



Walker Career Center

Principles of Automotive Services Syllabus

DOE# 7213



Course Description and Outline

This course gives students an overview of the operating and general maintenance systems of the modern automobile. Students will be introduced to the safety and operation of equipment and tools used in the automotive industry. Students will study the maintenance and light repair of automotive systems. Also, this course gives students an overview of the electrical operating systems of the modern automobile. Students will be introduced to the safety and operation of equipment and tools used in the electrical diagnosis and repair in the automotive electrical industry. Students will study the fundamentals of electricity and automotive electronics.

Teacher Information and Student Supports

Name: Dale Bupp
Email: dbupp@warren.k12.in.us
Phone: 317-532-6176

Course Supplies

- Online Textbook
- Work Shoes
- Work Clothes

Additional Supports

- Reteach and Enrichment activities in class every Thursday
- Individual help by appointment when necessary

Journey of a Graduate Skills

- Critical Thinking**
- Identify proper shop safety practices while in the labs.
 - Identify tools & fasteners used in automotive repair.
 - Identify and perform basic service and maintenance procedures including tire mounting, balancing, and repair.
 - Identify Electrical symbols and components.
 - Calculate resistance, current, and voltage problems using Ohms Laws.
 - Identify starting and charging system components and circuits.
- Communication**
- Identify and explain how the automotive repair industry is structured.
 - Identify and explain operation of the 8 major systems of the automobile.
 - Identify and explain what EPA, CAFÉ and NHTSA regulations are and how they affect the automotive industry.
- Resilience**
- Attain readiness to be certified to use industry standard diagnostic equipment, like ShopKey Pro.
 - Attain readiness to take SP/2 Mechanical Safety exam.
 - Attain readiness to take SP/2 Pollution Prevention exam.
 - Attain readiness to be certified to use an industry standard multimeter or fluke meter (e.g. Snap-On EEDM504B4).
- Collaboration**
- Students will work together to perform voltage, current, and resistance measurements using the proper measurement devices.
 - Students will work together to perform voltage drop testing on multiplex and non-multiplex circuits.
 - Students will work together to perform basic battery testing and diagnosis.

Content Knowledge

- Demonstrate safe shop practices while working with electrical systems.
- Describe the basic laws of electricity and circuit construction.
- Diagnose starting and charging system faults.
- Understand fundamentals of the 4-stroke cycle of an internal combustion engine
- Perform an oil change and demonstrate basic fluid maintenance.
- Complete a vehicle inspection.

Citizenship

- Students are always considerate and respectful of other people's beliefs, practices, and cultures demonstrated through words and actions.
- Students are responsible for their own learning; get makeup work when they have been out, take necessary notes, stay engaged while in class.
- Students learn and demonstrate employability skills such as punctuality, dependability, and work ethic.
- Students learn the importance of honesty and ethical practices while working in the automotive field.

Grade Calculation

MSD Warren Township Scale

Grade	Percentage
A	92.5 - 100
A-	89.5 - 92.4
B+	86.5 - 89.4
B	82.5 - 86.4
B-	79.5 - 82.4
C+	76.5 - 79.4
C	72.5 - 76.4
C-	69.5 - 72.4
D+	66.5 - 69.4
D	62.5 - 66.4
D-	59.5 - 62.4
F	Below 59.5

Grading Policies

Semester Grade

Your semester grade will be calculated in the following way:

50% Assessments (Tests, Quizzes, Projects)
40% Labs, Homework and other assignments
10% Final Project

Warren Central Grading Policy

The high school grading policies will be explained here

Warren Central Homework Policy

The high school homework policies will be explained here.

Synergy Grades

Grades posted in Synergy reflect the students' academic performance in the course.

Credits/Pathways

CORE 40 Diploma

Course fulfills two credits of the elective requirement for the Core 40 diploma.

Academic/Technical Honors Diploma

Has potential to fulfill academic/technical honors diploma. - see counselor

CTE Graduation Pathway

Recommended – Intro to Transportation

Principles – Principles of Automotive Services

Course A – Brake Systems

Course B – Steering and Suspension

Capstone – Automotive Service Capstone

Types of Assignments and Assessments

Assignments

Assignments will include classwork, homework, labs, and bell work. These items are opportunities for students to practice the concepts learned in class.

Labs

Each unit will have one or more laboratory experiments. Labs are designed to demonstrate “real world” applications of the class concepts and help students develop a deeper understanding of the learning objectives.

Assessments

Tests/projects cover Indiana State Standards, and there will be one test per unit.

Quizzes may be given throughout a unit. There may or may not be a quiz for each unit.