AUTO 2135: Manual Drive Train Systems and Service

A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: 1
Lab Hours/Week: 6
OJT Hours/Week: *

Prerequisites:
This course requires both of these prerequisites
AUTO 1010 - General Automotive Service
AUTO 1167 - Vehicle Electronics

Corequisites: AUTO 2007
MnTC Goals: None

This course covers the operational theory and repair procedures of the drive train and axles of passenger cars and light duty trucks. Includes front drive and rear drive vehicles. Lab experiences provide an opportunity to service vehicles. (Prerequisites: AUTO1010 and AUTO1167)(1 credit lecture/3 credits lab)

B. COURSE EFFECTIVE DATES: 06/24/1999 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Manual transmission/transaxle diagnosis and repair
2. General drive line noise and vibration diagnosis
3. Transfer case diagnosis and repair
4. Differential diagnosis and repair

D. LEARNING OUTCOMES (General)

1. Define general drive train diagnostic process.
2. Identify manual transmission/transaxle diagnosis and repair.
4. Inspect and repair drive axles, bearings, and seals. Includes wheel studs and flange run out.
5. Execute proper set-up and adjust ring and pinion gears.
6. Diagnose four-wheel drive, all-wheel drive systems.
7. Identify noise and vibration concerns.
8. Evaluate and repair transfer cases.
10. Calculate u-joint operating angles.
11. Utilize computer based automotive service information systems to produce vehicle maintenance related service specifications and procedures.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus
G. SPECIAL INFORMATION

None noted