

THIRD TERM

AB-222	Collision Repair III/Advanced Structural	6
ABR-129	Collision Repair/Refinishing III	6

Credits required for certificate 42

\* Program requirements: AB-112 Collision Repair Welding I and ABR-125 Collision Repair Refinishing I must be completed or be in progress prior to enrolling in ABR-127 Collision Repair Refinishing II.

## Automotive Service Technology

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### Associate of Applied Science Degree

PROGRAM CODE: AAS.AUTOSERTECH

The program focuses on the repair and maintenance of passenger cars and light trucks. Course work includes cooperative work experience working for a local employer. Those who wish to specialize may take advanced mechanical studies courses for more in-depth experience. Students may enter the program any term.

#### PROGRAM OUTCOMES

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

- practice safety precautions to protect the environment, yourself, and the vehicle,
- test and repair basic automotive electrical systems;
- diagnose, repair, and service modern automotive brake systems including, anti-lock systems, traction control systems, and stability control systems,
- diagnose, repair, and service modern suspension systems,
- diagnose, repair, and maintenance of all hybrid systems,
- diagnose and repair symptom based mechanical engine problems, including, cylinder head, valve train; and engine block problems.
- communicate clearly with team members and supervisors,
- conduct yourself on the job with a high degree of professionalism;
- diagnose, repair, and service front and rear wheel drive automatic transmissions,
- diagnose, repair, and service modern fuel and emissions systems,
- diagnose and repair automotive electrical accessory systems;
- diagnose, repair, and service modern heating and air conditioning systems,
- diagnose, repair, and service front and rear wheel drive manual drive train and axle systems;

#### CAREERS

Career opportunities include: automotive service mechanic/technician, recreational vehicle service technician and truck service mechanic/technician.

For information contact Jay Leuck, 503-594-3052 or [jayl@clackamas.edu](mailto:jayl@clackamas.edu), or the Automotive Department, 503-594-3047.

#### AUTOMOTIVE SERVICE TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE DEGREE: 1ST YEAR

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FALL TERM		CREDITS
AM-121	General Auto Repair I	3
AM-129	Electrical Systems	7
AM-130	Brake Systems	7
WINTER TERM		
AM-122	General Auto Repair II	3
AM-131	Chassis Systems	7
MTH-050	Technical Mathematics I	
or MTH-065	Algebra II	3-4

SPRING TERM

AM-223	Hybrid Service Technology	3
AM-133	Engine Systems	7
WR-101	Communication Skills: Occupational Writing	
or WR-121	English Composition	3-4

SUMMER TERM

AM-280*	Auto Mechanics/CWE	6
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AUTOMOTIVE SERVICE TECHNOLOGY

ASSOCIATE OF APPLIED SCIENCE DEGREE: 2ND YEAR

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FALL TERM

CREDITS

AM-245	Automatic Transmission Systems	7	
WLD-102	Introduction to Welding		
or AB-112	Collision Repair Welding I	2	
— —	Human Relations requirement (see page 82)		
	(Recommended: PSY-101 or COMM-100**)	3	
— —	PE/Health/Safety/First Aid requirement (see page 82)		(Recommended:
HE-252 or MFG-107)		3	

WINTER TERM

AM-243	Fuel & Emission Control Systems	7
AM-244	Advanced Electrical Systems	7

SPRING TERM

AM-224	Comfort Systems	4
AM-228	Service Shop Management	4
AM-235	Power Transmission Systems	7

Credits required for degree 93-95

\*May be taken after the first year

Note: Alternative course schedule is available. Contact the Automotive Department, 503-594-3047 for information.

## Under Car Technician–Automatic Transmission

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### Career Pathway Certificate

PROGRAM CODE: CC.UNDRCARTECAUTO

The Under Car Technician–Automatic Transmission Program combines the initial courses of the Associate of Applied Science (AAS) Automotive Service Technology degree to provide the student with an opportunity to gain entry level employment. This alternate first-year schedule offers accelerated employment qualification for the student. These courses train the student in the skills necessary to earn certification from Automotive Service Excellence (ASE) in the specified areas of A2, A3, A4, and C1, as described in the ASE Alignment Section. Coursework also qualifies the student to earn American Welding Society (AWS) certification. The National Institute for Automotive Service Excellence requires two years of documented time in trade before testing, and this nine month program is awarded 4.5 months equivalency. The AWS requires one year of documented time in trade before testing. These classes comprise an alternate first year schedule of our AAS degree in Automotive Service Technology. They focus on one skill set necessary for employment within the automotive service industry.

### PROGRAM OUTCOMES

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

- practice safety precautions to protect the environment, yourself, and the vehicle,
- test and repair basic automotive electrical systems,
- diagnose, repair, and service modern suspension systems,
- diagnose, repair, and service front and rear wheel drive manual drive train and axle systems
- diagnose, repair, and service front and rear wheel drive automatic transmissions

## CAREERS

Manual transmission technician, automatic transmission technician, front-end and alignment technician, drive axle specialist, four wheel drive service technician, apprentice technician, and service writer.

For information contact Jay Leuck, 503-594-3052 or [jayl@clackamas.edu](mailto:jayl@clackamas.edu), or the Automotive Department, 503-594-3047.

### UNDER CAR TECHNICIAN—AUTOMATIC TRANSMISSION CAREER PATHWAY CERTIFICATE

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FALL TERM		CREDITS
AM-121	General Auto Repair I	3
AM-129	Electrical Systems	7
AM-245	Automatic Transmission Systems	7
WINTER TERM		
AM-122	General Auto Repair II	3
AM-131	Chassis Systems	7
WLD-102 or AB-112	Introduction to Welding Collision Repair Welding I	2
SPRING TERM		
AM-228	Service Shop Management	4
AM-235	Power Transmission Systems	7
<i>Credits required for certificate</i>		<i>40</i>

### ASE ALIGNMENT

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AM-245 aligns with ASE A2 Automatic Transmission/ Transaxle  
AM-131 aligns with ASE A4 Suspension and Steering  
AM-235 aligns with ASE A3 Manual Drive Train and Axles  
AM-228 aligns with ASE C1 Automotive Service Consultant

## Under Car Technician—Manual Transmission

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### *Career Pathway Certificate*

PROGRAM CODE: CC.UNDERCARTECMAN

The Under Car Technician—Manual Transmission Program combines the initial courses of the Associate of Applied Science (AAS) Automotive Service Technology degree to provide the student with an opportunity to gain entry level employment. This alternate first-year schedule offers accelerated employment qualification for the student. These courses train the student in the skills necessary to earn certification from Automotive Service Excellence (ASE) in the specified areas of A3, A4, A5, and C1, as described in the ASE Alignment Section. Coursework also qualifies the student to earn American Welding Society (AWS) certification. The National Institute for Automotive Service Excellence requires two years of documented time in trade before testing, and this nine month program is awarded 4.5 months equivalency. The AWS requires one year of documented time in trade before testing. These classes comprise an alternate first-year schedule of our AAS degree in Automotive Service Technology. They focus on one skill set necessary for employment within the Automotive Service industry.

### PROGRAM OUTCOMES

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

- practice safety precautions to protect the environment, yourself, and the vehicle,
- test and repair basic automotive electrical systems,

- diagnose, repair, and service modern automotive brake systems including, anti-lock systems, traction control systems, and stability control systems,
- diagnose, repair, and service modern suspension systems,
- diagnose, repair, and service front and rear wheel drive manual drive train and axle systems;

#### CAREERS

Manual transmission technician, front-end and alignment technician, brake technician, drive axle specialist, four wheel drive service technician, apprentice technician, and service writer.

For information contact Jay Leuck, 503-594-3052 or [jayl@clackamas.edu](mailto:jayl@clackamas.edu), or the Automotive Department, 503-594-3047.

#### UNDER CAR TECHNICIAN–MANUAL TRANSMISSION CAREER PATHWAY CERTIFICATE

FALL TERM		CREDITS
AM-121	General Auto Repair I	3
AM-129	Electrical Systems	7
AM-130	Brake Systems	7
WINTER TERM		
AM-122	General Auto Repair II	3
AM-131	Chassis Systems	7
WLD-102 or AB-112	Introduction to Welding Collision Repair Welding I	2
SPRING TERM		
AM-228	Service Shop Management	4
AM-235	Power Transmission Systems	7
<i>Credits required for certificate</i>		<i>40</i>

#### ASE ALIGNMENT

AM-130 aligns with ASE A5 Brakes  
 AM-131 aligns with ASE A4 Suspension and Steering  
 AM-235 aligns with ASE A3 Manual Drive Train and Axles  
 AM-228 aligns with ASE C1 Automobile Service Consultant

## Under Hood Technician

### *Career Pathway Certificate*

PROGRAM CODE: CC.UNDERHOODTECH

The Under Hood Technician Program combines the initial courses of the Associate of Applied Science (AAS) Automotive Service Technology degree to provide the student with an opportunity to gain entry level employment. This alternate first-year schedule offers accelerated employment qualification for the student. These courses train the student in the skills necessary to earn certification from Automotive Service Excellence (ASE) in the specified areas of A1, A6, A7, A8, C1, and L1, as described in the ASE Alignment Section. Coursework also qualifies the student to earn American Welding Society (AWS) certification. The National Institute for Automotive Service Excellence requires two years of documented time in trade before testing, and this nine month program is awarded 4.5 months equivalency. The AWS requires one year of documented time in trade before testing. These classes comprise an alternate first year schedule of our AAS degree in Automotive Service Technology. They focus on one skill set necessary for employment within the Automotive Service industry.

#### PROGRAM OUTCOMES

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

- practice safety precautions to protect the environment, yourself, and the vehicle,

- test and repair basic automotive electrical systems,
- diagnose, repair, and service modern fuel and emissions systems,
- diagnose and repair automotive electrical accessory systems;
- diagnose, repair, and service modern heating and air conditioning systems,
- diagnose and repair symptom based mechanical engine problems, including, cylinder head, valve train; and engine block problems;

#### CAREERS

Diagnostic tune-up technician, electrical and electronics specialist, air conditioning service technician, apprentice technician, and service writer.

For information contact Jay Leuck, 503-594-3052 or [jayl@clackamas.edu](mailto:jayl@clackamas.edu), or the Automotive Department, 503-594-3047.

#### UNDER HOOD TECHNICIAN CAREER PATHWAY CERTIFICATE

FALL TERM		CREDITS
AM-121	General Auto Repair I	3
AM-129	Electrical Systems	7
WLD-102 or AB-112	Introduction to Welding Collision Repair Welding I	2
WINTER TERM		
AM-122	General Auto Repair II	3
AM-243	Fuel & Emission Control Systems	7
AM-244	Advanced Electrical Systems	7
SPRING TERM		
AM-224	Comfort Systems	4
AM-133	Engine Systems	7
AM-228	Service Shop Management	4
<i>Credits required for certificate</i>		<i>44</i>

#### ASE ALIGNMENT

AM-129 and AM-244 align with ASE A6 Electrical/Electronic	Systems
AM-243 aligns with ASE A8 Engine Performance, and L1 Advanced Engine Performance Specialist	
AM-133 aligns with ASE A1 Engine Repair	
AM-224 aligns with ASE A7 Heating and Air Conditioning	
AM-228 aligns with ASE C1 Automotive Service Consultant	

## Business

### *Associate of Applied Science Degree*

PROGRAM CODE: AAS.BUSINESS

This AAS degree establishes a foundation for a successful management career while enabling students to explore a wide variety of business topics. The program is designed to enhance skills and employability for students who desire a career path in management as well as those who choose the entrepreneurial path. The AAS in Business permits students to complete certificates in Accounting, Business Management, Human Resource Management, Marketing, Project Management or Retail Management and to apply those credits towards completion of the AAS in Business degree. Students may also select courses from a cross section of the aforementioned disciplines.

#### PROGRAM OUTCOMES

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

- demonstrate an understanding of fundamental business concepts through the integration of the functional areas of business into a comprehensive plan,
- interpret and present business-related financial information,