

Automotive Technology

The Automotive Technology program is a competency-based program designed following standards specified by the Automotive Service Excellence (ASE) Education Foundation. The competencies the student is expected to achieve in the program are based on the task described by ASE Education Foundation. A student who successfully completes the program will receive training in all of the eight areas described by ASE Education Foundation: A-1 Engine Repair; A-2 Automatic Transmission and Transaxle; A-3 Manual Drive Train and Axles; A-4 Suspension and Steering; A-5 Brakes; A-6 Electrical/Electronic Systems; A-7 Heating and Air Conditioning; and A-8 Engine Performance. In order to meet global changes, the automotive industry has gone Green with Hybrid and Electric vehicles. Our program will meet the industry needs by providing training in sustainable energy with Hybrid and Electric Vehicle (HEV) Technology and alternative fuels. Auto Refinishing and Non-Structural Repairs are also included in our program to meet the needs of cosmetic repairs and body refinishing at industry standards.

The goals of the program are to prepare students with the skills and competencies necessary for a successful career as an automotive technician, to instill in the student the work habits and attitude necessary to work in a highly competitive field, and to provide the student with the basic skills necessary to become a lifelong learner in order to keep abreast of the latest technological changes in the automobile.

The Automotive Technology program courses are clustered into certificates, each providing a set of marketable workplace skills. The Certificates of Competence (COs) in HEV Preventive Maintenance and Repair and the HEV Diagnostic and Repair lead to a Certificate of Achievement (CA) in Automotive Green Technology. The Drive Train Specialist, Engine Specialist, and Undercar Specialist lead to the CA in Automotive Technology Heavy Line Technician. In addition, other certificates earned are the Electronics/Computer Controls Technician, Driveability Technician, and Master Automobile Service Technology CAs that lead to the Associate in Applied Science (AAS) degree. This two-year AAS degree program is offered every year.

This program is articulated with other UH Community College Automotive programs. Students should plan to enroll in all the Automotive Technology program courses offered each semester in order to earn the desired certificate or degree in the shortest time possible. Students are strongly encouraged to consult with an academic advisor to help them plan the best path for reaching their academic goals.

The cost of tools and supplies for the program is approximately \$2,500. This cost can vary considerably, depending on where the student chooses to buy tools and supplies.

Program Admission Requirements:

Applicants will be admitted into the Automotive Technology program on a "first applied, first qualified" basis. Students must maintain a valid driver's license throughout the course of study.

Graduation Requirements:

A grade of "C" or higher in all AMT courses is needed to meet graduation requirements.

Program Student Learning Outcomes (PSLOs) approved 04/30/2015:

1. Demonstrate technical proficiency in entry-level skills for employment in the automotive service field or related areas.
2. Apply the theory behind automotive procedures and use critical thinking when performing service, maintenance, diagnostics, and repair of all major automotive systems.
3. Comply with personal and environmental safety practices in accordance with applicable safety and environmental regulations.
4. Identify and use appropriate tools, testing, and measuring equipment required to accomplish each task established by the National Automotive Technicians Education Foundation (NATEF).
5. Locate references, training information and manufacturer's procedures from industry resources using the appropriate technology and perform tasks in accordance with their research.
6. Perform all diagnostic and repair tasks in accordance with manufacturer's recommended procedures as published.

- Communicate effectively both orally and in writing.

Federal Program Licensure Reporting Requirements:

The Kaua'i Community College Automotive Technology Program curriculum is approved by the ASE Education Foundation (<http://www.aseeducationfoundation.org/program-accreditation>) and meets national requirements along with the State of Hawai'i Department of Commerce and Consumer Affairs (<https://cca.hawaii.gov/rico/rico-home/motor-vehicle-repairs/>) that recognizes ASE as its licensing body for automotive repairs. If you are not residing in the state of Hawai'i and are taking a Kaua'i Community College online course or program leading to professional licensure, Kaua'i Community College cannot confirm whether the course or program meets your state's professional licensure requirements. Please verify with the appropriate licensing board in the state you intend to practice.

Automotive Technology Degrees and Certificates

Automotive Technology: Associate in Applied Science Degree

Fall (Semester 1)

Course	Course Title/Category	Credits
AMT 100	Introduction to Automotive Technology	2
AMT 141	Electrical/Electronic Systems I	5
AMT 152	Brake Systems	4
AMT 154	Suspension and Steering Systems	4
	Thinking, Reasoning, and Mathematics: A.A.S. Core Options	3

- Thinking, Reasoning, and Mathematics: QM 108 is recommended.

Spring (Semester 2)

Course	Course Title/Category	Credits
AMT 129	Engine Repair	7
AMT 145	Manual Drive Trains and Axles	4
AMT 241	Electrical/Electronic Systems II	4
PHYS 101	Career and Technical Education Physics	3

- PHYS 101: This course fulfills the Natural Environment category.

Fall (Semester 3)

Course	Course Title/Category	Credits
AMT 149	Automatic Transmission and Transaxle	4
AMT 240	Fuel and Emission Systems	4
AMT 242	Engine Performance I	5
	Cultural Environment: A.A.S. Core Options	3
	Social Environment: A.A.S. Core Options	3

Spring (Semester 4)

Course	Course Title/Category	Credits
AMT 144	Heating and Air Conditioning	4
AMT 244	Engine Performance II	5
AMT 260	Diagnostic and Repair	4
	Communication: A.A.S. Core Options	3
1. Communication: ENG 106 is recommended.		
Total Credits		71

Category Descriptions

Communication: A.A.S. Core Options

Refer to the "General Education/Skills Core Options Course List" under the "Programs (Certificates and Degrees)" section of the catalog for a list of courses that will fulfill this category.

Cultural Environment: A.A.S. Core Options

Refer to the "General Education/Skills Core Options Course List" under the "Programs (Certificates and Degrees)" section of the catalog for a list of courses that will fulfill this category.

Social Environment: A.A.S. Core Options

Refer to the "General Education/Skills Core Options Course List" under the "Programs (Certificates and Degrees)" section of the catalog for a list of courses that will fulfill this category.

Thinking, Reasoning, and Mathematics: A.A.S. Core Options

Refer to the "General Education/Skills Core Options Course List" under the "Programs (Certificates and Degrees)" section of the catalog for a list of courses that will fulfill this category.

Automotive Technology: Certificate of Achievement (Automotive Green Technology)

Fall (Semester 1)

Course	Course Title/Category	Credits
AMT 141	Electrical/Electronic Systems I	5

Spring (Semester 2)

Course	Course Title/Category	Credits
AMT 129	Engine Repair	7

Fall (Semester 3)

Course	Course Title/Category	Credits
AMT 171	HEV I - Introduction to Hybrid and Electric Vehicle Technology	3

Spring (Semester 4)

Course	Course Title/Category	Credits
AMT 172	HEV II - Preventive Maintenance and Repair	3
AMT 173	HEV III - Diagnostic and Repair	3
AMT 244	Engine Performance II	5
	Total Credits	26

Automotive Technology: Certificate of Achievement (Driveability Technician)

Fall (Semester 1)

Course	Course Title/Category	Credits
AMT 141	Electrical/Electronic Systems I	5

Spring (Semester 2)

Course	Course Title/Category	Credits
AMT 129	Engine Repair	7
AMT 241	Electrical/Electronic Systems II	4

Fall (Semester 3)

Course	Course Title/Category	Credits
AMT 240	Fuel and Emission Systems	4
AMT 242	Engine Performance I	5

Spring (Semester 4)

Course	Course Title/Category	Credits
AMT 244	Engine Performance II	5
AMT 260	Diagnostic and Repair	4
	Total Credits	34

Automotive Technology: Certificate of Achievement (Electronics/Computer Control Technician)

Fall (Semester 1)

Course	Course Title/Category	Credits
AMT 141	Electrical/Electronic Systems I	5

Spring (Semester 2)

Course	Course Title/Category	Credits
AMT 241	Electrical/Electronic Systems II	4

Fall (Semester 3)

Course	Course Title/Category	Credits
AMT 240	Fuel and Emission Systems	4
AMT 242	Engine Performance I	5

Spring (Semester 4)

Course	Course Title/Category	Credits
AMT 144	Heating and Air Conditioning	4
AMT 244	Engine Performance II	5
	Total Credits	27

Automotive Technology: Certificate of Achievement (Heavy Line Technician)

Fall (Semester 1)

Course	Course Title/Category	Credits
AMT 100	Introduction to Automotive Technology	2
AMT 141	Electrical/Electronic Systems I	5
AMT 152	Brake Systems	4
AMT 154	Suspension and Steering Systems	4

Spring (Semester 2)

Course	Course Title/Category	Credits
AMT 129	Engine Repair	7
AMT 145	Manual Drive Trains and Axles	4

Fall (Semester 3)

Course	Course Title/Category	Credits
AMT 149	Automatic Transmission and Transaxle	4
	Total Credits	30

Automotive Technology: Certificate of Achievement (Master Automobile Service Technology)

Fall (Semester 1)

Course	Course Title/Category	Credits
AMT 100	Introduction to Automotive Technology	2
AMT 141	Electrical/Electronic Systems I	5
AMT 152	Brake Systems	4
AMT 154	Suspension and Steering Systems	4

Spring (Semester 2)

Course	Course Title/Category	Credits
AMT 129	Engine Repair	7
AMT 145	Manual Drive Trains and Axles	4
AMT 241	Electrical/Electronic Systems II	4

Fall (Semester 3)

Course	Course Title/Category	Credits
AMT 149	Automatic Transmission and Transaxle	4
AMT 240	Fuel and Emission Systems	4
AMT 242	Engine Performance I	5

Spring (Semester 4)

Course	Course Title/Category	Credits
AMT 144	Heating and Air Conditioning	4
AMT 244	Engine Performance II	5
AMT 260	Diagnostic and Repair	4
	Total Credits	56

Automotive Technology: Certificate of Achievement (Non-Structural Analysis and Damage Repair)

Fall (Semester 1)

Course	Course Title/Category	Credits
AMT 100	Introduction to Automotive Technology	2
AMT 120B	Auto Metal Work and Welding	4
AMT 126B	Non-Structural Analysis and Repair I	4
AMT 134B	Paint Prep and Refinishing I	4

Spring (Semester 2)

Course	Course Title/Category	Credits
AMT 136B	Non-Structural Analysis and Repair II	6
AMT 144B	Paint Prep and Refinish II	6
Total Credits		26

Automotive Technology: Certificate of Competence (Drive Train Specialist)

Fall (Semester 1)

Course	Course Title/Category	Credits
AMT 100	Introduction to Automotive Technology	2
AMT 141	Electrical/Electronic Systems I	5

Spring (Semester 2)

Course	Course Title/Category	Credits
AMT 145	Manual Drive Trains and Axles	4
Total Credits		11

Automotive Technology: Certificate of Competence (Engine Specialist)

Fall (Semester 1)

Course	Course Title/Category	Credits
AMT 100	Introduction to Automotive Technology	2
AMT 141	Electrical/Electronic Systems I	5

Spring (Semester 2)

Course	Course Title/Category	Credits
AMT 129	Engine Repair	7
Total Credits		14

Automotive Technology: Certificate of Competence (HEV Diagnostic and Repair)

Fall (Semester 1)

Course	Course Title/Category	Credits
AMT 141	Electrical/Electronic Systems I	5

Spring (Semester 2)

No courses scheduled.

Fall (Semester 3)

Course	Course Title/Category	Credits
AMT 171	HEV I - Introduction to Hybrid and Electric Vehicle Technology	3

Spring (Semester 4)

Course	Course Title/Category	Credits
AMT 173	HEV III - Diagnostic and Repair	3
AMT 244	Engine Performance II	5
Total Credits		16

Automotive Technology: Certificate of Competence (HEV Preventive Maintenance and Repair)

Fall (Semester 1)

Course	Course Title/Category	Credits
AMT 141	Electrical/Electronic Systems I	5

Spring (Semester 2)

Course	Course Title/Category	Credits
AMT 129	Engine Repair	7

Fall (Semester 3)

Course	Course Title/Category	Credits
AMT 171	HEV I - Introduction to Hybrid and Electric Vehicle Technology	3

Spring (Semester 4)

Course	Course Title/Category	Credits
AMT 172	HEV II - Preventive Maintenance and Repair	3
	Total Credits	18

Automotive Technology: Certificate of Competence (Undercar Specialist)

Fall (Semester 1)

Course	Course Title/Category	Credits
AMT 100	Introduction to Automotive Technology	2
AMT 141	Electrical/Electronic Systems I	5
AMT 152	Brake Systems	4
AMT 154	Suspension and Steering Systems	4
	Total Credits	15