

Automotive Technology (Automobile Service Technician) Certificate

The Automotive Technology (Automobile Service Technician) Certificate is specifically designed for students learning to become technicians who perform basic diagnostic and repair services in the automotive industry. These technicians perform the repair work being done in repair shops across the nation. Classes required will increase an individual's technical knowledge of comprehensive maintenance, basic diagnostics, and repairs in the critical areas of engine systems, automatic transmission/transaxle, manual drive train and axles, engine performance, suspension and steering, brakes, electrical, and heating and air conditioning. Individuals may enter the workforce or continue another 12 credit hours of studies to complete the Automotive Technology, AAS (<https://catalog.jccc.edu/degreecertificates/automotivetechology/automotive-tech-aas/>) degree.

(Major Code 3060; CIP Code 47.0604)

Automotive Technology Program web page (<http://www.jccc.edu/academics/credit/automotive-technology/>)

Program Learning Outcomes

Johnson County Community College (JCCC) is committed to offering high-quality, affordable programs that focus on developing knowledge and skills conducive to life-long learning. Both the General Education Student Learning Outcomes (<https://www.jccc.edu/about/leadership-governance/administration/institutional-effectiveness-branch/outcomes-assessment/learning-outcomes.html>) and Institutional Learning Outcomes (<https://www.jccc.edu/about/leadership-governance/administration/institutional-effectiveness-branch/outcomes-assessment/institutional-learning-outcomes.html>) convey JCCC's approach to programmatic outcomes. Additionally, students who successfully complete the Automotive Technology program from JCCC will be able to:

- Apply safety procedures and use personal protective equipment in an automotive shop environment.
- Diagnose and repair brake systems, including hydraulic systems, drum brakes, disc brakes, and anti-lock braking systems (ABS).
- Perform wheel alignments and suspension system repairs, including diagnosing and correcting alignment issues and replacing suspension components.
- Diagnose and repair electrical systems, including starting, charging, lighting, and body electrical systems, as well as advanced electrical/electronic systems and driver information systems.
- Perform engine repairs, including inspecting, diagnosing, and replacing engine components, and understanding engine performance principles.
- Diagnose and service manual drivetrains and axles, including clutches, differentials, and four-wheel drive/all-wheel drive systems.
- Diagnose and service automatic transmissions and transaxles, including computer-controlled systems.
- Demonstrate effective workplace communication skills, including verbal and written communication, teamwork, and problem-solving, and prepare for ASE certification.

Certificate Requirements

First Semester

Code	Title	Hours
COMS 155	Workplace Skills	1
AUTO 114	Introduction to Automotive Practices	4
AUTO 129	Brakes I*	3
AUTO 131	Brakes II*	1
AUTO 156	Electrical I*	3
Total Hours		12

Second Semester

Code	Title	Hours
AUTO 150	Steering and Suspension I*	3
AUTO 151	Alignment Practicum*	1
AUTO 155	Automotive Engine Repair*	3
AUTO 161	Engine Performance I*	3



AUTO 162	Electrical II*	3
Total Hours		13

Third Semester

Code	Title	Hours
AUTO 205	Engine Performance II*	3
AUTO 207	Manual Drivetrains and Axles*	3
AUTO 214	Electrical III*	4
ENGL 121	Composition I*	3
or ENGL 119	College Composition I with Review*	
MATH 120	Business Mathematics* (or higher)	3
Note: Students transferring to 4-year programs should take MATH 171 College Algebra.		
Total Hours		16

Fourth Semester

Code	Title	Hours
AUTO 201	ASE Certification Review*	1
AUTO 215	Engine Performance III*	3
AUTO 211	Automotive Heating and Air Conditioning*	3
AUTO 252	Automatic Transmissions*	3
Total Hours		10

Total Program Hours: 51

* This course has registration requirements.