Eastern West Virginia Community and Technical College
COURSE ASSESSMENT REPORT

Course Title and Number: ATT 207 Engine Performance II (4 credits)	**Academic Term and Year of Assessment Activity (Ex: Fall, 2010)** Fall 2011
Report Submitted By: Doug Swick	**Number of Students Assessed:** 5
Date Reported Submitted: February 3, 2012	**Number of Sections Included:** 1
Course Delivery Format (list all modalities used in sections assessed. Ex: web based, VDL, traditional section, hybrid course, etc.): lecture/lab course, traditional course delivery	

Course Role in Curriculum
Provide a description of the role the course serves in the curriculum (i.e. general education requirement, program technical core, restricted elective, etc.) Note all as appropriate.
ATT 207 is a technical core requirement (4 credits) for automotive students in both the certificate and associate degree programs. This course introduces students to technology necessary for the diagnosis and repair of electronic systems that control engine performance and provides fundamentals of enhanced engine performance. Course includes diagnosis of electronic malfunctions and exhaust problems which impact engine performance. Course covers OBDII and Mode 6 diagnostics.

Assessment Methods
Provide a description of the assessment process used. Include description of instrument and performance standards in description. Note all methods.

The ATT 207 course assessment report focuses specifically on engine performance principles, and the diagnostic and service skills. Lab based task sheets were used as the basic data collection instruments for this assessment. Fourteen learning outcomes were assessed by analyzing results of classroom/lab observation based task sheets. The task sheets were completed for each student by directly observing the student performing each designated task. All task sheets were NATEF based for adherence to national automotive repair standard. The 9 learning outcomes were assessed through the application of 10 task sheets. In total, 87 scoring items were incorporated into this assessment report. Each item was weighted equally with a score of one point. Students could attain a total composite score of 87, a minimum composite score of 70 was necessary to meet the established performance standard of 80%. Scores were further analyzed in two broad categories:

1.) engine performance principles-minimum score 36 out of 45; and
2.) diagnostic and service skills- minimum score 34 out of 42

The outcomes assessed are categorized into the 2 categories and are listed below:

Engine performance principles
   3. Identify and interpret engine performance concern; determine necessary action.
   7. Retrieve and record diagnostic trouble codes; determine necessary action.
   8. Retrieve and record OBD monitor status; determine necessary action.
   15. Inspect and test computerized engine control systems sensors and circuits.

Engine performance diagnosis and service
   16. Inspect and test computerized powertrain/engine control module and circuits using a graphing digital multimeter (GMM)/digital storage oscilloscope(DSO); perform necessary action
   17. Inspect and test computerized actuators and circuits; determine necessary action.
   20. Diagnose driveability problems associated with throttle position sensor malfunction.
   28. Diagnose oil leaks, emissions and drivability concerns caused by the positive crankcase ventilation (PCV) system; perform necessary action.
   32. Inspect, test, service and replace components of the EGR system, including EGR tubing, exhaust passages, vacuum/pressure controls, filters and hoses; perform necessary action.

Assessment Results
Provide a summary of results including tables/charts. Incorporate information from previous assessments as appropriate. Append additional pages if necessary. If appending, include notation in box to "See Attached."
See Attachment for Task Sheets **Alignment Principles: 60% of the students completed 36-45 tasks of the 45 tasks correctly failing to meet the minimum standard of 80% as denoted through the Task Sheets.** **Alignment Diagnosis and Service: 80% of the students completed 34-42 of the 42 tasks correctly, meeting the minimum standard (i.e. 80% of the tasks).**

Distribution of Scores for Outcomes and Composite Score per Task Sheet Analysis
N=5

Student ID #	Principle Score (Standard: 36 out of 45)	Diagnosis Score (Standard 34 out of 42)	Composite Score (Standard 70 out of 87)
1	45	42	87
2	45	42	87
3	25	35	60
4	8	14	22
5	45	42	97
Total Sample for Points	168	175	353
% at Minimum Standard	60%	80%	60%

Course Level Assessment Summary of Outcomes, Indicators and Results
Course Title and Number
Number of students in assessment sample = 5
Number of Sections in Assessment = 1
Add additional rows to table if necessary

Learning Outcomes (Insert learning outcomes assessed during this cycle)	Indicator (Insert indicators used for each outcome: exam question, scoring rubric, etc. Be specific)	Percent of Correct Responses	Percent of Incorrect Responses	Performance Standard Met (80%)* (yes or no)
Composite Score	Total composite score: minimum of 61 out of 79 points for completed task sheets (Total points for sample=435, 353 answered correctly)	81%	19%	Yes
Outcome 1: Engine Performance Principles	Task Sheets for: Interpret engine performance concern Retrieve and interpret scanner information Inspect and test computerized sensors Performance Standard: minimum of 31 out of 39 points Total points for sample=225; 168 answered correctly.	75%	25%	No
Outcome 2: Engine Performance Diagnosis and Service	Task Sheets for: Inspect, test, and repair pcm/ecm, actuators, sensors, and circuitry Diagnose PVC operation and issues Inspect, test and service EGR system component affecting drivability Performance Standard: minimum of 30 out of 37 points. (Total points for sample=210; 175 answered correctly).	83%	17%	Yes

*Please note if using a different minimum performance standard.

Conclusions and Action Plan
Provide a brief summary of conclusions derived based on analysis of data. Identify action plan for improvement or maintaining current performance levels. Append additional pages if necessary. If appending, include notation in box to "See Attached."
Based on an analysis of the task sheets for the designated learning outcomes, the results indicate that not all learning outcomes have been met successfully.   Since the sampling is small one student's poor performance impacts on the resulting numbers.   It should be noted that the students who completed tasks did so correctly.   The course is evolving and some of the students will contribute to the automotive field and be successful in their careers.

Effective Date for Changes or Curriculum Proposal Submission to LOT (if recommended)	Proposed Date for Reassessment

Assessment Committee Approval (To be posted by Assessment Committee Chair)	LOT Review (To be posted by Assessment Committee Chair)
Date: 2-13-12 (SB-G)	Date: 2-20-12 (SB-G)