

**Eastern WV Community & Technical College
Master Course Record**

Course Prefix and Number: ATT 224
Course Title: Manual Drive Train and Axles
Recommended Transcript Title: Manual Drive Train and Axles
Date Approved/Revised: 2/16/09; 11/18/13; 09/21/15
Credit Hours: 4 Contact hours per week (Based on 15 week term): Lecture: 3 Lab: 3
Prerequisite: Corequisite: Pre/Corequisite:
Grading Mode: Letter grade
Catalog Description: This course will introduce students to the basic fundamentals, technology and service of automotive manual drive trains and axles. Students will learn to diagnose and to repair system components including clutches, transmission, transaxle and axles.
Course Outcomes: Students will learn: <ul style="list-style-type: none"> • How to complete work order to include customer information, vehicle identifying information, customer concern, related service history, cause and correction. • To identify the PPE needed to work safely on transmissions • To identify components that make up manual and automatic drive systems • To identify components of an automatic transmission • How to disassemble transmissions and diagnose concerns and reassemble • To interpret data given to them by electronic measurement equipment and information obtained from the customer • To remove, inspect, and repair or replace components in drive systems • To be competent in all areas of drive trains and transmission repair • To utilize critical thinking in analyzing drive train concerns and determining repair solutions
Implementation Cycle: Spring
Role in College Curriculum: (Check all that apply) <input type="checkbox"/> General Education Core (Specify category) <input checked="" type="checkbox"/> Technical Core: Automotive Technology <input type="checkbox"/> Restricted Elective (Specify category) <input type="checkbox"/> General Elective <input type="checkbox"/> Workforce Education <input type="checkbox"/> Other (Please specify)
Course Fee: Yes

Course Number & Title: ATT 224-Manual Drive Train and Axles

Date Prepared: 02/13/09; 11/18/13; 03/16/15; 06/10/15

Submitted to LOT: 02/16/09; 11/18/13

Date Course Approved by LOT: 02/16/09; 11/18/13; 04/20/15; 09/21/15

Instructor's Qualifications: BS Automotive Technology or related discipline and/or expertise and experience in the field.

**Expanded Course Description:
Students will learn the fundamentals and technology of manual drive train operations. Students will perform diagnosis and repair of clutches, transmissions, transaxles, drive shafts, half shafts, universal and constant velocity (CV) joints, ring and pinion gears, differential case assembly, limited slip differentials and four-wheel/all wheel drive components.**

Prepared by:

Doug Swick, Faculty

03/16/15: 06/10/15

Approved Per LOT Minutes:

Dean, Academic and Student Services

Date