



AUTOMOTIVE

What is automotive technology?

As an Auto Technician, you need to think, decide, and act whenever a problem is brought to your attention. In the Auto Technology program, you will learn how to service, troubleshoot, and repair automobiles and light trucks. The automotive program and faculty are ASE (Automotive Service Excellence) certified.

What you will learn

- GAS ENGINES— MANUAL DRIVE TRAIN AND AXLES: The design, operation, diagnosis, and service procedures of automobile and light truck engines.
- ELECTRICAL SYSTEMS AND ENGINE PERFORMANCE: Engine performance, electrical emission control, fuel, and computerized engine control systems.
- AUTOMATIC TRANSMISSION/ TRANSAXLE: The design, operation, service, and overhaul of modern automatic transmissions and transaxles.
- CHASSIS/INDUSTRY PRACTICES: The design, operation, diagnosis, and servicing procedures for suspension steering, alignment, braking, and related systems.

Certifications preparing for

Students are also encouraged to study for and take the ASE certification tests. The college now offers a test preparation course.

Type of college degree

Certificate of Applied Science (9 month)
Associate of Applied Science degree (two-year)

Career information

Automotive Technology graduates may find jobs with retail and wholesale companies, independent repair shops, automotive dealers, service stations, and leasing companies.

Job Outlook and Pay

| | |
|-------------------|-------------------------------------|
| Median Wage (MT)* | \$36,700 yearly \$17.64 per hour |
|-------------------|-------------------------------------|

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|-------------------|-------------------------------------|
| Median Wage (US)* | \$37,100 yearly \$17.84 per hour |
|-------------------|-------------------------------------|

*Bureau of Labor Statistics, Office of Employment Projections; MT Dept. of Labor and Industry, Research and Analysis Bureau (projections through MT 2022 U.S. 2026)

**For more information visit <http://www.careerinfonet.org/Occupations>.

City College entry-level wages of graduates:
\$33,598 (2014-2017)

Automotive Technology

(Associate of Applied Science Degree)

| Required Courses | Credits |
|---|-----------|
| AST 106 Automotive Manual Drive Train and Axles | 2 |
| AST 107 Automotive Manual Drive Train and Axles Lab | 2 |
| AST 114 Automotive Brakes | 2 |
| AST 115 Automotive Brakes Lab | 2 |
| AST 162 Automotive Engine Diagnostics | 3 |
| AST 163 Automotive Engine Diagnostics Lab | 3 |
| AST 175 Engine Rebuild Lab | 5 |
| AST 220 Automotive Steering and Suspension | 2 |
| AST 221 Automotive Steering and Suspension Lab | 2 |
| AST 230 Electrical/Electronics Systems II | 2 |
| AST 231 Electrical/Electronics Systems II Lab | 2 |
| AST 260 Advanced Automotive Diagnostics | 3 |
| AST 261 Advanced Automotive Diagnostics Lab | 3 |
| AST 270 Automatic Transmission and Transaxles | 3 |
| AST 271 Automatic Transmission and Transaxles Lab | 3 |
| AST 285 ASE Exam Prep: Section One | 1 |
| AST 280 Applied Lab Experience and Light Repair | |
| OR AST 298 Automotive Internship | 4 |
| CAPP 120 Introduction to Computers | 3 |
| COMX 106 Communicating in a Dynamic Workplace | 3 |
| M 114 Extended Technical Mathematics | 3 |
| TRID 150 Environmental and Shop Practices | 2 |
| TRID 151 Welding | 2 |
| TRID 152 Vehicle Heating, Ventilation, and Air Conditioning | 3 |
| TRID 170 Engine Theory | 4 |
| TRID 181 Transportation Electrical Systems Lecture | 2 |
| TRID 182 Transportation Electrical Systems Lab | 2 |
| WRIT 122 Introduction to Business Writing | |
| OR WRIT 121 Introduction to Technical Writing | 3 |
| Total minimum credits required for degree | 71 |

Automotive Technology

(Certificate of Applied Science)

| | |
|---|-----------|
| AST 106 Automotive Manual Drive Train and Axles | 2 |
| AST 107 Automotive Manual Drive Train and Axles Lab | 2 |
| AST 114 Automotive Brakes | 2 |
| AST 115 Automotive Brakes Lab | 2 |
| AST 162 Automotive Engine Diagnosis | 3 |
| AST 163 Automotive Engine Diagnosis Lab | 3 |
| AST 175 Engine Rebuild Lab | 5 |
| COMX 106 Communicating in a Dynamic Workplace | 3 |
| M 111 Technical Mathematics | 3 |
| TRID 170 Engine Theory | 4 |
| TRID 181 Transportation Electrical Systems Lecture | 2 |
| TRID 182 Transportation Electrical Systems Lab | 2 |
| WRIT 104 Workplace Communications | 3 |
| Total minimum credits required for certificate | 36 |

Optional courses

| | |
|---|---|
| TRID 150 Environmental and Shop Practices | 2 |
| CAPP 120 Introduction to Computers | 3 |

Students should check the course description for required prerequisites. Math and English requirements are determined by performance on placement tests or transfer credits.

For more information on this City College gainful employment program, such as cost, financial assistance, and placement rates, please go to:

https://www.msubillings.edu/citycollege/programs/gedt2018/auto_tech/47.0604-Gedt.html

Suggested Plan of Study

*Automotive Technology,
Associate of Applied Science
Degree*

| <u>First Semester</u> | <u>Credits</u> |
|------------------------|----------------|
| AST 106 | 2 |
| AST 107 | 2 |
| CAPP 120 | 3 |
| COMX 106 | 3 |
| TRID 170 | 4 |
| TRID 181 | 2 |
| TRID 182 | 2 |
| Total | 18 |
| <u>Second Semester</u> | <u>Credits</u> |
| AST 114 | 2 |
| AST 115 | 2 |
| AST 175 | 5 |
| AST 162 | 3 |
| AST 163 | 3 |
| TRID 150 | 2 |
| Total | 17 |
| <u>Third Semester</u> | <u>Credits</u> |
| AST 285 | 1 |
| AST 220 | 2 |
| AST 221 | 2 |
| AST 230 | 2 |
| AST 231 | 2 |
| M 114 | 3 |
| TRID 152 | 3 |
| WRIT 121 or 122 | 3 |
| Total | 18 |
| <u>Fourth Semester</u> | <u>Credits</u> |
| AST 260 | 3 |
| AST 261 | 3 |
| AST 280 or 298 | 4 |
| AST 270 | 3 |
| AST 271 | 3 |
| TRID 151 | 2 |
| Total | 18 |

Suggested Plan of Study

*Automotive Technology
Certificate of Applied Science*

| <u>First Semester</u> | <u>Credits</u> |
|------------------------|----------------|
| AST 106 | 2 |
| AST 107 | 2 |
| COMX 106 | 3 |
| M 111 | 3 |
| TRID 170 | 4 |
| TRID 181 | 2 |
| TRID 182 | 2 |
| Total | 18 |
| <u>Second Semester</u> | <u>Credits</u> |
| AST 114 | 2 |
| AST 115 | 2 |
| AST 175 | 5 |
| AST 162 | 3 |
| AST 163 | 3 |
| WRIT 104 | 3 |
| Total | 18 |