

AMST2236 - Automatic Transmissions

Credits:	5 (2/3/0)
Description:	This course covers the principles of automatic transmissions, including power flow, hydraulic systems, Pascal's law and electronic controls. Students learn planetary gearing, clutch operation, band application, one-way clutching and power flow inside an automatic transmission. Students overhaul an automatic transmission, identify components, and assemble the transmission to be tested.
Prerequisites:	
Corequisites:	
Pre/Corequisites*:	
Competencies:	<ol style="list-style-type: none"> 1. Exhibit safety precautions and professionalism by maintaining a clean and safe work environment, following OSHA and manufacturer guidelines. 2. Use service information to locate information related to the automatic transmission and learn the description and operation of an automatic transmission. 3. Understand and explain power flow for an automatic transmission. 4. Perform automatic transmission diagnostics using manufacturer flow charts and strategy-based diagnostic procedures. 5. Understand, diagnose and repair internal transmission components, including valve body, clutches, bands, planetary gear sets, hydraulic control devices, hydraulic pumps, sensors and solenoids, and other internal components. 6. Understand, diagnose and repair automatic transmission cooling systems and related components. 7. Understand, diagnose and repair external transmission components. 8. Understand the relationship between the transmission control system and the engine control system. 9. Understand and identify different transmission types used in vehicles. 10. Use service information to locate transmission shift application charts and understand component relationship with transmission concerns. 11. Understand, diagnose and repair automatic transmission control systems. 12. Perform live vehicle diagnostics for check engine light concerns for the transmission. 13. Understand Engine Control Module (ECM) inputs that affect transmission operation.
MnTC goal areas:	None

*Can be taken as a Prerequisite or Corequisite.