



Automotive Technology Syllabus

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Course Description:

Automotive Technology is a two-year program that trains and prepares students to be successful automotive technicians, have jobs in related fields, and/or pursue post-secondary education through safe, honest, respectful, and professional work habits in the classroom and shop.

Units are aligned with the National Institute of Automotive Service Excellence (ASE), and students have an opportunity to take an ASE exam and earn an entry-level Industry Recognized Credential (IRC) at the conclusion of each unit.

Students will be trained on HACTC shop vehicles. They will utilize individual skills, as well as team-based learning, to become proficient at problem solving and time management.

Qualified Level 2 students will have the opportunity for a Cooperative Education placement with a local automotive employer.

Units of Study:

During these units, students will be expected to demonstrate the use of industry procedures and tools, and use math, science, reading and writing to demonstrate their understanding of the topic.

Level 1

- Introduction to AT & Safety
- Steering & Suspension
- Electrical Systems
- Engine Repair
- Brakes
- Automotive Career Exploration

Level 2

- Safety and Review
- Heating & Cooling
- Engine Performance
- Automatic Transmission
- Manual Transmission
- Hybrid/Electric Technology

Assignment Policy:

Absences/Missing Work: Students are expected to make up all missed work, whether it is graded or ungraded. Students are responsible for asking the instructor for missed work on the day they return from an absence. Work turned in the following day will be counted as “on time.” There is a 10% per day late grade penalty, and all work must be made up within one week, or it will receive a zero. Absences, whether excused or unexcused, will negatively affect students’ professionalism and work habits grades.

Articulation Agreements:

- Universal Technical Institute
- Lakes Region Community College
- University of Northern Ohio (UNOH)

Grading Categories and Weights:

To be career-ready, students must demonstrate technical skills, as well as transferable skills and work habits. Grades will reflect the important balance between developing technical “hard” skills and transferable “soft” skills. Students are expected to complete ALL assignments, graded or not. Active participation, work completion, teamwork, professionalism and engagement will be assessed in the Leadership & Teamwork and Communication categories. Demonstration of technical knowledge and skills will be assessed in the Problem Solving and Technical Skills categories.

Each grading category accounts for 25% of students’ grades:

- **Communication** includes goal setting and written reflections on areas of growth and opportunity.
- **Leadership & Teamwork** includes professionalism and work habits rubric assessment.
- **Problem Solving** includes ASE Unit Exams, the Final Exam, Quizzes (“hard skills”: classroom-based tests)
- **Technical Skills** include shop-based performance assessments (“hard skills”: hands-on tests)

Standards Unique to Automotive Technology:

ESS03.01.03 Describe the value of using problem-solving and critical thinking skills to improve a situation or process.

ESS03.01.04 Create ideas, proposals and solutions to problems.

ESS06.01.07 Use personal protective equipment according to manufacturer rules and regulations.

ESS02.02.05 Communicate effectively with customers and employees to foster positive relationships.

ESS10.02 Employ planning and time management skills and tools to enhance results and complete work tasks.

Classroom Expectations and Goals:

Whether you are just starting out or have some automotive experience, this is a class where everyone feels safe and has the opportunity to learn.

- Cell phone use is not permitted in Automotive Technology.
- Everyone is required to wear safety glasses, Personal Protective Equipment (PPE), and proper dress code. Students must wear closed-toed non-flammable shoes (Leather boots and steel toes preferred), pants (jeans or canvas like Carhartt or similar), shirts that cover shoulders/upper arms and midriff. Safety glasses are required to be on in the lab space at all times.
- Students are expected to behave and speak in a professional, respectful, and appropriate manner at all times. The shop space will be conducted as a professional business space.
- Live and personal vehicle work will be determined on a per-class basis.
- Being able to participate in labs or shop work is based on passing safety tests with 100% accuracy in the beginning of the year and consistently showing professionalism in and out of class.

Embedded Credit: Science

Concurrent Enrollments Offered:

- None at this time

Industry Recognized Credentials:

- CCAR E-Safety
- Lift it Right Certification
- ASE Maintenance and Light Duty Student Certification
- WorkKeys National Career Readiness Certification (NCRC)

Common Standards Assessed in Every Program:

Communication: ESS02.01 Select and employ appropriate reading and communication strategies to learn and use technical concepts and vocabulary in practice.

Leadership and Teamwork: ESS07.03 Employ teamwork skills to achieve collective goals and use team members’ talents effectively.

Technical Skill: ESS10.01 Employ information management techniques and strategies in the workplace to assist in decision-making.

Problem Solving/Critical Thinking: ESS03.01 Employ critical thinking skills independently and in teams to solve problems and make decisions (e.g., analyze, synthesize and evaluate).