

Automotive Care & Maintenance

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COURSE DESCRIPTION

This one semester course gives students the opportunity to perform routine Care and Maintenance on their first car. Students will get an introductory overview of all 8 ASE areas as well as Scheduled Service, Roadside Emergencies and Purchasing that first Vehicle. Automotive Careers will also be explored.

STANDARDS AND BENCHMARKS

Class standards and benchmarks align with the ITEA standards and benchmarks. Students will also follow ASE guidelines for Introductory Automotive classes so they can transition into Automotive Diagnostics.

WHAT ARE WE GOING TO DO IN THIS CLASS?

COURSE OBJECTIVES:

Upon completion of this course, the student will be able to:

1. Demonstrate safe work habits in an Auto Shop environment.
2. Demonstrate correct usage of Hand/Power Tools and Specific Auto Equipment.
3. Perform routine maintenance: Fluid Changes, Tire Rotations, Cleaning etc.
4. Understand 4 Stroke Theory and Automotive Engine operation.
5. Handle Roadside Emergencies: Jump Starts and Changing Tires with a Car Jack.
6. Use Scanners to Diagnose problems on OBDII vehicles.
7. Diagnose NO STARTS.
8. Know OHMS Law and be able to use a DVOM.
9. Work Independently and in Small Groups.
10. Identify Post-Secondary Career Opportunities, "Career Report".

Class Calendar: The first day of every week will be spent in the classroom

- Auto Shop Safety (Chapter 5)
- Hempstead Auto Procedures: Parking, Lifts, White Board, etc.
- Hand Tool ID and usage (Chapter 3)
- Power Tool and Equipment Operation (Chapter 4)
- Service Information Look-Up (Chapter 7)
2 weeks

- The Automobile (Chapter 1)
- Automotive Careers and ASE Certification (Chapter 2) "Career Report"
1 week

- Fluid Service (Chapter 10)
- Engine Fundamentals (Chapter 11)
2 week

- Cooling System Fundamentals (Chapter 39)
- Lubrication System Fundamentals (Chapter 41)
1 week
- Basic Electricity (Chapter 8)
- Automotive Batteries (Chapter 28)
- Battery Testing (Chapter 29)
- Starting system Fundamentals (Chapter 30)
- Charging System Fundamentals (Chapter 32)
- Ignition System Fundamentals (Chapter 34)
3 week
- Computer System Fundamentals (Chapter 17)
- Scan Tools (Chapter 18)
2 week
- Fuel System Components (Chapter 21)
- Fuel Injection (Chapter 22)
- Exhaust, Turbos, Superchargers (27)
2 weeks
- Tire & Wheel Fundamentals (Chapter 65)
- Suspension System Fundamentals (Chapter 67)
- Steering System Fundamentals (Chapter 69)
- Brake System Fundamentals (Chapter 71)
3 weeks

Class Materials:

Textbook – Modern Automotive Technology, Jim Duffy. You will not be assigned a textbook. All textbooks are a classroom set and will remain in the classroom. Time will be given to complete work in class. If you need to check out a book, you will have to check one out via the library system.

Notebook – Every student will keep a notebook that will contain all written work: Syllabus, diagrams, Chapter Review Questions and handouts. * A spiral notebook with pockets is best, this notebook will be used exclusively for Auto Care and can be used on the Final Test. The Notebook is very important, you can't pass without it.

Pencil or Pen- You need something to write with.

Safety Glasses – Students must provide their own Clear Safety Glasses. Safety glasses must say Z-87.

INSTRUCTIONAL STRATEGIES

Instructional strategies that will be used in this course, but are not limited to: direct instruction, active participation, videos, animations, student projects, note taking, demonstrations, and shop activities

GRADING

Your grade will be based on the following:

Notebook - Chapter Review questions will be checked every 2 weeks. Para-Phrasing is OK but NO 1 word answers will be accepted and there is NO partial credit. 150 Points Total

Shop Work - The inside front cover of the notebook is where students will keep their SHOP LOG. Groups need to have a vehicle in the shop at least once every week. 150 Points Total

Career Report - The “Career Report” will be 500 words typed on the Student’s Career aspirations. The report is due just prior to Parent-Teacher Conferences. 50 Points for Full Credit

Final Test - The Final Test is 50 Review Questions. 50 Points Total

There will be additional credit available at the end of the Semester – Syllabus, Notes, TDC, 40-50 Points

Grading Scale: Grades are calculated per District guidelines and recorded every two weeks.

BEHAVIOR EXPECTATIONS AND CLASS RULES

You are High School Students, and will be expected to behave responsibly. Safety is our highest priority and any Student who demonstrates un-safe behavior will be removed from class immediately and report to the AP office for reassignment.

Should other problems arise I will contact your parents and/or pursue assistance from the AP office. If a serious offense occurs, you will be asked to leave the classroom. At no time will I allow a disruption to the educational environment.

Cell phones are not allowed in the classroom or lab. Get used to it, employers do not like cell phones in the workplace either. The only exception is during days when we are working in the notebook, students may listen to music with headphones only. In the Shop there are NO: phones, inappropriate clothing or open toed shoes.

1. Everyone **will** wear safety glasses in the lab.
2. Students will not be in, on or around any vehicles or equipment without permission.
3. No “horseplay” (running, pushing, wrestling, arm wrestling, ball playing, etc.)
4. No swearing, threatening, intimidating or derogatory language at any time.
5. No food, drinks, etc., may be brought to the classroom or lab area.
6. All tools and equipment will be maintained. Do not misuse tools or waste supplies.
7. There is a New phone system at Hempstead, under no circumstances are students to answer the classroom phone unless instructed to do so. (In a real Emergency dial 911)
8. All accidents must be reported to the instructor immediately.
9. All students are responsible for cleaning up at the end of class and putting tools away.
10. Theft and Vandalism will be dealt with by the AP office with severe consequences.
11. Only 1 Student per vehicle, NO passengers. Students are not allowed off HHS property.
12. Reckless Driving will be reported to the AP office.

Failure to follow the rules will result in detention, AP office and/or Parent intervention, or a drop from the class depending on severity and/or frequency of the infractions.