

## 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:	<ul style="list-style-type: none"> <li>• AMST1135</li> </ul>
Corequisites:	
Pre/Corequisites*:	
Competencies:	<ol style="list-style-type: none"> <li>1. Exhibit safety precautions and professionalism by maintaining a clean and safe work environment, following OSHA and manufacturer guidelines.</li> <li>2. Use service information to locate information related to the automatic transmission and learn the description and operation of an automatic transmission.</li> <li>3. Understand and explain power flow for an automatic transmission.</li> <li>4. Perform automatic transmission diagnostics using manufacture flow charts and strategy-based diagnostic procedures.</li> <li>5. 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>6. Understand, diagnose and repair automatic transmission cooling systems and related components.</li> <li>7. Understand, diagnose and repair external transmission components.</li> <li>8. Understand the relationship between the transmission control system and the engine control system.</li> <li>9. Understand and identify different transmission types used in vehicles.</li> <li>10. Use service information to locate transmission shift application charts and understand component relationships related to transmission concerns.</li> <li>11. Understand, diagnose and repair automatic transmission control systems.</li> <li>12. Perform live vehicle diagnostics for check engine light concerns for the transmission.</li> <li>13. Understand Engine Control Module (ECM) inputs that affect transmission operation.</li> </ol>
MnTC goal areas:	None

\*Can be taking as a Prerequisite or Corequisite.