
MECHANICS 30

ADVANCED MODULES

Program Rational:

The mechanics 30 program will continue to provide a wide variety of experiences. This in turn helps you further develop your personal skills related to mechanics and other career fields. This program consists of courses and activities designed to explore different technologies. All courses and activities are designed for practical preparation which in turn allows you to pursue a career in a trade field. In the process, the Mechanics 30 program will continue to develop your problem solving abilities, increase your self-knowledge, and explore your talents and skills.

General Objectives:

This course will provide you with the opportunity to:

- Realize the importance of the automobile in our society
- Become familiar with technical terms found in the field of Automotives
- Learn to work safely and to practice safe work habits
- Develop good work habits by working both independently and harmoniously
- Become familiar with the many different types of tools used in the automotive field
- Be able to use the proper tools for the task at hand
- Understand the fundamentals of engine operation
- Become familiar with basic diagnostic procedures
- An introduction to computer management systems
- Service and repair of a wide range of a vehicles operating systems

Course Content:

- Automotive Shop and Personal Safety
- Shop Hand Tools
- Shop Equipment and Power Tools

- Automotive Computers
- Climate control and Automatic Transmissions
- Fundamentals of Engine Performance and Diagnosis
- Engine Construction and Servicing
- Electrical Fundamentals
- Wheel Alignments
- Special Project

Evaluation:

- Shop Work and F.A.A.P. (See below) 60% of your final grade.
- Chapter Assignments 20% of your final grade.
- Exams and Quizzes 20% of your final grade.

Shop Work: All tasks performed in the shop may include service and repair of a vehicles power train, transmission, engine performance diagnosis and or repair and also maintaining a clean and safe environment. You will demonstrate the safe use of hand tools and shop equipment including using the proper tools for a specific job and accuracy of work.

Focus: Students are to focus on learning and the task given to them. All assignments will be completed in a timely manner.

Attendance: Students must attend class. No student will be allowed into the shop until their assignments have been handed in.

Accountability: Students are accountable for your actions; both in the classroom and in the shop. You will listen to instructions and complete the tasks given to you. You will show respect and politeness towards your instructor and also your fellow students. You will use appropriate language while working in the shop.

Personal readiness: Students are to be ready to learn. You must bring your books, chapter assignments, something to write with and coveralls to class.

Chapter Assignments: Multiple choice questions at the end of each chapter are to be completed and the review questions are to be neatly written. Please UNDERLINE OR highlight the review questions.

Exams and Quizzes: While class notes and lectures are given, quizzes will be given so that students can evaluate their own progress in achieving the course objectives. The quizzes will be from the chapter assignments and overhead notes. The instructor will also mark all notebooks. A final cumulative exam may be given at the end of the term.

Additional Information:

- The student is responsible for bringing his / her pen, notebook and textbook to class.
- If you miss a day due to unforeseen reasons it is your responsibility to ask a fellow student what happened. It is up to you to collect any missed information.
- Learning is the students' responsibility, but assistance is **ALWAYS** available. If at any time you are unsure about procedures or directions ask your instructor.
- Remember that acting like an adult gains respect and greater responsibilities.

General Shop Safety Rules:

1. **NO HORSEPLAY** or running is permitted.
2. All loose clothing and hair must be secured before operating any machine.
3. Know the location of fire extinguishers and emergency cut-off switches.
4. Check all electrical equipment before using it. Report any frayed or broken cords
5. Report all accidents, however minor, to your instructor immediately.
6. Keep the shop neat by putting away all tools when the job is finished.
7. **DO NOT** leaving oil, grease, tools or other loose objects on the floor.
8. Don't forget your eye protection. Always keep safety shields and guards in place.
9. Don't distract a person operating a hoist or machine.
10. Never use a file without a handle.
11. If you have any doubts about shop procedures ask your instructor.
12. Safety Glasses are **MANDATORY** while working in the shop. No Exceptions.

Remember this course belongs to you and its success rests largely with you.

If you do not understand, just ask.