COURSE NUMBER & TITLE: ASES 1025: Automatic Transmission/Transaxle  
CREDITS: 4 (2 Lec / 2 Lab)  
PREREQUISITES: Instructor approval.

CATALOG DESCRIPTION:  
Automatic Transmission/Transaxle covers the operation, diagnosis and repair of automotive automatic transmissions and transaxles. Topics include internal components and operation, power flow through the unit, and overhaul.

OUTLINE OF MAJOR CONTENT AREAS:  
1. Safety precautions  
2. Fundamentals of hydraulics  
   A. Pascal’s Law  
   B. Pressure versus surface area  
3. Internal components and operation  
   A. Holding devices  
   B. Driving devices  
   C. Planetary gear sets  
   D. Governors  
   E. Valve bodies  
4. Four speed trans operation-overdrive  
   A. Internal  
   B. Add-on  
5. Torque converters  
6. Service and overhaul  

COURSE GOALS/OBJECTIVES/OUTCOMES:  
1. Students will identify and interpret transmission/transaxle concern, differentiate between engine performance and transmission/transaxle concerns; determine necessary action.  
2. Students will check fluid level in a transmission or a transaxle not equipped with a dipstick.  
3. Students will perform pressure tests (including transmissions/transaxles equipped with electronic pressure control); determine necessary action.  
4. Students will diagnose transmission/transaxle gear reduction/multiplication concerns using driving, driven, and held member (power flow) principles.  
5. Students will diagnose pressure concerns in a transmission using hydraulic principles (Pascal’s Law).

MNTC GOALS AND COMPETENCIES MET: N/A
HCC COMPETENCIES MET:
Working Productively and Cooperatively
Communicating Clearly and Effectively

STUDENT CONTRIBUTIONS:
A. Be present—if you’re not here you can’t get paid.
B. Participate—you will get out what you are willing to put in.
C. Work safe—it’s hard to fix cars if you cut off your fingers.
D. Take care of yourself—your body is your most valuable tool.
E. Keep your driver’s license—techs without good driving records don’t have jobs.
F. Think outside of the box—there is always a way.
G. Be a Professional—act like it, look like it, smell like it.
H. Communicate—nobody gets fired by asking for help

SPECIAL INFORMATION: (SPECIAL FEES, DIRECTIVES ON HAZARDOUS MATERIALS, TEXTBOOK USED, ETC.)
-Handouts and other materials will be provided in class.
-Factory and aftermarket service manuals will be used for reference.
-Hazardous Waste Policy: proper handling practices will be used.
-Safety Eyeglass Policy: safety glasses will be worn at all time while working in the labs.
-Shop Safety Policy: safe shop working practices must be followed.

Violations of the above policies will be verbal or documented warnings and will be handled on a case-by-case basis.

METHODS FOR EVALUATING STUDENT LEARNING:
Student assessment shall take place using instruments selected/developed by the course instructor.

Curriculum Committee Approval Date: February 5, 2019

AASC APPROVAL DATE: February 20, 2019
REVIEW DATE: February 2024