



## **Automotive Technology: Advanced Electric Drive/ Alternative Fuels C.A.**

Career Community: Transportation

Curriculum Code: 1792

Effective: Fall 2025 – Summer 2030

### **Purpose of the Major**

There is a need for highly skilled automotive technicians because automobiles are more complex than ever, and are being kept for a record-breaking length of time. This Advanced Electric Drive-Alternative Fuels Certificate will give students the training needed to diagnose, repair, and maintain the automobiles of today, as well as the automobiles of tomorrow. Certificate holders may improve their employment opportunities for advancement in this or a related area. Students will study theory and operation, diagnosis, repair, and maintenance of modern automobile hybrid/electric vehicles, and alternative fueled vehicles. Students will be trained with the newest and latest tools and equipment in a realistic hands-on laboratory environment.

### **Milestone**

Completion of AUTM 111 and AUTM 180 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

### **Additional Information**

A student must earn a minimum grade of 2.0 in all courses.

Approximately 70% of the instruction is hands-on laboratory time, and all lab and lectures feature class sizes of less than 16 students to provide generous personal interaction with your instructors. All instructors are ASE certified, and bring their extensive years of experience working within the automotive repair industry to the classroom. All students have the opportunity throughout this program to take State of Michigan as well as the nationally recognized ASE tests to become a certified automotive technician. To assist students with their career goals, LCC Automotive covers the cost of State and ASE tests for these specialty areas. Most automotive textbooks are provided as part of this Certificate.

The Automotive Technology Program is a National Automotive Technicians Education Foundation (NATEF) Certified Training Program, evaluated by the National Institute for Automotive Service Excellence (ASE). The Automotive Program is a Snap-On Diagnostics Training Center and a member of the National Alternative Fuels Training Consortium (NAFTC).

Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

## Contact Information

For further information, including career options, course substitutions and waivers, etc., contact the Automotive Technology Program, West Campus Building, Room M103, telephone number 517-267-6406, or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

## Major Required Courses

Course Code	Course Title	Credit / Billing Hours
AUTM 102	Automotive/Collision Safety	1 / 1
AUTM 111	Automotive Electrical I	4 / 6
AUTM 113	Automotive Electrical II	4 / 6
AUTM 180	Intro to Alternative Fuels	2 / 2
AUTM 211	Automotive Electrical III	4 / 6
AUTM 270	Gas Eng Drivability Diagnosis	4 / 6
AUTM 280	Electric/Fuel Cell Technology	2 / 2.5
AUTM 282	Gaseous Fuels	3 / 4
AUTM 286	vEV Energy & Support Systems	4 / 6
AUTM 288	xEV Propulsion & Drive Systems	4 / 6

## Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 30-credit minimum required for a Certificate of Achievement may select any course(s) needed to reach 30 credits, except those courses noted in number 7 in the [Institutional Requirements for Certificates of Achievement](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

## Minimum Total Credit Hours

32 credits / 45.5 billing hours

## Recommended Course Sequence

Semester I
AUTM 102
AUTM 111 – Milestone course
AUTM 113
AUTM 180 – Milestone course
Semester II
AUTM 211
AUTM 280
AUTM 282

Semester III
AUTM 270
AUTM 286
AUTM 288

*LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree titles, and make course changes as needed, without prior notice. The College also reserves the right to discontinue programs when warranted.*