Eastern West Virginia Community and Technical College
COURSE ASSESSMENT REPORT

Course Title and Number: ATT 224 Manual Drive Train and Axles (4 credits)	**Academic Term and Year of Assessment Activity (Ex: Fall, 2010)** Spring 2011
Report Submitted By: Doug Swick;	**Number of Students Assessed:** 5 students completed assessment
Date Reported Submitted: September 8, 2011	**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 224 is a technical core requirement (4 credits) for automotive students in both the certificate and associate degree programs. This course introduces students to basic fundamentals, technology, and service of automotive manual drive trains and axles. Students learn to diagnose and to repair system components including clutches, transmissions, transaxles, and axles.

Assessment Methods **Provide a description of the assessment process used. Include description of instrument and performance standards in description. Note all methods.**
The ATT 224 course assessment report focuses specifically on manual drive train and axle mechanical 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 are NATEF based for adherence to national automotive repair standards. The 10 learning outcomes were assessed through the application of 10 task sheets. In total, 109 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 109, a minimum composite score of 87 was necessary to meet the established performance standard of 80%. Scores were further analyzed in two broad categories: 1) Manual drive train principles-minimum score 19 out of 24; and 2) Manual drive train diagnosis and service skills- minimum score 68 out of 85. The outcomes assessed are grouped into the 2 categories and are listed below: **Manual Drive Train principles** 5. Locate and interpret vehicle and major component identification numbers. 13. Inspect flywheel and ring gear for wear and cracks; determine necessary action. 32. Describe the operational characteristics of an electronically controlled manual transmission/transaxle. **Manual Drive Train diagnosis and service** 11. Inspect and replace clutch pressure plate assembly, clutch disc, release (throw-out) bearing and linkage, and pilot bearing/bushing (as applicable). 12. Bleed clutch hydraulic system. 16. Remove and reinstall transmission/transaxle. 17. Disassemble, clean, and reassemble transmission/transaxle components. 55. Remove and replace drive axle shafts. 60. Remove and reinstall transfer case. 61. Disassemble, service, and reassemble transfer case and components.

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

Manual Drive Train Principles: 80% of the students completed 19-24 of the 24 tasks correctly, meeting the minimum standard of 19 (i.e. 80% of the tasks).

Manual Drive Train Diagnosis and Service: 80% of the students completed 68-85 of the 85 tasks correctly, meeting the minimum standard of 68 (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: 19 out of 24)	Diagnosis Score (Standard 68 out of 85)	Composite Score (Standard 87 out of 109)
1	24	77	101
2	16	36	52
3	24	68	92
4	24	70	94
5	24	85	109
Total Sample for Points	112	336	448
% at Minimum Standard	80%	80%	80%

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 (75%)* (yes or no)
Composite Score	Total composite score: minimum of 87 out of 109 points for completed task sheets (Total points for sample=545, 448 answered correctly)	92%	8%	Yes
Outcome 1: Manual Drive Train Principles	Task Sheets for: Locate and interpret vehicle and major component identification numbers Inspect flywheel and ring gear for cracks; determine necessary action Describe the operational characteristics of an electronically controlled manual transmission/transaxle Performance Standard: minimum of 19 out of 24 points Total points for sample=120; 112 answered correctly.	93%	7%	Yes
Outcome 2: Manual Drive Train Diagnosis and Service	Task Sheets for: Inspect and replace clutch pressure plate assembly, clutch disc, release (throw-out) bearing and linkage, and pilot bearing/bushing Remove and reinstall transmission/transaxle Disassemble, clean, and reassemble transmission/transaxle components Remove and replace drive axle shafts Remove and reinstall transfer case Disassemble, service, and reassemble transfer case and components	80%	20%	Yes

	Performance Standard: minimum of 68 out of 85 points. (Total points for sample=425; 336 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 the learning outcomes have been met successfully by 80% of the students completing the assessment activities. The sampling represents 100 % of the enrollment but is a small number. The results are impacted by one student who chose to remain enrolled yet not to complete a substantial number of the required tasks. Our equipment for the initial offering of this course was not complete. That situation was resolved for the term in which this assessment occurs. The tasks completed successfully increased based on the acquisition of the necessary teaching tools.

Effective Date for Changes or Curriculum Proposal Submission to LOT (if recommended)	**Proposed Date for Reassessment**
	2013

Assessment Committee Approval **(To be posted by Assessment Committee Chair)**	**LOT Review** **(To be posted by Assessment Committee Chair)**
Date: 9-12-11 (SB-G)	**Date: 9-19-11 (SB-G)**