Eastern West Virginia Community and Technical College
COURSE ASSESSMENT REPORT

Course Title and Number: ATT 205 Automotive Electricity/Electronics II (4 credits)	**Academic Term and Year of Assessment Activity (Ex: Fall, 2010)** Spring 2012
Report Submitted By: Doug Swick	**Number of Students Assessed:** 9 students completed assessment
Date Reported Submitted: October 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 205 is a technical core requirement (4 credits) for automotive students in both the certificate and associate degree programs. This course introduces students to the fundamentals and technology for diagnosis and repair of electronically controlled systems, including anti-theft, supplemental restraints, body modules and keyless entry. Students learn about module communication via CAN and BUS.

Assessment Methods

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

The ATT 205 course assessment report focuses specifically on electrical and electronic principles, and the diagnostic and service skills. Lab based task sheets were used as the basic data collection instruments for this assessment. Ten 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 10 learning outcomes were assessed through the application of 10 task sheets. In total, 63 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 63, a minimum composite score of 50 was necessary to meet the established performance standard of 80%. Scores were further analyzed in two broad categories:

1.) basic electrical/electronic principles-minimum score 24 out of 30; and
2.) diagnostic and service skills- minimum score 26 out of 33

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

Electrical/Electronic Principles

3. Identify and interpret electrical/electronic concern.
5. Locate and interpret vehicle and major component identification numbers.
9. Check electrical wiring/circuits using appropriate tools and techniques.
23. Perform charging output test.
32. Inspect and test sensors, connectors and wires of electronic (digital) instrument circuits.

Electrical/Electronic diagnosis and service

29. Inspect and test gauges and gauge sending units for cause of abnormal gauge readings.
37. Diagnose incorrect electric lock operation (including remote keyless entry).
39. Diagnose supplemental restraint system (SRS) concerns; determine necessary action.
43. Diagnose body electronic system circuits using scan tool; determine necessary action.
45. Check for module communication (including CAN/BUS systems) errors using scan tool.

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

Electrical/Electronic Principles: 33% of the students completed 24 of the 30 tasks correctly failing to meet the minimum standard as denoted through the Task Sheets.

Diagnosis and Service: 78% of the students completed 26-33 out of the 33 tasks correctly, failing to meet the minimum standard of 26 (i.e. 80% of the tasks).

Distribution of Scores for Outcomes and Composite Score per Task Sheet Analysis
N=9

Student ID #	Principle Score (Standard: 24 out of 30)	Diagnosis Score (Standard 26 out of 33)	Composite Score (Standard 50 out of 63)
1	10	19	29
2	18	30	48
3	18	20	38
4	25	28	53
5	30	33	63
6	10	33	43
7	25	33	58
8	10	38	48
9	20	26	46
Total Sample for Points	166	260	426
% at Minimum Standard	33%	78%	33%

Course Level Assessment Summary of Outcomes, Indicators and Results
Course Title and Number ATT 205 Automotive Electricity/Electronics II
Number of students in assessment sample = 9
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 50 out of 63 points for completed task sheets (Total points for sample=567, 426 answered correctly)	75%	25%	No
Outcome 1: Electrical/Electronic Principles	Task Sheets for: Identify electrical/electronic concern Locate and interpret vehicle and major component identification numbers Check electrical wiring/circuits using appropriate tools and techniques Perform charging output test Inspect and test sensors, connectors, and wires of electronic (digital) instrument circuits Performance Standard: minimum of 24 out of 30 points Total points for sample=270; 166 answered correctly.	62%	38%	No
Outcome 2: Electrical/Electronic Diagnosis and Service	Task Sheets for: Inspect and test gauges and gauge sending units for cause of abnormal gauge readings Diagnose incorrect electric lock operation (including keyless entry) Diagnose supplemental restraints system	88%	12%	Yes

	(SRS) concerns; determine necessary action Diagnose body electronic system circuits using scan tool; determine necessary action Check for module communication (including CAN and BUS systems) errors using scan tool Performance Standard: minimum of 26 out of 33 points. (Total points for sample=297; 260 answered correctly).			

*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 completed task sheets for the designated learning outcomes, the results indicate that some of the learning outcomes have not been met successfully by those students completing the assessment activities. The sampling includes all of the students that enrolled. Consequently, since the sampling is small the lack of commitment by one or more students impacts adversely on the results. Five of the nine students failed to obtain a C grade primarily due to failure to complete the required task sheets. If you review the students who chose to complete it is evident that the learning outcomes were met successfully.

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: 10-10-12 (SB-G)	**Date: 10-15-12 (SB-G)**