

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: AUT 283 **Credits:** 4

Course Title: Drivetrain Systems I - OEM

Course Description:

Studies the operation, inspection, diagnosis, service, and repair of the various drivetrain systems. Focuses on the operation and testing of automatic transmissions, manual transmissions, hybrid/electric drive, four-wheel drive and/or other drivetrain configurations. Develops diagnostic strategies and the use of tools and equipment related to the repair of drivetrain issues. This course is intended for students in an original equipment manufacturer training program. Part I of II. Lecture 2 hours. Laboratory 8 hours. Total 10 hours per week. 4 credits

General Course Purpose:

This course is intended for students in an OEM training program to provide specific instruction and hands-on practice of the OEM's vehicle and drivetrain platforms. The course focuses on the tools and equipment, strategies for diagnosis, and repair of OEM-specific powertrains.

Course Prerequisites and Co-requisites:

- **Prerequisite:**
 - Acceptance and good standing in the original equipment manufacturer (OEM) training program.
 - AUT 181 Electrical I - OEM or program head approval.
- **Co-Requisite:**
 - None

Student Learning Outcomes:

Upon completing the course, the student will be able to

- Prepare to sit for the A2 – Automatic Transmission ASE Examination
- Prepare to sit for the A3 – Manual Drivetrains ASE Examination
- Inspect, service, diagnose and repair various drivetrain configurations used by the OEM's vehicle platforms.
- Achieve OEM-level certification as a Drivetrain Specialist

Major Topics to Be Included:

- Automatic transmissions
- Manual transmissions
- Four-wheel drive and differentials
- Hybrid/electric drivetrains
- Other drivetrain configurations and relate systems
- Other technologies as required by the OEM's specifications

Effective Date/Updated: January 1, 2023