

# AUTOMOTIVE TECHNOLOGY (AAS)

(101 credits)

## Program Description

When you encounter a problem, do you see it as a challenge? Do you want to work with your hands in an industry that's essential to everyday life?

When you study Automotive Technology at SPSCC, you'll receive both formal training and real-world experience diagnosing and repairing automotive problems. Take classes in a modern, industry-standard shop facility that has been certified by the National Institute for Automotive Service Excellence (ASE). We also offer an in-depth curriculum designed to prepare you to reach success in all eight ASE areas.

The Automotive Technology Program curriculum is certified with the National Automotive Technician Education Foundation (NATEF) and is designed to provide entry-level skills in the automotive mechanics field. Students learn to diagnose automotive problems in a practical hands-on shop environment, using state-of-the-art diagnostic and repair equipment. Upon completion of this program students will be qualified for a broad range of employment opportunities.

## Career Opportunities

The automotive industry employs more than 17,800 persons in the state of Washington. There is a shortage of qualified journey-level workers. Studies show many employers are reluctant to hire trainees without on-the-job or live shop experience. Job prospects are best in high population centers. Some mechanics specialize in one aspect of repair work while others become technicians or general mechanics. Car dealers, garages, service stations, industrial plants, and public agencies are potential employers.

- Service Technician or Mechanic
- Maintenance & Repair Worker
- Transportation Vehicle, Equipment & Systems Inspector

## Program Information

### Length of Program

The Automotive Technology Program takes a minimum of two years of full-time studies for the Associate in Applied Science degree. The beginning certificate can be completed in a minimum of three quarters leading to the advanced certificate for an additional three quarters.

### Additional Costs

The required set of first-year professional grade tools will typically cost anywhere between \$2,000 to \$10,000 depending on quality and brand from the vendor. Second-year purchases of professional-grade tools are highly recommended before graduation and can cost between \$3,000 and

\$4,200 depending on quality and brand from the vendor. Books will cost approximately \$300 for the two-year course.

### Special Program Note

Students with previous automotive background or completion of high school automotive training can receive advanced placement credit for AUTO 100 Introduction to Automotive Technology and enroll directly into AUTO 141 Chassis Systems. Students who have had no previous automotive training must enroll in AUTO 100 Introduction to Automotive Technology or have instructor's permission. Students may enroll in AUTO 100 Introduction to Automotive Technology concurrently.

The program is certified by the Automotive Service Excellence (ASE) Education Foundation. For the technician in the field, single classes may be taken for update upon instructor approval. For information during summer quarter please contact the Counseling/Career Center, (360) 596-5261.

### Advanced Placement of Credit

Students with a previous automotive background or completion of high school automotive training can receive advanced placement credit for AUTO 100 and enroll directly into AUTO 141/142/143 depending on the quarter the student is starting. Students with no previous automotive training must enroll in AUTO 100 or have the instructor's permission. Students may enroll in AUTO 100 concurrently.

For the technician in the field, single classes may be taken for update upon instructor approval. For information during summer quarter, please contact the the Advising, Career & Transfer Center at 360-596-5261.

### Accreditation

The Automotive Technology Program curriculum is certified by the National Institute for Automotive Service Excellence (ASE). They are also certified through Boeing's Pre-Employment Training (BPET) program where students are eligible to bypass the interview process when applying for certain manufacturing jobs at Boeing.

### Outcomes

South Puget Sound Community College believes that all students need to develop a broad range of abilities that will not only make them more effective in their professional pursuits but will enhance their capacity to relate well to others in their daily lives.

- Demonstrate expertise needed to be employed as an entry-level automotive technician including proficiency with brakes, steering, suspension, basic oil changes, vehicle inspections, and shop safety procedures.
- Analyze problems and research potential solutions using computer-based tools including vehicle service manuals, diagrams, and safety bulletins.
- Identify and articulate the locations and functions of vehicle parts and systems and utilize diagnostic tools to accurately determine the cause of failures.
- Produce accurate work order summaries that provide detailed information for co-workers as well as customers.
- Demonstrate safe and appropriate use of automotive tools and equipment including the ability to explain local and federal regulations around safety such as OSHA, L I, and EPA requirements for the automotive industry.
- Use quantitative and computational skills to diagnose and repair vehicles including utilizing precision measurement tools; interpreting

information presented in graphs, diagrams, and charts; and applying proper unit conversion methods.

- Monitor and model interpersonal competency skills necessary for a culturally diverse and inclusive workplace with both coworkers and customers by analyzing and adjusting one’s own behavior, recognizing and addressing differences in communication and interaction styles, and demonstrating appropriate and effective communication and conflict management strategies.
- Recognize common ethical dilemmas that may arise in the automotive industry and implement practical strategies to address ethical issues, both personal and organizational.

The SPSCC college-wide abilities are embedded into each program:

- Effective Communication
- Information Literacy
- Analytical Reasoning
- Multicultural Awareness
- Social Responsibility

## Courses by Quarter

All 100 level automotive courses must be completed with a “C” or better in order to enroll in 200 level automotive courses.

Code	Title	Credits
<b>Quarter 1</b>		
Transition Studies		
<b>Quarter 2</b>		
CCS 101	Pathways to Success	3.0
MATH 101	Technical Mathematics I	5.0
AUTO 100	Introduction to Automotive Technology	5.0
<b>Quarter 3</b>		
ENGL 090 or ENGL 095	Integrated Reading and Writing I Integrated Reading and Writing II	5.0
AUTO 141	Chassis Systems	
<b>Quarter 4</b>		
ENGL 098 or ENGL& 101	Transitional English Composition English Composition I	5.0
AUTO 142	Electrical/Electronic Systems	
<b>Quarter 5</b>		
AUTO 143	Engine Repair	
<b>Quarter 6</b>		
AUTO 244	Engine Performance	
Select one of the following:		5
KINS 150	Intro to Adaptive Physical Activity: Diversity	
PSYC 116	Psychology of Human Relations: Diversity	
CMST& 210	Interpersonal Communication: Diversity	
CMST& 240	Intercultural Communication: Diversity	
HUM 121	Multicultural America: Diversity	
<b>Quarter 7</b>		
AUTO 241	Manual Drivetrains	
<b>Quarter 8</b>		
AUTO 242	Automatic Transmissions	
AUTO 243	Heating and Air Conditioning	

\*After completing AUTO 100, students can begin AUTO in fall, winter, or spring – starting with whichever AUTO 141, 142, or 143 course is offered at the time of entry.

\*\*All AUTO courses are only taught in the evenings.

## Pathway Maps

South Puget Sound Community College has provided pathways and associated recommended courses for ease of student selection based upon a student’s career interest. Please review the pathway maps for required and recommended courses.

**Automotive Technology Pathway Map**  
Associate in Applied Science, 101 Credits  
Certificate, 42 credits\*\*\*

Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4	Qtr. 5	Qtr. 6	Qtr. 7	Qtr. 8
Transition Studies	CCS 101 (3cr)** Pathways to Success	AUTO 141 (13cr)** Chassis Systems fall only	AUTO 142 (13cr)** Electrical/Electronic Systems winter only	AUTO 143 (13cr)** Engine Repair spring only	AUTO 244 (15cr) Engine Performance fall only	AUTO 241 (15cr) Manual Drivetrains winter only	AUTO 242 (10cr) Automatic Transmissions spring only
	MATH 101 (5cr) Technical Mathematics I	ENGL 090 (5cr) Integrated Reading and Writing I ENGL 095 (5cr) Integrated Reading and Writing II	ENGL 098 (5cr) Transitional English Composition ENGL& 101 (5cr) English Composition I		Choose One (5cr): (Human Relations / Diversity, recommended) KINS 150 (5cr) Intro to Adaptive Physical Activity: Diversity PSYC 116 (5cr) Psychology of Human Relations: Diversity CMST& 210 (5cr) Interpersonal Communication: Diversity CMST& 240 (5cr) Intercultural Communication: Diversity HUM 121 (5cr) Multicultural America: Diversity		AUTO 243 (5cr) Heating and Air Conditioning spring only
	AUTO 100 (5cr) Introduction to Automotive Technology fall, winter, spring						

NOTE1: After completing AUTO 100, students can begin AUTO in fall, winter, or spring -- starting with whichever AUTO 141, 142, or 143 course is offered at the time of entry.

NOTE2: All AUTO courses are **only** taught in the evenings.

\*\*\* AUTO Cert = 42 credits:

- CCS 101 (3cr), AUTO 141 (13cr), AUTO 142 (13cr), and AUTO 143 (13cr)
- AUTO 100 or instructor permission is a pre-requisite for AUTO 141, 142, and 143.

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