Course Information

Course Title	Automotive Engine Performance Analysis I
Course Prefix, Num. and Title	AUMT 2417
Division	Vocational Science
Department	Automotive Technology
Course Type	WECM Course
Course Catalog Description	Theory, operation, diagnosis of drivability concerns, and repair of ignition and fuel delivery systems. Use of current engine performance diagnostic equipment. May be taught manufacturer specific.
Pre-Requisites	Credit for or concurrent enrollment in AUMT 1301.
Co-Requisites	AUMT 1407 and AUMT 1419

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours: Lab/Other Hours	4:3:4
Equated Pay Hours	5
Lab/Other Hours Breakdown: Lab Hours	4
Lab/Other Hours Breakdown: Clinical Hours	Enter Clinical Hours Here.
Lab/Other Hours Breakdown: Practicum Hours	Enter Practicum Hours Here.
Other Hours Breakdown	List Total Lab/Other Hours Here.

Approval Signatures

Title	Signature	Date
Prepared by:		
Department Head:		
Division Chair:		
Dean/VPI:		
Approved by CIR:		

Additional Course Information

Topical Outline: Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

Basic Theories, Typical Shop Procedures and Equipment

Engine Design and Operation, General Engine Condition Diagnosis

Ignition Systems, Ignition System Diagnosis and Service

Intake and Exhaust Systems, Intake and Exhaust System Diagnosis and Service

Fuel Systems, Fuel System Diagnosis and Service

Computer-Controlled Carburetors, Feedback Carburetor System Diagnosis and Service

Emission Control Systems, Emission Control System Diagnosis and Service

Course Learning Outcomes:

Learning Outcomes – Upon successful completion of this course, students will:

1. Utilize appropriate safety procedures.
2. Explain engine dynamics.
3. Diagnose and repair ignition and fuel delivery systems.
4. Use current engine performance diagnostic equipment.

Methods of Assessment:

1. Quizzes and assignments   Completion of priority 1,2, and 3 items on the ASE task list, job sheets.
2. Quizzes and assignments   Completion of priority 1, 2, and 3 items on the ASE task list, job sheets.
3. Quizzes and assignments   Completion of priority 1, 2, and 3 items on the ASE task list, job sheets.
4. Quizzes and assignments   Completion of priority 1, 2, and 3 items on the ASE task list, job sheets

Required text(s), optional text(s) and/or materials to be supplied by the student:

CDX Online e Textbook. & Fundamentals of Automotive Technology CDX Automotive Jones & Bartlett Learning textbook.

Complete set of tools in compliance with the tool list.

Suggested Course Maximum:

24

List any specific or physical requirements beyond a typical classroom required to teach the course.

Complete auto shop lab with all the tools required by ASE to meet the standards for Automotive Engine Performance Analysis I.

Course Requirements/Grading System: Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

90%to 100% = A

80%to 89% = B

70%to79% = C
60%to 69% = D
Below60% = F
The grade is based on the percentage basis between lecture and lab.

Quizzes and assignments will count 30% of the course grade. At the end of the course a final exam will be given that will count 10% of the course grade. The auto shop lab grade will count 60% of the course grade.

Lab work will be evaluated on attendance, percentage completion of priority 1, 2, and 3 items on the ASE task list, job sheets, having the required tools to perform lab work, cleanliness, and attitude.

Curriculum Checklist:

☐**Administrative General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.

☐**Administrative WCJC Core Course**. Attach the Core Curriculum Review Forms

> ☐Critical Thinking
> ☐Communication
> ☐Empirical & Quantitative Skills
> ☐Teamwork
> ☐Social Responsibility
> ☐Personal Responsibility

☒**WECM Course** -If needed, revise the Program SCANS Matrix and Competencies Checklist