CTEHSF: ELECTRIC AND HYBRID VEHICLE SAFETY AND FUNDAMENTALS

History

1. Mar 27, 2026 by Carol Evans (cacevans)
2. Mar 27, 2026 by Carol Evans (cacevans)

Viewing: CTEHSF : Electric and Hybrid Vehicle Safety and Fundamentals
Last approved: 2026-03-27T19:57:17Z
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Program Cover

Program Name
Electric and Hybrid Vehicle Safety and Fundamentals

Transcript Title
Electric & Hybrid Vehicle Safe

Department
Transportation Technologies

Division/College
Adv Tech/Public Serv Careers

Academic Level
Credit

Program Code
CTEHSF

Type of Award
Certificate

Does this program lead to licensure?
Yes

Describe the licensure/certification
ASE testing prep

Is this intended to be an embedded program?
Yes

Parent Program(s)

Parent Program
Transportation Technologies

Is this program occupational?
Yes

Is it state approved?
No

Program Occupation
High Demand Occupation
High Skill Occupation
High Wage Occupation

CIP Code
470604 - Automobile/Automotive Mechanics Technology/Technician.

Purpose

Effective Catalog

Fall 2026

Program Curriculum

Minimum Credits Required for the Program: 10

Code	Title	Credits
ATT 131	Automotive Electrical	4
ATT 180	Alternative Vehicle Fundamentals & Safety	2
ATT 280	Introduction to Electric and Hybrid Vehicles	4
Total Credits		**10**

Program Description for Catalog

In this program, students will be introduced to the rapidly growing electric vehicle (EV) and hybrid vehicle (HEV) market. Students will learn the safety standards, precautions, and best practices needed when working around EV's and HEV's. Topics of study will include basic electrical system identification and testing along with ever evolving new technologies incorporated in alternative energy vehicles such as EV's and HEV's. This mini-certificate will prepare students for High Voltage (HV) specific ASE testing required for the industry.

Admission/Eligibility Requirements

Additional program information (articulation, accreditation, advisors)

Budget

Additional Information

Is this a substantive change?

No

Key: 163

WASHTENAW COMMUNITY COLLEGE

PROGRAM CHANGE FORM

Program Code:	Current Program Name: Electric Vehicle (EV) Safety & Fundamentals (CTEVSF)	Effective Term: Fall 2026
Division Code: ATP	Department: Transportation Technologies	

Directions:

1. Attach the current program listing from the WCC catalog or website and indicate any changes to be made.
2. Draw lines through any text that should be deleted and write in additions. Extensive narrative changes can be included on a separate sheet.
3. Check the boxes below for each type of change being proposed. Changes to courses, discontinuing a course, or adding new courses as part of the proposed program change, must be approved separately using CurricUNET, but should be submitted at the same time as the program change form.
4. If changes affect the program assessment plan or if program outcomes are updated, please submit a Program Assessment Plan Change form. These changes must be approved separately from the program change form and should be submitted at the same time. Current program assessment plans can be found on the Curriculum and Assessment Program Information page.

Requested Changes:

- ☐ Remove course(s): _____
- ☐ Add course(s): _____
- ☒ Program title (new title is Electric and Hybrid Vehicle Safety & Fundamentals (CTEHSF) Certificate)
- ☒ Description
- ☐ Advisors
- ☐ Program admission requirements
- ☐ Continuing eligibility requirements
- ☒ Program outcomes (may also result from removing or adding a course)*
- ☐ Program assessment plan*
- ☐ Accreditation information
- ☐ Other _____

Note: A change to the Award Type requires the submission of a new program proposal form and a separate program inactivation form. Contact the Director of Curriculum & Assessment for more information.

Show all changes on the catalog page you attach.

* Please submit a Program Assessment Plan Change form.

Rationale for proposed changes: The proposed program change expands the current Electric Vehicle (EV)–focused curriculum to include Hybrid Electric Vehicle (HEV) systems. While fully electric vehicles continue to grow in market share, hybrid vehicles remain a significant and prevalent segment of the automotive industry and are widely represented in both current fleets and service environments.
By incorporating hybrid vehicle theory, technology, diagnostics, and repair into the program, students will gain broader and more relevant technical competencies. This change ensures graduates are not limited solely to EV applications but are instead prepared to work with a wider range of electrified powertrains commonly encountered in the workforce. Hybrid systems combine internal combustion engines with high-voltage electrical components, making them an essential bridge technology between conventional and fully electric vehicles. Expanding the program scope improves graduate employability, aligns the curriculum with current industry needs, and better reflects the realities of today's automotive service sector. This update enhances the program's relevance while maintaining its focus on advanced vehicle electrification technologies.

Financial/staffing/equipment/space implications: None

List departments that have been consulted regarding their use of this program. The courses and curriculum are solely Transportation Technology courses. No other departments are affected.

PROGRAM CHANGE FORM

Signatures:

Reviewer	Print Name	Signature	Date
Initiator	Shawn Deron	Shawn Deron	1/8/2026
Department Chair	Shawn Deron	Shawn Deron	1/8/2026
Division Dean/Administrator	Eva Samulski	Eva Samulski	01/09/2026

Please return completed form to the Office of Curriculum & Assessment, SC 257
or by e-mail to curriculum.assessment@wccnet.edu
Once reviewed by the appropriate faculty committees we will secure the signature of the VPI.

Reviewer	Print Name	Signature	Date
Curriculum Committee Chair	Randy Van Wagnen	RVanWagnen	03/16/26
Assessment Committee Chair	Jessica Hale	JHale	3/17/26
Executive Vice President for Instruction	Dr. Brandon Tucker		3/18/26

Do not write in shaded area. Entered in: Banner_____ C&A Database_____ Log File _____

Reviewed by C&A Committees 2/12/26

Program Information Report

Advanced Manufacturing

Electric Vehicle (EV) Safety & Fundamentals (CTEVSF)

Certificate

Program Effective Term: **Fall 2024**

High Demand Occupation **High Skill Occupation** **High Wage Occupation**

In this program, students will be introduced to the rapidly growing electric vehicle (EV) market. Students will learn the safety standards, precautions, and best practices needed when working around EV's. Topics of study will include basic electrical system identification and testing along with ever evolving new technologies incorporated in alternativeenergy vehicles such as EV's. This mini-certificate will prepare students for EV specific ASE testing required for the industry.

Major/Area Requirements		(10 credits)
ASV 131	Automotive Electrical	4
ATT 180	Alternative Vehicle Fundamentals & Safety	2
ATT 280	Introduction to Electric Vehicles (EV)	4

Minimum Credits Required for the Program: **10**

Program Information Report

Transportation Technologies

Electric Vehicle (EV) Safety & Fundamentals (CTEVSF)

Certificate

Program Effective Term: **Fall 2024**

High Demand Occupation **High Skill Occupation** **High Wage Occupation**

In this program, students will be introduced to the rapidly growing electric vehicle (EV) market. Students will learn the safety standards, precautions, and best practices needed when working around EV's. Topics of study will include basic electrical system identification and testing along with ever evolving new technologies incorporated in alternativeenergy vehicles such as EV's. This mini-certificate will prepare students for EV specific ASE testing required for the industry.

Major/Area Requirements		(10 credits)
ASV 131	Automotive Electrical	4
ATT 180	Alternative Vehicle Fundamentals & Safety	2
ATT 280	Introduction to Electric Vehicles (EV)	4

Minimum Credits Required for the Program: **10**

Received by C&A 2/1/24

Washtenaw Community College

PROGRAM PROPOSAL FORM

Preliminary Approval – Check here when using this form for preliminary approval of a program proposal, and respond to the items in general terms.

Final Approval – Check here when completing this form after the Vice President for Instruction has given preliminary approval to a program proposal. For final approval, complete information must be provided for each item.

Program Name:	Electric Vehicle (EV) Safety & Fundamentals	**Program Code:**
Division and Department:	ATP - Advanced Transportation	CTEVSF
Type of Award:	AA AS AAS **Cert.** Adv. Cert. Post-Assoc. Cert. Cert. of Comp.	
Effective Term/Year:	Fall 2024	**CIP Code:**
Initiator:	Shawn Deron / Justin Morningstar	47.0604

Program Features Program's purpose and its goals. Criteria for entry into the program, along with projected enrollment figures. Connection to other WCC programs, as well as accrediting agencies or professional organizations. Special features of the program.	This program is being developed in coordination with the electric vehicle (EV) Department of Education (DOE) training grant known internally as the Power Project. In this program, students will develop an introductory foundation in both automotive components and systems used specifically in EVs and safety preparations and precautions when working around EVs in a lab environment. This mini-certificate (10 credit hours) will be nested within a 22-credit hour EV Service Technician certificate and that certificate will be nested within a two-year degree (APOETT with EV concentration (EVSR)). This program utilizes some existing courses from the automotive services (ASV/ATT) program to provide the background for identifying and working with electrical systems from internal combustion engine (ICE) vehicles and low voltage systems. With support from state grants and funding, WCC will be able to revamp an existing lab space to host safety training and skill building techniques on emerging technologies in the transportation field to provide a strategic pathway for employment. • The EV industry is valued at **over $250 billion** • There are in excess of **10 million** EV's on the road • Over **6 million** plug-in EV's are sold per year • The electric vehicle industry is currently valued at **$500.48 billion**. • This figure is set to significantly grow in the coming years, reaching **over $1.5 trillion** in **2030**. At a **CAGR of 17.8%**.

Need Need for the program with evidence to support the stated need.	This program is being developed in coordination with the electric vehicle (EV) DOE training grant known internally as the Power Project and as a result of collaboration with the EV jobs academy (EVJA), Center for Connected and Automated Transportation (CCAT), Detroit Drives Degrees Community College Collaborative (D3C3) along with the ATT advisory board discussions consisting of industry partners and leaders. These groups and employers were able to identify the key areas and skills needed for students to be successful in this career field.	
Program Outcomes/Assessment State the knowledge to be gained, skills to be learned, and attitudes to be developed by students in the program. Include assessment methods that will be used to determine the effectiveness of the program.	Outcomes 1. Identify safety standards and protocols when operating alternative energy vehicles. 2. Recognize and differentiate alternative energy vehicle components and systems. 3. Perform basic service procedures on electric vehicles.	Assessment method 1. Outcome-related exam questions 2. Outcome-related exam questions 3. Outcome-related student achievement checklist

Curriculum List the courses in the program as they should appear in the catalog. List minimum credits required. Include any notes that should appear below the course list. Associate degree programs must provide a semester by semester program layout.	• ASV 131 Automotive Electrical* - 4 credit hours • ATT 180 Alternative Vehicle Fundamentals & Safety - 2 credit hours • ATT 280 Introduction to Electric Vehicles (EV) - 4 credit hours Total: - 10 credit hours (* Currently existing course)
Budget Specify program costs in the following areas, per academic year:	**START-UP COSTS ONGOING COSTS** **Faculty** $. $. **Training/Travel** . . **Materials/Resources** . . **Facilities/Equipment** . . **Other** . . **TOTALS:** $. $.

Program Description for Catalog and Web site	In this program, students will be introduced to the rapidly growing electric vehicle (EV) market. Students will learn the safety standards, precautions, and best practices needed when working around EVs. Topics of study will include basic electrical system identification and testing along with ever evolving new technologies incorporated in alternative energy vehicles such as EVs. This mini-certificate will prepare students for EV-specific ASE testing required for the industry.
Program Information	**Accreditation/Licensure -** ASE Tests **Advisors -** Niki Lee, Justin Morningstar, Shawn Deron **Advisory Committee -** Same as ASV/ATT **Admission requirements -** **Articulation agreements -** TBD **Continuing eligibility requirements -**

Assessment plan:

Program outcomes to be assessed	Assessment tool	When assessment will take place	Courses/ other populations	Number students to be assessed
Identify safety standards and protocols when operating alternative energy vehicles.	ATT 180 - Outcome-related exam questions	Fall 2027	All sections of ATT 180	All students
Recognize and differentiate alternative energy vehicle components and systems.	ATT 180 - Outcome-related exam questions	Fall 2027	All sections of ATT 180	All students
Perform basic service procedures on electric vehicles.	ATT 280 - Outcome-related student achievement checklist.	Fall 2027	All sections of ATT 280	All students

Scoring and analysis plan:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally-developed rubric, external evaluation, other). Attach the rubric.

   Outcome-related exam questions will be scored using an answer key.
   Student achievement checklists will be scored with a departmentally-developed rubric.

2. Indicate the standard of success to be used for this assessment.

The standards of success used for each outcome will be 70% of the students will score 70% or higher on the outcome-related questions or outcome-related rubric items.

3. Indicate who will score and analyze the data.

Departmental faculty will score and analyze the data for reporting.

REVIEWER	PRINT NAME	SIGNATURE	DATE
Department Chair/Area Director	Rocky Roberts	Rocky Robert	2/1/24
Dean	Jimmie Baber	Jimmie Baber	2/1/24
Please return completed form to the Office of Curriculum and Assessment (SC 257) or by email to curriculum.assessment@wccnet.edu. Once reviewed by the appropriate faculty committees, we will secure the signature of the VPI and President.			
Curriculum Committee Chair	Randy Van Wagnen	R Van	2-12-24
Assessment Committee Chair	Jessica Hale	JHale	2/13/24
Interim Vice President for Instruction Approved for Development Final Approval X	Dr. Brandon Tucker		2/14/24
President	Dr. Rose Bellanca	Rose B Bellanca	2/18/24
Board Approval			2/27/24

Reviewed by C&A committees on 2/8/24