



East Leyden High School
Industrial Technology
Autos II



Course Description:

Welcome to Autos II. In this course you will receive an in-depth look into the many different systems found on today's cars. These systems include the different engine and chassis systems, along with brakes, steering and suspension. Upon completion of the class you will be able to identify, diagnose, and repair problems found in each of the different systems. This knowledge and experience is essential for a career as an apprentice mechanic or for further technical training at the technical school level. A prerequisite of Autos I is required to take this course.

Instructional Philosophy:

The theory and operation of each automotive system is discussed in the classroom along with the opportunity to gain hands-on, real world experience in the shop. Students will be expected to work both individually and in groups where they will solve problems using industry standard technology and tools. Students will use computers to research vehicle information, part replacement and costs, repairs, and procedures. The students will then be required to replicate the repair work in the shop.

Class Objectives/Standards:

- Apply appropriate academic and technical skills to the automotive field.*
- Utilize critical thinking to make sense of automotive problems and preserve in solving them. *
- Use technology to enhance productivity. *
- Implement personal and jobsite safety rules and regulations to maintain safe and healthful working conditions and environments. *
- Evaluate the engine systems and individual stroke diagnosis.
- Perform vehicle inspections and maintenance on the brakes, steering, suspension, cooling, and exhaust systems.

* Common Career Technical Core Standards

Major Course Assessments

- Analyze and assess various safety scenarios.
- Recognize and perform appropriate safety behaviors during daily shop activities.
- Perform introductory maintenance work on both student and shop cars such as oil and tire changes.
- Understand and summarize the four stroke cycle.
- Identify the major components of an engine.
- Test and compare the compression in engine cylinders.
- Analyze cooling system malfunctions, formulate a plan, and complete the necessary repair work.
- Measure the amount of pressure in a cooling system and calculate its effectiveness.
- Inspect, measure, and replace disc and drum brakes.
- Create a circuit board utilizing electrical theories.
- Test the starting and charging system of cars.
- Summarize the functions of the different automotive systems and how to maintain them.
- Relate scientific principles of volume, vacuum, pressure, heat, hydraulic forces to the automotive field.
- Use computers to research car parts, repair procedures, and automotive related websites.

Assessment & Grading Plan

Grade	Scale (%)	Description of Work
A	100-90	Consistently demonstrates an advanced level of quality. Shows mastery in evaluating, synthesizing, and applying automotive technology. All components of the work are complete.
B	89-80	Consistently demonstrates a proficient level of quality. Characterized by an analysis and application of automotive technology. Most of the components of the work are complete.
C	79-70	Demonstrates a basic level of quality. Shows a recognition and comprehension of the principles of automotive technology. Some components of the work are complete.
D	69-60	The work is below basic with limited understanding or comprehension of the automotive technology. Some components of the work may be incomplete or of poor quality.
F	59-↓	The work is below basic with little understanding or comprehension of automotive technology. Work is incomplete or of poor quality.

Class Materials:

- Pen or pencil
- Folder
- Chrome Books
- Safety Glasses*
- Classroom Textbook: Modern Automotive Technology*

*Provided in class

Classroom Procedures:

- 1. Start of Class:** When entering the classroom go directly to your seat.
 - 1a.** When entering the shop put on your safety glasses and wait for teachers instructions.
- 2. Assignments:** All assignments must be handed in on the due date for full credit. Late assignments will be accepted but will receive a lower grade.
- 3. Absences:** Assignments will be required upon return from an absence. See the teacher either before or after class or the school day regarding any missing assignments, tests, quizzes, or shop activities.
- 4. Redoing of Work:** If at any time you feel your grade for an assignment or test is unacceptable you will be given a chance to redo the work. Arrangements must be made with me for an appointment before or after school.
- 5. Before & After School Help:** Extra help is offered before or after school. Stop in anytime in either 128 or 124. Communicate with me during class if you want to setup an appointment for extra help.
- 6. End of Class:** Stay in your seat until the bell rings. Do not line up at the door.
 - 4a.** Return your glasses, put away your tools, and clean up your own mess during the last 5 minutes in the shop.

Classroom Rules:

- 1.** Be on time! You must be in your seat and ready to work when the bell rings.
- 2.** Be prepared! Bring all necessary materials to class and be ready to work.
- 3.** Be respectful! Show respect to everyone and everything.
- 4.** Do not touch anything that is not yours!
- 5.** Safety rules must be followed at all times when working in the shop!

Discipline Policy:

- 1st Offense: Verbal Warning
- 2nd Offense: Teacher/student conference
- 3rd Offense: Period 0/11
- 4th Offense: Phone call home
- 5th Offense: Referral to Dean's office

Contact Information:

Instructor: Joe Shilts

jshilts@leyden212.org

847-451-3072

Room Numbers:

Auto Shop & Office 124

Classroom 128

If you like this course, consider taking the other following Industrial Technology courses offered here at East Leyden.

Construction

Home Repair

Woods

Car Care

Metals

Principles of Engineering

Acknowledgement

Student Name: _____

Student Signature: _____

Parent Signature: _____

Parent Email or Phone: _____

