

William D. Ford Career Technical Center  
36455 Marquette, Westland, MI 48185  
(734) 419-2100

Course Name: Automotive Technology I

CIP Number: 47.0604

Course Number: V0310/V0310M

Course Credit: 1.5 credits per semester

School Year: 2024-2025

Instructors: Mark Batko and Doug Helka

Auto Shop Office: (734) 419-2149

This course will focus on basic automotive skills and shop safety practices. We will be using Google Classroom for announcements and assignments. Some assignments can be completed in class using Chrome books in the auto shop. We will focus on practical skills in the Auto Shop/Lab. To access the Google platform and training modules; **all students must use their assigned Wayne-Westland email account.**

Course Description:

The Automotive Technology program is designed to prepare students for a career in the automotive service industry. Students learn automotive systems, tool usage, shop safety, and the use of diagnostic test equipment. Theory and practice are combined to give the student an educational experience in the field of automotive service. Good attendance and enthusiasm are essential for participation in this program.

Program Information:

The automotive technology course at the William D. Ford Career Technical Center is certified by the Automotive Service Excellence (ASE) in Maintenance and Light Repair. Students will receive the required hours of combined classroom and Auto Shop/Lab instructional activities during the delivery of the 12 segments. Classroom instructional methods will include lecture, demonstrations, discussions, video, and presentations.

The following competencies will be included but are not limited to in the first and second semesters of the class:

- Employability Skills and Industrial Safety
- Electrical – General Electrical Systems; Theory and Operation
- Electrical – Battery Diagnosis and Service
- Electrical – Starting and Charging Systems Diagnosis and Repair
- Electrical – Lighting Systems, Horn, and Wiper/Washer Diagnosis and Repair
- Electrical – Gauges, Warning Devices Diagnosis and Repair
- Electrical – Accessories Diagnosis and Repair
- Brakes – General Brake Systems & Hydraulic Systems Diagnosis and Repair
- Brakes – Drum and Disc Brake Diagnosis and Repair
- Brakes – Power Assist Units Diagnosis and repair
- Brakes - Miscellaneous (Wheel Bearings, E- Brake) Diagnosis and Repair
- Brakes – Electronic Brake, Traction and Stability Control Diagnosis & Repair

Students will then couple the knowledge learned in the classroom with practical hands-on exercises in the automotive lab. These exercises may be performed on simulated automotive trainers, finding and correcting faults placed in shop vehicles by the instructors, or in some cases on the student's own vehicle. To complete the hands-on tasks, the students have access to some of the latest automotive service tools. These tools include manufacturers' scan tools, electrical test equipment, air conditioning recovery and recharging stations, and specialty tools designed to service the various automotive systems.

Work based learning is a valuable experience in which every student in Career and Technical Education is required to participate. All students will be given opportunities to attend a minimum of one field experience each school year. Those students who do not attend the scheduled experience(s) will be required to find a site where they will spend a minimum of one class period in a business related to their program of study. The student will be required to get the teacher's signed permission, the parent/guardian's signed permission, fill out a training agreement to be signed by the site supervisor, and

provide their own transportation to and from the site. Upon completion of the field experience, the student will turn in a question-and-answer assignment provided by the teacher regarding the experience.

#### CTSOs/Leadership Opportunities:

SkillsUSA: This is a student-led organization. Students may have the option to participate in competitions at the local, state, and national levels.

Classroom Leadership: There will be opportunities within the classroom that include a variety of competitions (classroom to regional) designed to enhance leadership (group and independent activities) within the Automotive Technician realm.

#### Extra Help:

The instructor will be available for extra help. Feel free to schedule a time that is convenient for both you and your instructor. This could possibly be before or after school. Tests/quizzes may be read aloud, and extended time may be permitted under certain circumstances. Seating arrangements may be adjusted based on student needs. Any questions, ask in class or by email.

#### Course Objectives:

1. To prepare students for employment in the automotive service industry.
2. To prepare students for the Michigan Mechanics Certification Tests.
3. To prepare students for the entry level ASE Certification Tests.
4. To introduce desirable attitudes toward work and quality of performance.
5. To develop safe work habits.
6. To develop respect for the property of customers and others.

#### Course Text and Reference Materials:

1. Modern Automotive Technology by James E. Duffy, 2022 10th edition published by Goodheart and Wilcox.
2. Manufacturers Manuals
3. Mitchell on Demand Vehicle Service Information System
4. Honda Service and Training Website
5. Selected websites for training modules including S/P2 Automotive Service Safety and Ford Automotive Career Exploration (ACE) program.

#### Attendance Policy:

The William D. Ford Career Technical Center places a high priority on attendance because the attendance pattern established by the student in school often sets an attendance pattern for employment. Class attendance is necessary for learning and academic achievement as well as for developing the habits of punctuality, dependability, and self-discipline demanded by business and industry. Regular attendance in the Career Centers labs is essential to allow students to fully participate in class instruction, discussion, and skill development. Absences beyond eight days for each semester are considered excessive. Both excused and unexcused absences are counted in the student's total.

#### Certificates that may be awarded:

1. Certificate of Completion. Certificates are awarded to those students completing the full year program with a minimum of 2.5 GPA for the school year. Printout of their skills will be attached.
2. Certificates earned through S/P2 and 3<sup>rd</sup> party training including American Lift Institute, WD-40 and Valvoline.
3. Ford ACE training certificates on specific automotive systems.
4. Certificate of Perfect Attendance. Awarded to those with perfect attendance for each semester with special recognition for those with perfect attendance for the entire school year.
5. Certificate of Outstanding Attendance. Presented to students maintaining a minimum of 95% attendance for the school year.

#### Grading Policy:

Written homework = 25%  
Quizzes = 10%

Daily grade = 20%  
Lab/Checklist = 35%  
Final test = 10%

The syllabus explains the grading weights in detail. The card marking scores are added as follows: card marking 1=45% +card marking 2= 45%, and final (practical and written sections combined) =10%. All scores are used to calculate the semester grade. The minimum to pass the semester is 59.5% (D-) overall.

#### Assignment Policy:

All assigned work will have due dates. Some assignments are to be completed in class the same day while others may have a longer time frame to complete and turn in for scoring. **NO** late work will be accepted after the specified due date. If you are unable to complete an assignment by the due date; you need to communicate with the instructor to request an extension. Grades are updated through MiStar weekly.

#### Cell Phone and Electronic Device Policy:

Cell phones/electronic devices are valuable and important communicative devices. However, the use of cell phones and other devices during instructional time can impede and distract from the learning process. Students must silence all electronic devices (not on vibrate) upon entry to the classroom/Auto Shop. Students are **NOT** permitted to wear earbuds or headphones during class hours, whether they are listening to them or not (these can be used only during scheduled break times). Instructors reserve the right to authorize the use of devices for specific defined educational purposes and also to have students place cell phones in a secured location upon entry into the classroom/Auto Shop if the use of cell phones becomes an issue.

Note: This policy does not apply to school-issued Chromebooks.

#### Instructor Expectations:

Automotive service is a satisfying career but can be dangerous if safe work practices are not followed. Students should wear clothing and shoes appropriate for the automotive technology program. **Safety glasses and proper footwear must be worn by the students whenever they are in the shop to avoid injuries. Earbuds/headphones are NOT permitted when working in the shop for safety.** Vehicles driven into the shop must travel slowly to avoid accidents. Failure to follow safe work practices can cause serious injuries.