Department:

Automotive Technology

Course Description:

This course begins with basic engine diagnostics and progresses through engine removal, tear down, short block repair, and cylinder head repair. The course will also emphasize correct engine repair techniques.

Course Competencies:

Upon completion of the course, the student should be able to:

1. Explain the theory and operation of the internal combustion engine.
2. Remove an automotive engine.
3. Install an automotive engine.
4. Inspect and repair cylinder head, valve train, and timing defects.
5. Disassemble a short block.
6. Inspect and repair short block defects.
7. Reassemble a short block.
8. Inspect and repair engine lubrication defects.
9. Inspect and repair engine cooling systems defects.

Course Content:

A. Parts and Operation of an Internal Combustion Engine
B. Engine Diagnosis
C. Engine Removal
D. Cylinder Head and Valve Train Function, Diagnosis and Repair Procedures
E. Short Block Assembly Functions
F. Lubricating Systems
G. Engine Assembly and Preparation For Installation
H. Diagnosis and Repair of the Cooling System

Learning Assessments:

Assessments may include quizzes, tests, project work, demonstrations, observations, weekly assignments, and written papers.
Instructional Materials:


Guidelines for Requesting Accommodations Based on Documented Disability or Medical Condition

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

In order to begin the process all students must complete the “Disabilities Self-Identification Form” at this link: [https://highlandcc.edu/pages/disability-services](https://highlandcc.edu/pages/disability-services).

This form can also be accessed at the Highland Community College homepage under Students Services/Student Resources/Disability Service or by contacting the Disabilities Coordinator.