Introduces basic and advanced internal combustionengine concepts including theory and practical application. Covers cooling systems, lubrication, valve train, block assembly, and general engine diagnosis. Provides preparation for the Automotive Service ence (ASE) A1 Engine Repair Certification examination. Lect Drepurs. Laboratory 6 hours. Total 8 hours per week. 5 credits

This course provides instruction on the testing, repair, and replacement of automotive engines. Focus will be on proper diagnosis including precision measuring, repairreplacement techniques.

Prerequisites: AUT 149 and AUT 197

Upon completing the course, the student will be able to

- Perform precision measuremendes engine components
- Analyze condition of engine mechanical components
- Diagnose engine mechanical failures such as noise, consumption, and drivability
- Demonstrate proper engine removal, installational, startup/break
- Engine Mechanical Conditionand Diagnosis
 - o Compression testing
 - o Cylinder leak downtesting
 - o Noise diagnosis
 - o Exhaust diagnosis
 - o Oil and coolant consumption diagnosis
- Engine Removal and Installation Techniques
- Valve Train ConstructionService, Repair and Diagnosis
 - o Engine timingrepairs (belt and chain)
 - o Variable valve timing operation and diagnosis
 - o Cylinder head, valve guide, valve and valve seat diagnosis and repair
- Cylinder Block and Lowern Construction, Service and Repair
 - o Pistons, ringsand connecting rods

o Cylinder block measurements and analysiand analksenalyalyisentRe me-1.9 b (ent)-6..5 (al)2