

Course discipline/number/title: AMT 1810: Engine Repair Theory

A. CATALOG DESCRIPTION

1. Credits: 3
2. Hours/Week: 3
3. Prerequisites (Course discipline/number): None
4. Other requirements:
5. MnTC Goals (if any): NA

B. COURSE DESCRIPTION: This course covers engine design as well as diagnosis, evaluation, repair, and maintenance steps involved in restoring gasoline automotive engines to good running order.

C. DATE LAST REVISED (Month, year): February, 2022

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Engine Design and Operation
2. Variable Value Timing (VVT)
3. Scan tool Usage in Evaluating Powertrain
4. Diagnosis and Evaluation of Engines
5. Measuring Tools
6. Cylinder Head Repair Methods
7. Lower Engine Repair Methods
8. Final Engine Break-in Steps

E. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Identify and list various engine designs.
2. Describe engine operation.
3. Identify evaluation and performance steps.
4. Show understanding in cylinder head and lower engine repair methods.
5. Explain engine break-in and final evaluation steps.

F. LEARNING OUTCOMES (MNTC): NA

G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to:

1. Tests
2. Quizzes
3. Assignments
4. Worksheets

H. RCTC CORE OUTCOME(S). This course contributes to meeting the following RCTC Core Outcome(s): Critical Thinking. Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.

I. SPECIAL INFORMATION (if any): None