

Course Objectives/Course Outline
Spokane Community College

Course Title: Theory of Engine Performance

Prefix and Course Number: AUTO 117

Course Learning Outcomes:

By the end of this course, a student should be able to:

- Have the basic knowledge to perform proper diagnosis and repair procedures on ignition systems components.
- Have the basic knowledge to perform proper diagnosis and repair procedures on fuel and exhaust systems components.
- Have the basic knowledge to perform proper diagnosis and repair procedures on emissions control systems components.

Course Outline:

- I. Ignition Systems
 - A. the Ignition System and Engine Operation
 - B. Ignition Primary Circuit and Components
 - C. Ignition Secondary Circuit and Components
 - D. Ignition Timing and Spark Advance Control
 - E. Solid-State Electronic Ignition systems
- II. Engine Components
 - A. Fuel Systems
 - B. Exhaust Systems
 - C. Emission control
- III. Emission Control and Exhaust
 - A. Modern Emission controls
 - B. Internal Engine Modifications
 - C. External Systems and Components
 - D. Emission System Tampering
- IV. Exhaust Systems
 - A. Manifolds
 - B. Catalytic Converters
 - C. Exhaust Pipes