**BARTON COMMUNITY COLLEGE**

**COURSE SYLLABUS**

# **GENERAL COURSE INFORMATION**

Course Number: AUTO 1110

Course Title: Engine Repair II

Credit Hours: 3

Prerequisite: Engine Repair I

Division/Discipline: Workforce Training and Economic Development/Automotive Technology

Course Description: In this course students explore theory and perform analysis/service to the engine systems of the automobile.

# **INSTRUCTOR INFORMATION**

# **COLLEGE POLICIES**

Students and faculty of Barton Community College constitute a special community engaged in the process of education. The College assumes that its students and faculty will demonstrate a code of personal honor that is based upon courtesy, integrity, common sense, and respect for others both within and outside the classroom.

Plagiarism on any academic endeavors at Barton Community College will not be tolerated. The student is responsible for learning the rules of, and avoiding instances of, intentional or unintentional plagiarism. Information about academic integrity is located in the Student Handbook.

The college reserves the right to suspend a student for conduct that is determined to be detrimental to the College educational endeavors as outlined in the College Catalog, Student Handbook, and College Policy & Procedure Manual. (Most up-to-date documents are available on the College webpage.)

Any student seeking an accommodation under the provisions of the Americans with Disability Act (ADA) is to notify Student Support Services via email at [disabilityservices@bartonccc.edu](mailto:disabilityservices@bartonccc.edu).

# **COURSE AS VIEWED IN THE TOTAL CURRICULUM**

Engine Repair II is the second in a series of two courses, pertaining to the service of the Automotive Engines systems. This course follows the curriculum standards defined by NATEF (National Automotive Technicians Education Foundation.)

# **ASSESSMENT OF STUDENT LEARNING**

Barton Community College is committed to the assessment of student learning and to quality education. Assessment activities provide a means to develop an understanding of how students learn, what they know, and what they can do with their knowledge. Results from these various activities guide Barton, as a learning college, in finding ways to improve student learning.

Course Outcomes, Competencies, and Supplemental Competencies:

1. Identify, evaluate and interpret the theory and operation of internal combustion engines.

Linked External Standards: NATEF 1.A.1, thru 1.A.6, 1.A.13, 1.A.14, 1.A.15.

1. Complete service work orders.
2. Determine engine system concerns and necessary actions.
3. Service, analyze and repair cylinder heads and valve train.

Linked External Standards: NATEF 1.B.1, 1.B.3, thru1.B.11, 1.B.13, 1.B.14

1. Evaluate and compare measurements to specifications found in service information.
2. Perform needed repairs per industry standards and procedures.
3. Service, analyze and repair engine block assembly.

Linked External Standards: NATEF 1.C.1, 1.C.2, `1.C.3, 1.C.4, 1.C.6, 1.C.7, 1.C.8, 1.C.9,1.C.11, 1.C.14, 1.C.15.

1. Evaluate and compare measurements to specifications found in service information.
2. Determine and perform needed repairs per industry approved standards and procedures.
3. Service, analyze and repair engine lubrication systems.

Linked External Standards: NATEF 1.C.1, 1.C.2, 1.c.3, 1.C.4, 1.C.6, 1.C.7, 1.C.8, 1.C.9, 1.C.11, 1.C.14, 1.C.15.

1. Measure and compare results to stated specifications and determine need for repairs.
2. Perform needed repairs per industry standards applying theory and inspection principles.
3. Service, analyze and repair engine cooling systems.

Linked External Standards: NATEF 1.D.1 thru 1.D.8, 1.D.12, 1.D.13, 1.D.14.

1. Measure and compare results to stated specifications and determine need for repairs.
2. Perform needed repairs per industry standards applying theory and inspection principles.
3. General Engine Diagnosis.

Linked External Standards: NATEF 1.A.1, thru 1.A.15, 1.C.15, 1.D.1, thru 1.D.12, 1.D.14

1. Inspect, appraise, evaluate, and interpret diagnostic testing results and formulate engine problem diagnosis.
2. Create, estimate, cost needed to repair engine systems.
3. Engine Removal and Reinstallation.

Linked External Standards: NATEF 1.A.12, 1.A.15, 1.B.2, 1.B.11, 1.B.14

1. Research and employ needed tools and methods to remove and reinstall engine in OBDII or newer vehicle.
2. Evaluate, and identify needed repairs for wiring harnesses and various electronic components associated with engine R&R procedures.
3. Inspect, interpret, and appraise engine performance upon completion of engine installation.
4. **INSTRUCTOR'S EXPECTATIONS OF STUDENTS IN CLASS**

# **TEXTBOOKS AND OTHER REQUIRED MATERIALS**

# **REFERENCES**

# **METHODS OF INSTRUCTION AND EVALUATION**

1. **ATTENDANCE REQUIREMENTS**

# **COURSE OUTLINE**