

This program is designed as an apprenticeship program for those interested in a job as an advanced driveability specialist or would like to further their knowledge and training in advanced engine performance. Dealers are particularly interested in this specialty due to advances in technology on current model vehicles with increasing electrical/electronic devices. All entrance eligibility requirements for the certificate program are the same as the degree programs.

All tracks are filled on a first-come, first-served basis, dependent upon satisfactory MVR, criminal background checks, and drug screening.

Students wishing to pursue the two-year degree or the certificate programs must be signed into courses by the program director at the beginning of each semester to ensure that they are on track academically to graduate in the prescribed two-year period. Classes for the corporate tracks will be filled with dealer sponsored students first. General program students may be allowed to fill any remaining seats. All students, regardless of their chosen track, should be aware of automotive repair industry expectations, specifically that technicians must drive customers' vehicles as part of the repair process; thus, the technician and the student must have a clean motor vehicle record and valid driver's license. The hiring process at reputable repair shops and dealerships will include a drug screen and a thorough background investigation.

Required Courses	Credits	Pre or Co Reqs Rqd	Course Availability		
			Fall	Spr	Sum
Major Courses					
• ASE 101 - Auto Shop Orientation (2 Cr.)	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• ASE 120 - Basic Automotive Electricity (2 Cr.)	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• ASE 122 - Automotive Electrical Safety Systems (1 Cr.)	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ASE 123 - Starting and Charging System (2 Cr.)	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ASE 130 - General Engine Diagnosis (2 Cr.)	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ASE 134 - Automotive Fuel and Emissions Systems I (2 Cr.)	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ASE 170 - Laboratory Experience I (2 Cr.)	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ASE 171 - Laboratory Experience II (4 Cr.)	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ASE 172 - Laboratory Experience III (2 Cr.)	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ASE 221 - Automotive and Diesel Body Electrical (4 Cr.)	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ASE 231 - Automotive Computers and Ignition Systems (2 Cr.)	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ASE 233 - Auto Fuel Injection and Emissions Systems II (4 Cr.)	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ASE 235 - Driveability & Diagnosis (2 Cr.)	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ASE 250 - Automatic Transmission/Transaxle Service (1 Cr.)	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• ASE 264 - Introduction Automotive Heating and Air Conditioning (1 Cr.)	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ASE 265 - Heating and Air Conditioning Systems (4 Cr.)	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ELT 106 - Fundamentals of DC/AC (4 Cr.)	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• ELT 146 - Digital Devices in Computers (3 Cr.)	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• ENG 121 - English Composition GT-CO1 OR ENG 131 - Technical Writing GT-CO1*	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
• MAT 108 - Technical Mathematics or Higher* (4 Cr.)	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Pre-Requisites, Co-Requisites, and Recommendations (grade C or better required)

Where requirements are listed as course categories (e.g. Electives, Arts/Humanities) rather than as specific courses, please note that depending upon course choice, pre-requisites may be required.

ASE 123 - Starting and Charging System (2 Cr.)

- Pre-Requisite: ASE 120 - Basic Automotive Electricity

ASE 134 - Automotive Fuel and Emissions Systems I (2 Cr.)

- Pre-Requisite: ASE 231 - Automotive Computers and Ignition Systems

ASE 170 - Laboratory Experience I (2 Cr.)

- Pre-Requisite: ASE 120 - Basic Automotive Electricity

ASE 171 - Laboratory Experience II (4 Cr.)

- Pre-Requisite: ASE 120 - Basic Automotive Electricity

ASE 172 - Laboratory Experience III (2 Cr.)

- Pre-Requisite: ASE 120 - Basic Automotive Electricity

ASE 221 - Automotive and Diesel Body Electrical (4 Cr.)

- Pre-Requisite: ASE 120 - Basic Automotive Electricity

ASE 231 - Automotive Computers and Ignition Systems (2 Cr.)

- Pre-Requisite: ASE 120 - Basic Automotive Electricity
- Pre-Requisite: ASE 170 - Laboratory Experience I

ASE 233 - Auto Fuel Injection and Emissions Systems II (4 Cr.)

- Pre-Requisite: ASE 120 - Basic Automotive Electricity
- Pre-Requisite: ASE 134 - Automotive Fuel and Emissions Systems I
- Pre-Requisite: ASE 231 - Automotive Computers and Ignition Systems

ASE 235 - Driveability & Diagnosis (2 Cr.)

- Pre-Requisite: ASE 120 - Basic Automotive Electricity

ASE 265 - Heating and Air Conditioning Systems (4 Cr.)

- Pre-Requisite: ASE 264 - Introduction Automotive Heating and Air Conditioning

ELT 146 - Digital Devices in Computers (3 Cr.)

- Pre-Requisite: ASE 221 - Automotive and Diesel Body Electrical
- Pre-Requisite: ELT 106 - Fundamentals of DC/AC OR ASE 120 - Basic Automotive Electricity OR ASE 123 - Starting and Charging System OR ASE 170 - Laboratory Experience I OR ASE 171 - Laboratory Experience II, OR ASE 172 - Laboratory Experience III

ENG 121 - English Composition GT-CO1 OR ENG 131 - Technical Writing GT-CO1*

- Co-Requisite: CCR 094 - Studio 121

MAT 108 - Technical Mathematics or Higher* (4 Cr.)

- Co-Requisite: MAT 091 - Applied Quantitative Lab
- Pre-Requisite: MAT 050 - Quantitative Literacy (4 Cr.) OR MAT 055 - Algebraic Literacy (4 Cr.) OR appropriate score

Notes

- *This course requires college level readiness as measured by Accuplacer, ACT, or SAT scores; approved high school course work that is less than five years old; or successful completion of appropriate college-readiness course.



Academic Plan
Certificate
Advanced Automotive Electrical

51 Credits

Catalog Year: 2021/2022

- Course availability is subject to change.
- In order to meet program requirements, students registered for ENG 121 or ENG 131 must also register for CCR 094 unless they can demonstrate otherwise meeting the CCR 094 standard through assessment testing, prior college coursework, or recent High School coursework. See an Advisor for details.
- Recommended courses may be listed above for certain electives; consult with the Academic Advising Office (advising@arapahoe.edu or 303.797.5664) for additional elective recommendations.
- Refer to 21/22 catalog for specific requirements and important information about this certificate.
- The Automotive Program requires full time attendance.
- This certificate is in addition to the degree and cannot be taken separately. Please see Associate of Applied Science degree sheet for more information.

Graduation Requirements

- To graduate, students must apply for graduation (form available at www.arapahoe.edu/departments-and-programs/graduation) by the deadline and meet all degree requirements.

RECOMMENDED COURSE SEQUENCE FULL-TIME TRACK

Year 1: Summer	Credits	Course
	2	ASE 101 - Auto Shop Orientation (2 Cr.)
	2	ASE 120 - Basic Automotive Electricity (2 Cr.)
	1	ASE 250 - Automatic Transmission/Transaxle Service (1 Cr.)
	4	ELT 106 - Fundamentals of DC/AC (4 Cr.)
	3	ENG 121 - English Composition GT-CO1 OR ENG 131 - Technical Writing GT-CO1 ~Recommended English Course(s)~ ENG 131 - Technical Writing I: GT-CO1* (3 Cr.)
Year 1: Fall	Credits	Course
	1	ASE 122 - Automotive Electrical Safety Systems (1 Cr.)
	2	ASE 123 - Starting and Charging System (2 Cr.)
	2	ASE 170 - Laboratory Experience I (2 Cr.)
	4	ASE 171 - Laboratory Experience II (4 Cr.)
	2	ASE 172 - Laboratory Experience III (2 Cr.)
	4	ASE 221 - Automotive and Diesel Body Electrical (4 Cr.)
	1	ASE 264 - Introduction Automotive Heating and Air Conditioning (1 Cr.)
	4	MAT 108 - Technical Mathematics or Higher* (4 Cr.)
Year 1: Spring	Credits	Course
	2	ASE 130 - General Engine Diagnosis (2 Cr.)
	2	ASE 134 - Automotive Fuel and Emissions Systems I (2 Cr.)
	2	ASE 231 - Automotive Computers and Ignition System (2 Cr.)
	4	ASE 233 - Auto Fuel Injection and Emissions Systems II (4 Cr.)
	2	ASE 235 - Driveability & Diagnosis (2 Cr.)
	4	ASE 265 - Heating and Air Conditioning Systems (4 Cr.)
	3	ELT 146 - Digital Devices in Computers (3 Cr.)



RECOMMENDED COURSE SEQUENCE PART-TIME TRACK