

# MEMORANDUM

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To: Christy Smith, CTE Dean, Mendocino College

From: Sara Phillips, Director, Far North Center of Excellence

Date: Wednesday, September 14, 2022

Re: Program Recommendation: Advanced Automotive Technology- Hybrid/Electric Vehicles

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## Background

Mendocino College contacted the Far North Center of Excellence to request labor market information for a new Certificate of Achievement in Advanced Automotive Technology- Hybrid/Electric Vehicles. The COE prepared a Labor Market Assessment for Program Recommendation report in September 2022, that provides an overview of the labor market demand and related educational program supply for two occupations related to the request: automotive service technicians and mechanics, and electronic equipment installers and repairers, motor vehicles. It is important to note the automotive service technicians and mechanics SOC code includes all automotive occupations, not solely hybrid and electric vehicles. Mendocino College should include this report along with the present memo for the Regional Consortium application.

This memo provides an analysis of occupational demand and program supply data to assess labor market gaps. Data is provided for the fifteen-county Far North subregion and comes from Lightcast and BurningGlass. Occupations are aligned to career education programs using the Center of Excellence TOP-to-CIP-to-SOC crosswalk and the ONet OnLine education crosswalk. Program awards data comes from Management Information Systems (MIS) Data Mart.

## Findings

*What occupations are aligned to the proposed program?*

- The occupations that align with the program are:
  - Electronic Equipment Installers and Repairers, Motor Vehicles (49-2096)
  - Automotive Service Technicians and Mechanics (49-3023)

*What are the hourly wages for the studied occupations?*

- Entry-level hourly wages for the occupations studied here are above the living wage threshold of \$12.74 for a single adult in the Far North subregion (Exhibit 1)<sup>1</sup>.

*What is the employment outlook for the studied occupations?*

- Employment for these occupations is expected to remain the same over the next 5 years (Exhibit 2).
- Between 2021 and 2026, there are projected to be 231 job openings for these occupations each year in the Far North subregion. It is important to note the automotive service technicians and mechanics SOC code includes all automotive occupations, not solely hybrid and electric vehicles.

*What are the most in-demand skills for the studied occupations?*

- Job postings data provide information about skills employers are seeking (Exhibit 3).

*What does training supply look like for the studied occupations?*

- Over the last three academic years, 52 awards were conferred for TOP Code 0948.00- Automotive Technology in the Far North (Exhibit 4). No awards were conferred for TOP Code 0948.40- Alternative Fuels and Advanced Transportation Technology.

### Summary and Recommendation:

- It is important to note the automotive service technicians and mechanics SOC code includes all automotive occupations, not solely hybrid and electric vehicles, so it is difficult to weigh demand for this focus area using traditional labor market information.
- As California plans to gradually transition away from gas-powered automobiles, we may assume more demand for auto mechanics and technicians who are trained to service hybrid/electric vehicles.<sup>1</sup>
- Based on the number of projected annual openings (n= 231) and average number of awards conferred over the past three years (n= 52), there appears to be an undersupply of trained advanced automotive workers in the region.
- The Far North Center of Excellence recommends moving forward with the program.

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<sup>1</sup> The Self-Sufficiency Standard for California 2021. Center for Women's Welfare, University of Washington.  
<http://www.selfsufficiencystandard.org/California>

**Exhibit 1. Summary of entry-level work requirements by occupation**

Occupation	Typical Entry-Level Education	Work Experience Requirements	Typical On-the-job Training Required	Entry-level Hourly Wage
Electronic Equipment Installers and Repairers, Motor Vehicles	High school diploma or equivalent	None	Moderate-term	\$16.56
Automotive Service Technicians and Mechanics	Postsecondary nondegree award	None	Short-term	\$15.07

**Exhibit 2. Occupational employment and projected demand, 2021-2026**

Occupation	2021 Jobs	2026 Jobs	2021-2026 Change	2021-2026 % Change	2021-2026 Annual Openings
Electronic Equipment Installers and Repairers, Motor Vehicles	12	10	(2)	(19%)	7
Automotive Service Technicians and Mechanics	2,013	2,010	(3)	0%	224
<b>Far North</b>	<b>2,025</b>	<b>2,020</b>	<b>(5)</b>	<b>0%</b>	<b>231</b>

**Exhibit 3. Most in-demand skills for studied occupations**

Top 10 Specialized Skills	Top 10 Human-Centered Skills	Top 10 Technical Skills
Repair	Physical Abilities	Microsoft Office
Auto Repair	Teamwork / Collaboration	Microsoft Excel
Customer Service	Troubleshooting	Computer-Assisted Auditing Technology (CAAT) services
Hand Tools	Communication Skills	Microsoft Word

Top 10 Specialized Skills	Top 10 Human-Centered Skills	Top 10 Technical Skills
Battery Testing and Installation	Organizational Skills	Cisco Unified Contact Center Enterprise (UCCE)
Motor Vehicle Operation	Detail-Oriented	Google Drive
Automotive Services Industry Knowledge	Computer Literacy	Microsoft Windows
Tire Mounting	Preventive Maintenance	Agile Development

**Exhibit 4. Annual average community college awards by program, 2018-19 through 2020-21**

Program - TOP Code	College	Annual Awards 2018-19	Annual Awards 2019-20	Annual Awards 2020-21	3-Yr Annual Awards Average
Automotive Technology (0948.00)	Butte	40	11	15	22
	Lassen	5	8	3	5
	Mendocino	7	15	5	9
	Redwoods	12	6	3	7
	Shasta	11	11	3	8
	<b>Total</b>	<b>75</b>	<b>51</b>	<b>29</b>	<b>52</b>

Please contact Sara Phillips, Director, Far North COE, for further information at [sphillips@shastacollege.edu](mailto:sphillips@shastacollege.edu) or 530-242-7635.

<sup>1</sup><https://calmatters.org/environment/2022/08/electric-cars-california-to-phase-out-gas-cars/>