their information sharing policy and this can no longer be used as a part of the assessment tool.	2020

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

6.

III. Attached Files

ASV_254_f17
ASV_254_f18
ASV_254_w19

Faculty/Preparer: Jeremiah Pfahlert **Date:** 06/27/2019
Department Chair: Justin Morningstar **Date:** 08/07/2019
Dean: Brandon Tucker **Date:** 09/12/2019

Assessment Committee Chair: Shawn Deron **Date:** 06/16/2020

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Auto Services	254	ASV 254 11/21/2016-Suspension and Steering
Division	Department	Faculty Preparer
Advanced Technologies and Public Service Careers	Automotive Services	Thomas Hemsteger
Date of Last Filed Assessment Report		

I. Assessment Results per Student Learning Outcome

Outcome 1: Read and interpret vehicle service manuals.

- Assessment Plan
  - Assessment Tool: Common departmental exam; NATEF checklist
  - Assessment Date: Fall 2011
  - Course section(s)/other population: All students enrolled
  - Number students to be assessed: Approximately 30 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 students will score an average of 70% or higher.
  - Who will score and analyze the data: Departmental faculty will blind-score data when possible.

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)
	2015	

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

# of students enrolled	# of students assessed
19	18

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.

One student did not complete the course

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.

All sections offered were assessed.

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

In order to perform the suspension and steering inspection, students had to be able to read and interpret the vehicle and service manual. Student were scored on their performance of the inspection. Students reported their findings to the instructor and they were scored using a checkoff list. This checkoff list was scored as pass or fail.

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
18 students scored a 20 of 20 on their checkoff list. They were able to evaluate the vehicle and identify all areas that needed service. Different vehicles are evaluated using different procedures which are outlined in the service manual. This demonstrates their ability to meet this student learning outcome.

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

100% of the students met the outcomes. They were able to evaluate the vehicle and identify all areas that needed service. Different vehicles are evaluated using different procedures which are outlined in the service manual. This demonstrates their ability to meet this student learning outcome.

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.

All students met the standard of success.

Outcome 2: Diagnose steering and suspension issues.

- Assessment Plan
    - Assessment Tool: Common departmental exam; NATEF checklist
    - Assessment Date: Fall 2011
    - Course section(s)/other population: All students enrolled
    - Number students to be assessed: Approximately 30 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 students will score an average of 70% or higher.
    - Who will score and analyze the data: Departmental faculty will blind-score data when possible.

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)
	2015	

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

# of students enrolled	# of students assessed
19	18

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.

One student did not complete the course

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.

All sections offered were assessed.

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

Students performed five tasks as part of diagnosing steering and suspension issues. Each task was scored on as pass/fail and students who passed were awarded 20 points. The five scores were added up for a total score on this outcome. In order to be successful, students had to achieve a score of 70 or higher.

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
14 students scored 70 or higher on their checkoff lists. This exceed the minimum requirement of 70% of students (13) scoring 70% or higher. Students were able to diagnose five different conditions on the vehicle. Ten students scored 100 on the total checklist while four scored 80. This demonstrates their ability to meet this student learning outcome.

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

Students were able to diagnose five different conditions on the vehicle. Ten students scored 100 on the total checklist while four scored 80. This demonstrates their ability to meet this student learning outcome.

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.

Students had the most difficulty with the diagnosis and repair of steering return to center. They also had more difficulty diagnosing and repairing vehicle wandering. These issues are less common and can result from multiple causes. Therefore, students have to rule out tire and wheel causes.

Outcome 3: Remove and replace steering gears, racks, pumps and linkages. Remove and replace front and rear suspension components.

- Assessment Plan
    - Assessment Tool: Common departmental exam; NATEF checklist
    - Assessment Date: Fall 2011
    - Course section(s)/other population: All students enrolled
    - Number students to be assessed: Approximately 30 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 students will score an average of 70% or higher.
- Who will score and analyze the data: Departmental faculty will blind-score data when possible.

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)
	2015	

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

# of students enrolled	# of students assessed
19	18

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.

One student did not complete the course

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.

All sections offered were assessed.

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

Students performed two tasks as part of removing and replacing steering gears, racks, pumps and linkages. They also removed and replaced front and rear suspension components. Each task was scored on as pass/fail and students who passed were awarded 20 points. The two scores were added up for a total score on this outcome. In order to be successful, students had to achieve a score of 28 or higher.

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
16 students (88%) scored 40 on their checkoff lists. This exceed the minimum requirement of 70% of students (13) scoring 70% (28) or higher. Students were able to perform front and rear suspension services. This demonstrates their ability to meet this student learning outcome.

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

Students performed two tasks as part of removing and replacing steering gears, racks, pumps and linkages. They also removed and replaced front and rear suspension components. Students performed very well on the front suspension service, scoring 100%. Sixteen students performed well on the rear suspension service tasks. Overall, these are excellent results.

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.

Because student performed so well on these tasks, no areas for improvement can be identified.

Outcome 4: Perform wheel alignments on vehicles.

- Assessment Plan
    - Assessment Tool: Common departmental exam; NATEF checklist
    - Assessment Date: Fall 2011
    - Course section(s)/other population: All students enrolled
    - Number students to be assessed: Approximately 30 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 students will score an average of 70% or higher.
    - Who will score and analyze the data: Departmental faculty will blind-score data when possible.

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)

	2015	

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

# of students enrolled	# of students assessed
19	18

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.

One student did not complete the course

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.

All sections offered were assessed.

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

Students performed three tasks as part of various wheel alignments. Each task was scored on as pass/fail and students who passed were awarded 20 points. The three scores were added up for a total score on this outcome. In order to be successful, students had to achieve a score of 40 or higher.

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
16 students (88%) scored 40 or higher on their checkoff lists. This exceed the minimum requirement of 70% of students (13) scoring 70% (40) or higher. Students were able to perform three levels of wheel alignments. This demonstrates their ability to meet this student learning outcome.

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

There were three, progressively more difficult, levels of wheel alignment. Students performed extremely well on the 4-wheel alignments and the 4-wheel alignment when the tires had rear toe.

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.

More students had difficulty performing 4-wheel service with special parts. After-market repair parts can be used to improve vehicle alignment. This is more challenging for students, often because it is time consuming in order to get it aligned correctly.

II. Course Summary and Action Plans Based on Assessment Results

1. 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?

Students performed very well. When students diagnosed and repaired the vehicle wander, we recognized that a "Road Force Tire Balancer" would improve their performance. Since this equipment is not currently available, we may discuss purchasing it.

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

Department will discuss this information at a departmental meeting.

3. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Other: Evaluate online homework performance	In the process of assessing this course, we identified that a number of students did not complete their homework or scored poorly on those tasks. We will investigate why students are not performing well and identify some ways to improve their performance.	To promote student success.	2018

Other: Road Force Tire Balancer	We may request that the college purchase a new piece of equipment that would help student perform tire balancing better.	New equipment would help student perform tire balancing better.	2018

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

5.

III. Attached Files

ASV 254 data

Faculty/Preparer:	Thomas Hemsteger	**Date:**	03/22/2017
Department Chair:	Allen Day	**Date:**	05/10/2017
Dean:	Brandon Tucker	**Date:**	06/21/2017
Assessment Committee Chair:	Michelle Garey	**Date:**	11/27/2017