

## 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> <li>Exhibit safety precautions and professionalism by maintaining a clean and safe work environment, following OSHA and manufacturer guidelines.</li> <li>Use service information to locate information related to the automatic transmission and learn the description and operation of an automatic transmission.</li> <li>Understand and explain power flow for an automatic transmission.</li> <li>Perform automatic transmission diagnostics using manufacture flow charts and strategy-based diagnostic procedures.</li> <li>Understand, diagnose and repair internal transmissions components, including valve body, clutches, bands, planetary gear sets, hydraulic control devices, hydraulic pumps, sensors and solenoids, and other internal components.</li> <li>Understand, diagnose and repair automatic transmission cooling systems and related components.</li> <li>Understand, diagnose and repair external transmission components.</li> <li>Understand the relationship between the transmission control system and the engine control system.</li> <li>Understand and identify different transmission types used in vehicles.</li> <li>Use service information to locate transmission shift application charts and understand component relationship with transmission concerns.</li> <li>Understand, diagnose and repair automatic transmission control systems.</li> <li>Perform live vehicle diagnostics for check engine light concerns for the transmission.</li> <li>Understand Engine Control Module (ECM) inputs that affect transmission operation.</li> </ol>
MnTC goal areas:	None

<sup>\*</sup>Can be taking as a Prerequisite or Corequisite.