



Transportation Technology IV: Advanced Automotive Mechanics

First Semester

Fairfield Ludlowe High School - Fairfield Warde High School

COURSE DESCRIPTION

Advanced Automotive Mechanics continues and deepens students' understanding of automobile servicing and maintenance/repair. Work is performed on operational vehicles. Complete overhaul, repair, servicing and troubleshooting of all automotive systems are undertaken. Emphasis is placed on practical hands-on learning.

COURSE OBJECTIVES

Students will be able to:

- use computer based service information to solve part replacements and repairs.test and diagnose automotive computer problems.
 - replace sensors and actuators. test, remove and replace fuel system component parts.
 - diagnose fuel system problems using diagnostic equipment.
 - use service manuals when making basic adjustments on gasoline injection systems.maintain, diagnose, and repair electrical systems.
 - describe the components and functions of the various electrical and electronic systems that are related to engine performance.
 - remove and replace a starter motor if necessary.
 - repair common starting problems.
 - remove, test, repair, and replace an alternator, if necessary.
 - repair charging system problems.
 - test, remove and replace ignition system parts, as required.
 - repair typical ignition system problems.
 - explain advantages and disadvantages of existing, new, and emerging systems in automobiles.
 - explain the operational principles of hybrid drive systems and how they are impacting the environment.
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UNITS OF STUDY

Unit 1: Automotive Careers, ASE Certification/Safety Review & Service Information and Work Orders (2 weeks).

Unit 2: Computer System Service and Diagnosis (3-4 weeks).

Unit 3: Fuel Injection Diagnosis and Servicing (3-4 weeks).

Unit 4: Starting System, Charging System and Ignition System Testing and Repair (4-5 weeks).

Unit 5: Hybrid System Operation and Service (4-5 weeks).

COURSE POLICIES AND REQUIREMENTS

GRADING: Generally . . . See district policy ([Policy 6146.1AR](#))

Grading Communication

- Specific grading expectations and practices will be communicated to all students and families at the start of the school year via a consistent format.
- If students or parents have questions about grading practices, they should follow the district's established chain of command structure (see district website) with the first contact being to the teacher and then to the school administration.
- Buildings will send out reminders of the importance of checking students' grades in the Grading Portal with directions.
- Teachers will notify guardians when students fall into the F range after October 1st.

Grade Reporting

- For a processed piece or "chunked" assignment that is part of a larger task, feedback and the grade shall be shared before the next step in the process, so long as students have submitted their work at those checkpoints, on time.
- Grades for summative assessments shall be entered within 10 school days from the date of submission or the date it was due, whichever is later.
- Grades for formative assessments shall be entered within 5 school days from the date of submission or the date it was due, whichever is later, and prior to any subsequent assessment.

Guidelines for Late Work :

- Teachers will accept late work for both summative and formative tasks beyond the due date.
- Teachers will not accept late work beyond the deadline for late work. The deadline is defined as the next class period from the due date of the assignment or the alternative date that the teacher and student may agree upon depending on individual circumstances.
- Teachers may reduce the total points students can achieve as a penalty for late work up to the deadline. Students will earn a zero (0) if the assignment is not submitted or is submitted after the deadline.
- Late work only consists of assignments with an expected due date. Assessments, such as tests, quizzes and in class assignments, must be taken on the scheduled date except in cases of make-up assessments due to an excused absence.

REASSESSMENT GUIDELINES:

Eligibility of assessments	Teachers of the same course will determine which summative assessments are eligible. Students can select any part of a project to reassess. Reassessments may not be allowed one week before the end of a term.
Process	Students have two class periods in which to indicate they would like to take a reassessment. Teachers will make clear to students their preferred method for students to request reassessment (<i>e.g.</i> email or filling out a simple form/spreadsheet).
Frequency	Students will have the opportunity to reassess on two summatives per year but not more than one per term (quarter).
Assessment Format	Based on discussion between the student and teacher, students will revise portions of the original assessment in which they did not show proficiency.
Gradebook impact	Original and reassessment scores will be averaged in the gradebook.

MATERIALS:

- As provided by the course.

EXPECTATIONS OF STUDENTS:

- Be Tech and Learning Ready: Come prepared with all necessary materials, including your charged device and any required software.
- Prioritize Safety: Follow all safety guidelines and procedures, especially when working with tools, equipment, or hazardous materials.
- Participate Actively: Engage in class discussions, ask questions, and contribute to group projects. Actively participate in lab activities by following instructions, working collaboratively, and cleaning up your workspace.
- Respect the Digital Realm: Treat all digital resources and equipment with care. Avoid actions that could harm or disrupt the learning environment.
- Embrace Digital Citizenship: Use technology ethically and responsibly. Be mindful of copyright laws and online etiquette.

EXTRA HELP:

- Students should seek out extra help when needed. The teacher is available for extra help before and after school as well as during prep periods.