

# Automotive Technology

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**Description:** The Automotive Technology program leads to an Associate in Applied Science (A.A.S.) degree. As the automotive industry has undergone a parts and service revolution, the increased complexity of the modern automobile has created a demand for highly skilled, technologically advanced automotive professionals.

The Automotive Technology program prepares students to work as mechanics, safety inspectors and shop supervisors. The skills courses provide experience with the most modern diagnostic and repair equipment. The general education courses are transferable to some baccalaureate degree programs in engineering and vocational education. This program is certified by the Automotive Service Excellence (ASE) Education Foundation.

## Student Learning Outcomes:

Upon completion of this program graduates will be able to:

- Apply a basic foundation in theory, maintenance, diagnosis and repair of automotive systems.
- Integrate and analyze online service data, written repair material and technical service bulletins to repair and service a vehicle.
- Demonstrate proficiency in the use of specialized automotive service tools, electronic diagnostic equipment and basic hand tools.
- Demonstrate ethical behavior, professionalism and the ability to work as a team.

**Program Entry Requirements:** Students interested in automotive fields may enroll in this curriculum. New students are normally required to take the College's placement test at their time of entry. Students who are identified as needing developmental course work must satisfactorily complete the appropriate English and mathematics courses as part of the [degree program](#).

**Program of Study and Graduation Requirements:** To qualify for the A.A.S. degree in Automotive Technology, a student must complete a minimum of 62 credits as prescribed and attain a grade point average of 2.0 ("C" average).

## Course Sequence:

Semester 1

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">AT 100 - Introduction to Automotive Technology</a>		3 credits	

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">ENGL 101 - English Composition I</a>		3 credits	Writing, Research, Info Lit 1
<a href="#">CIS 103 - Computer Applications &amp; Concepts</a>		3 credits	Tech Comp
<a href="#">AT 121 - Principles of Automotive Electricity and Electronics</a>	<a href="#">AT 100</a> , which may be taken concurrently	3 credits	
<a href="#">SOC 101 - Introduction to Sociology</a> or <a href="#">HIST 101 - United States History: Colonial America through the Revolutionary Era</a> or <a href="#">HIST 102 - United States History: The Civil War and the 19th Century</a> or <a href="#">HIST 103 - United States History: The 20th Century and Beyond</a> or <a href="#">HIST 176/ADC 176 - Philadelphia History: Architecture and Planning</a>		3 credits	Cultural Analysis & Interpretation

Semester 2

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">AT 181 - Auto Engine Mechanical Repair</a>	<a href="#">AT 100</a> , which may be taken concurrently	4 credits	
<a href="#">AT 131 - Automotive Manual Transmissions and Drivelines</a>	<a href="#">AT 100</a> , which may be taken concurrently	4 credits	
<a href="#">FNMT 118 - Intermediate Algebra</a>	FNMT 017 or FNMT 019 completed or FNMT 118 (or higher) placement	3 credits	Quantitative Reasoning
<a href="#">AT 150 - Automotive Braking Systems</a>	<a href="#">AT 100</a> , which may be taken concurrently	2 credits	

Summer

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">AT 221 - Advanced Automotive Electrical Systems</a>	<a href="#">AT 121</a> , <a href="#">FNMT 118</a> or higher MATH, which may be taken concurrently	4 credits	

Semester 3

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">AT 261 - Engine Performance &amp; Diagnosis</a>	<a href="#">AT 221</a> , which may be taken concurrently	4 credits	
<a href="#">AT 271 - Air Conditioning and Heating Systems</a>	<a href="#">AT 221</a>	3 credits	
<a href="#">CHEM 101 - Fundamentals of Chemistry I (Lab Based)</a> or <a href="#">PHYS 105 - Survey of Physics</a> or <a href="#">STS 101 - Introduction to Science, Technology and Society</a> or <a href="#">EASC 111 - Environmental Conservation</a>	For <a href="#">PHYS 105</a> and <a href="#">STS 101</a> : <a href="#">FNMT 017</a> or placement in <a href="#">FNMT 118</a> or higher	3 or 4 credits	Scientific Reasoning
<a href="#">AT 250 - Advanced Braking Systems &amp; Controls</a>	<a href="#">AT 121</a> , <a href="#">AT 150</a>	2 credits	

Semester 4

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">AT 241 - Auto Transmissions and Transaxles</a>	<a href="#">AT 221</a> , <a href="#">AT 131</a>	4 credits	
<a href="#">ENGL 102 - The Research Paper</a>	<a href="#">ENGL 101</a> with a grade of "C" or better	3 credits	Writing, Research, Info Lit 2

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">ENGL 115</a> - Public Speaking or <a href="#">ENGL 117</a> - Group and Team Communication or <a href="#">ENGL 118</a> - Intercultural Communication or ART 111 - Three-Dimensional Design I	<a href="#">ENGL 101</a> , which may be taken concurrently	3 credits	Oral Communication/Creative Expression
<a href="#">AT 111</a> - Automotive Suspension and Steering Systems	<a href="#">AT 100</a> , which may be taken concurrently	4 credits	

### Summer

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">AT 281</a> - Advanced Automotive Engine Performance	<a href="#">AT 221</a> , <a href="#">AT 261</a>	4 credits	

**Minimum Credits Needed to Graduate: 62**

### Courses and Completion Sequence

#### Semester 1

Course Number and Name	Credits	Advisory Notes
<a href="#">AT 100</a> - Introduction to Automotive Technology	3 credits	AT 100 is corequisite/prerequisite for all 100-level AT major courses
<a href="#">ENGL 101</a> - English Composition I	3 credits	
<a href="#">CIS 103</a> - Computer Applications & Concepts	3 credits	
<a href="#">AT 121</a> - Principles of Automotive Electricity and Electronics	3 credits	AT 121 Is a key course for progressing to many other AT classes

Course Number and Name	Credits	Advisory Notes
<a href="#">SOC 101 - Introduction to Sociology</a> or <a href="#">HIST 101 - United States History: Colonial America through the Revolutionary Era</a> or <a href="#">HIST 102 - United States History: The Civil War and the 19th Century</a> or <a href="#">HIST 103 - United States History: The 20th Century and Beyond</a> or <a href="#">HIST 176/ADC 176 - Philadelphia History: Architecture and Planning</a>	3 credits	

#### Semester 2

Course Number and Name	Credits	Advisory Notes
<a href="#">AT 181 - Auto Engine Mechanical Repair</a>	4 credits	AT 181 is prerequisite for AT 261
<a href="#">AT 131 - Automotive Manual Transmissions and Drivelines</a>	4 credits	AT 131 is prerequisite for AT 241
<a href="#">FNMT 118 - Intermediate Algebra</a>	3 credits	FMNT 118 is corequisite/prerequisite for AT 131 and AT 221
<a href="#">AT 150 - Automotive Braking Systems</a>	2 credits	AT 150 is prerequisite for AT 250

#### Summer

Course Number and Name	Credits	Advisory Notes
<a href="#">AT 221 - Advanced Automotive Electrical Systems</a>	4 credits	AT 121 and FNMT 118 are prerequisites. FNMT 118 may be taken concurrently.

Course Number and Name	Credits	Advisory Notes
		AT 221 is prerequisite for AT 241 and AT 261.

You must earn a grade of "C" or better grade in all courses and earn at least a 2.0 GPA

#### Semester 3

Course Number and Name	Credits	Advisory Notes
<a href="#">AT 261 - Engine Performance &amp; Diagnosis</a>	4 credits	AT 221 and FNMT 118 are prerequisites; both may be taken concurrently. AT 261 is prerequisite for AT 281
<a href="#">AT 271 - Air Conditioning and Heating Systems</a>	3 credits	AT 121 is prerequisite
<a href="#">CHEM 101 - General Chemistry I</a> or <a href="#">PHYS 105 - Survey of Physics</a> or <a href="#">STS 101 - Introduction to Science, Technology and Society</a>	3 or 4 credits	
<a href="#">AT 250 - Advanced Braking Systems &amp; Controls</a>	2 credits	AT 121 and AT 150 are prerequisites

#### Semester 4

Course Number and Name	Credits	Advisory Notes
<a href="#">AT 241 - Auto Transmissions and Transaxles</a>	4 credits	AT 121 and AT 131 are prerequisites
<a href="#">ENGL 102 - The Research Paper</a>	3 credits	
<a href="#">ENGL 115 - Public Speaking</a> or <a href="#">ENGL 116 - Interpersonal Communication</a> or <a href="#">ENGL 117 - Group and Team or Communication</a> <a href="#">ENGL 118 - Intercultural Communication</a> or <a href="#">ART 111 Three-Dimensional Design I</a>	3 credits	

Course Number and Name	Credits	Advisory Notes
<a href="#">AT 111 - Automotive Suspension and Steering Systems</a>	4 credits	

Semester 5

Course Number and Name	Credits	Gen Ed Req.
<a href="#">AT 281 - Advanced Automotive Engine Performance</a>	4 credits	AT 221 and AT 261 are prerequisites