

# AUTOMOTIVE TECHNOLOGY ELECTRONICS AND ELECTRIC VEHICLE SPECIALIST ASSOCIATE IN SCIENCE AND CERTIFICATE OF ACHIEVEMENT



Many businesses need technicians with very specific skills to diagnose and repair complex problems in the Electric Vehicle and Hybrid Vehicle specialty. The high voltage battery and vehicle power systems require extremely fast computer multiplexing. This specialized degree includes electronic controlled autonomous drive systems, electronic motor drive, four wheel motor drive, and hybrid drive systems. Successful students will obtain a highly desired specialty set of skills. Work experience is a requirement for this major, which ensures student competency and success. All students are required to complete a digital portfolio resume used for assessment and practicum. Students completing all courses and general education courses will receive an Associate in Science during Commencement. Students completing all automotive course requirements will receive a Certificate of Achievement during Commencement.

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Accurately describe and demonstrate knowledge of various electrical, electronic, hybrid, and electric vehicle systems.
- Diagnose and repair advanced electronic automotive systems by performing necessary actions.
- Communicate effectively and professionally in a diverse setting that includes colleagues, clients, and supervisors.
- Comply with environmental health and safety regulations at the state and federal levels.

## Associate in Science Degree Requirements

Code	Title	Units
AUTO-121	Automatic Transmission Theory and Operation	2
AUTO-121L	Automatic Transmission Theory and Operation Laboratory	1
AUTO-121T	Automatic Transmission Theory and Operation Assessment Test Out	0.5
AUTO-132	Differential and 4WD Systems Diagnosis and Service	1
AUTO-132L	Differential and 4WD Systems Laboratory	1

AUTO-132T	Differential and 4WD Systems Assessment Test Out	0.5
AUTO-143	Steering and Suspension Diagnosis and Repair	1
AUTO-143L	Steering and Suspension Diagnosis and Repair Laboratory	1
AUTO-143T	Steering and Suspension Diagnosis and Repair Assessment Test Out	0.5
AUTO-153	Advanced Brake System Diagnosis and Repair	2
AUTO-153L	Advanced Brake System Diagnosis and Repair Laboratory	1
AUTO-153T	Advanced Brake System Assessment Test Out	0.5
AUTO-161	Electrical Diagnosis and Repair	2
AUTO-161L	Electrical Diagnosis and Repair Laboratory	1
AUTO-161T	Electrical Diagnosis and Repair Assessment Test Out	0.5
AUTO-162	Electronics Diagnosis and Repair	2
AUTO-162L	Electronics Diagnosis and Repair Laboratory	1
AUTO-162T	Electronics Diagnosis and Repair Assessment Test Out	0.5
AUTO-171	Climate Control System Diagnosis and Repair	1
AUTO-171L	Climate Control System Diagnosis and Repair Laboratory	1
AUTO-171T	Climate Control System Diagnosis and Repair Assessment Test Out	0.5
AUTO-181	Engine Performance I Ignition and Fuel Systems	2
AUTO-181L	Engine Performance I Ignition and Fuel Systems Laboratory	1
AUTO-181T	Engine Performance I Ignition and Fuel Systems Assessment Test Out	0.5
AUTO-183	Engine Performance II Intake Exhaust and Emission Systems	2
AUTO-183L	Engine Performance II Intake Exhaust Emission Systems Laboratory	1
AUTO-183T	Engine Performance II Intake Exhaust Emission Systems Assessment Test Out	0.5
AUTO-263	Advanced Electronics	1
AUTO-263L	Advanced Electronics Laboratory	1
AUTO-263T	Advanced Electronics Assessment Test Out	0.5
AUTO-264	Hybrid and Electric Vehicle Operation and Diagnosis	1
AUTO-264L	Hybrid and Electric Vehicle Operation and Diagnosis Laboratory	1
AUTO-264T	Hybrid and Electric Vehicle Operation and Diagnosis Assessment Test Out	0.5
AUTO-283	Advanced Engine Performance	1
AUTO-283L	Advanced Engine Performance Laboratory	1
AUTO-283T	Advanced Engine Performance Assessment Test Out	0.5
AUTO-212	Automotive Work Experience <sup>1</sup>	12

ET-110	Introduction to Electricity and Electronics	4
<b>Total Units</b>		<b>52</b>

Plus General Education Requirements (<https://catalog.gcccd.edu/cuyamaca/degree-requirements-transfer-information/>)

<sup>1</sup> Must be taken for a total of 12 units.

## **Certificate of Achievement**

Students who complete only the major requirements above qualify for a Certificate in Automotive Technology Electronics and Electric Vehicle Specialist. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.