Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Auto Services	251	ASV 251 11/21/2016-Engine Diagnosis and Repair
Division	Department	Faculty Preparer
Advanced Technologies and Public Service Careers	Automotive Services	Justin Carter
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: Winter 2012
    - 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 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)
2016, 2015	2016, 2015, 2014, 2013, 2012	

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

# of students enrolled	# of students assessed
67	57

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.

6 students dropped the class and 4 students skipped the exam questions.

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.

Day students on campus.

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

The multiple choice and true or false questions were scored against an answer sheet. The final exam questions are extracted from the textbook question pool. The exam is administered on Blackboard.

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
The Item Analysis tool in Blackboard was used to view the questions related to this outcome. 39 students out of 57 (68%) scored 70% or higher on the exam.

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

The questions on the exam seemed to accurately measure the student's ability to interpret various service manual engine specifications to determine whether or not repairs are necessary or if parts were within or outside of specifications.

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 students need more time using the service manual to review critical engine specifications required for the repairs being performed in class. A pre-test given in the first week of class would help identify which students understand how to use the service manuals correctly.

Outcome 2: Properly use tools and processes for diagnosing engine systems as well as rebuilding or replacing engine components.

- Assessment Plan
    - Assessment Tool: Common departmental exam; NATEF checklist
    - Assessment Date: Winter 2012
    - 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 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)
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2. Provide assessment sample size data in the table below.

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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.

6 students dropped the class and 4 students skipped the exam questions.

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.

Day students on campus.

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

The multiple choice question was scored against an answer sheet. The exam questions are extracted from the textbook question pool. The exam is administered on Blackboard.

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

The Item Analysis tool in Blackboard was used to view the question related to this outcome. 54 out of 57 students answered the question correctly; 94% met the standard of success.

The multiple choice question used for this outcome is below:

Question:

- Review recommended
- ASE-Style Questions

The tool that would MOST-Likely be used to verify that a transmission oil cooler is not restricted is:

		Answers	Total	Top 25%	2nd 25%	3rd 25%	Bottom 25%
√	a.	blowgun	8(100.0%)	2	1	4	1
	b.	cam bearing tool	0(0.0%)	0	0	0	0
	c.	fire wall	0(0.0%)	0	0	0	0
	d.	chainfall	0(0.0%)	0	0	0	0

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

The common exam questions provided an adequate means to determine that the students understood the importance of using the correct tools and the process involved with completing an engine repair procedure.

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 exam questions do not seem to provide a strong assessment of this outcome. A performance-focused tool and a rubric should be used instead.

Outcome 3: Diagnose and repair internal engine components.

- Assessment Plan
    - Assessment Tool: Common departmental exam; NATEF checklist
    - Assessment Date: Winter 2012
    - 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 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)
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2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
67	57

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.

6 students dropped the class and 4 students skipped the exam questions.

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.

Day students on campus.

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

The multiple choice and true or false questions were scored against an answer sheet. The exam questions are extracted from the textbook question pool. The exam is administered on Blackboard.

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
The Item Analysis tool in Blackboard was used to view each student's exam score. 39 out of 57 students (68%) earned a score of 70% or higher on the final exam.

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

The written exam questions seem to capture the student's ability to diagnose defective or failing engine 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.

More in-depth questions about specific engine components need to be included in the exam. They should cover a wider variety of mechanical assemblies and sub-assemblies broken into categories. For example: engine intake system, engine camshafts and valve assemblies, engine cylinder head gasket, engine pistons and cylinders, engine oil system and engine cooling system components.

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?

The course does meet the need of the students as it allows them to conduct engine repairs in the shop. This experience is an important part of the automobile technician's educational experience.

The assessment process did identify areas of weakness in the course that need to be revised, such the lack of an outcome assessment tool and scoring method needed to measure student performance completing repairs on project vehicles.

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

The assessment data, the assessment report, action plan and course revisions will be shared with department members during the in-service department meeting in August 2017.

3. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Outcome Language	Outcome 1: Analyze engine specification data in service manuals to determine if parts are worn or within specification. Outcome 2: Use tools to diagnose and repair engine components. Outcome 3: Complete engine repair project after determining defective or worn components.	Update outcome language as a result of assessment process.	2017
Assessment Tool	Remove the NATEF checklist from outcomes 1, 2 and 3.	Delete NATEF checklist as assessment tool for outcome 1, does not provide measurable information for this outcome.	2017

		Replace NATEF checklist with measurable tool - instructor assigned and student project vehicles in outcomes 2 and 3. The NATEF checklist does not provide a measurement of student learning for course assessment.	
Objectives	1. Verify engine-related concern on project vehicles. 2. Inspect engine components for wear or damage on project vehicles. 3. Test-drive project vehicle to verify repair procedure completeness.	Add objectives to align with student learning outcomes 2 and 3.	2017

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

5.

III. Attached Files

ASV 251 Final Exam Scores
Sample Final Blackboard Final Exam - Winter 2014

Faculty/Preparer: Justin Carter **Date:** 04/21/2017

Department Chair:	Allen Day	**Date:** 05/10/2017
Dean:	Brandon Tucker	**Date:** 06/21/2017
Assessment Committee Chair:	Michelle Garey	**Date:** 09/27/2017