

# Automotive Technology

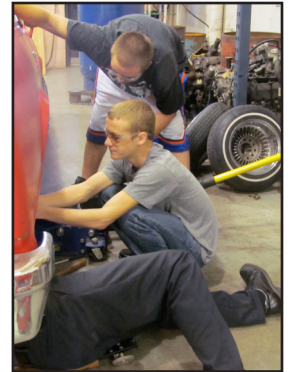
## TRANSPORTATION: Auto Service Technology

### POSSIBLE CAREERS:

DIESEL SERVICE TECHNICIAN  
MECHANIC, SMALL ENGINE  
MECHANIC, HEAVY VEHICLE  
AUTO BODY & GLASS REPAIRER  
AUTOMOTIVE STORE MANAGER  
SERVICE STATION MANAGER  
TRANSIT PLANNER  
SAFETY COMPLIANCE  
FREIGHT MANAGEMENT



Norwell



Norwell



Huntington North



South Adams

**With an emphasis on automotive technology and safety, Area 18 schools offer both classroom and hands-on experiences to students. They also get opportunities in independent problem solving and the use of database research products. Courses prepare students for employment following graduation or continuation in a two-year technical post-secondary school.**

### COURSES:

INTRO TO TRANSPORTATION  
AUTOMOTIVE SERVICE TECH I  
AUTOMOTIVE SERVICE TECH II

CTSO: SKILLS USA  
FORD/AAA TROUBLE SHOOTING  
\* scholarship opportunities

DUAL COLLEGE CREDITS  
IUPUI,  
Vincennes University

TECHNICAL HONORS DIPLOMA



### JOB OUTLOOK

Employment of **Automotive Service Technicians** and **Mechanics** is expected to grow 17 percent from 2010 to 2020, about as fast as the average for all occupations. Job opportunities for qualified jobseekers should be very good.

*Source: Bureau of Labor Statistics*



CTE Cooperative Serving Adams • Blackford • Huntington • Jay • Wells Counties

For more information:  
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**See your school guidance counselor for assistance if your school currently does not offer the classes in which you are interested. There are shared programs among the nine high schools in the Area 18 Career and Technical Education network.**

Indiana College and Career Pathway Plan – State Model									
Cluster: Transportation					Pathway: Automotive Service Technology				
Core 40 with Honors High School Graduation Plan*									
*This is a SAMPLE plan for schools to use in planning. Course sequences and grade level in which courses are offered may vary according to local policies, practices and resources.									
Students should enroll in Indiana Career Explorer, complete interest inventories, and investigate careers in clusters & pathways prior to or during the time they create their individual Pathway Plans.									
SECONDARY	Grade	English/ Language Arts	Math	Science	Health/PE Social Studies	CTE/Career Preparation Courses for this Pathway		Other Elective Courses for this Pathway	
	9	English 9	Algebra I	Integrated Chemistry- Physics	Health & Wellness/ Physical Ed	Preparing for College & Careers;		Digital Citizenship, Personal Financial Responsibility	World Language
	10	English 10	Geometry	Biology	Geography/History of the World or World History/Civilization	Introduction to Transportation	Norwell Bellmont Bluffton Blackford		World Language
	11	English 11	Algebra II	3 <sup>rd</sup> Core 40 Science	US History	**Automotive Services Technology I		South Adams Huntington N.	World Language
	12	English 12	Math or Quantitative Reasoning		Government Economics	**Automotive Services Technology II		South Adams Huntington N.	Fine Arts
State specified Pathway Assessments: Dual credit final exams or NA3SA assessments – Minimum of 4 by the end of Automotive Technology II covering the following modules: Brakes, Electrical and Electronic Systems & Engine Performance and Suspension Steering									
Industry Recognized Certification: NA3SA or Automotive Service Excellence (ASE)									

Postsecondary Courses Aligned for Potential Dual Credit**	
**See individual Course Frameworks for alignment of high school course standards and postsecondary course objectives	
Ivy Tech Community College	Vincennes University
<ul style="list-style-type: none"> <li>AUTC 101 Suspension and Steering</li> <li>AUTC 121 Brakes</li> <li>AUTC 113 Electrical Systems</li> <li>AUTC 109 Engine Performance</li> </ul>	<ul style="list-style-type: none"> <li>AUTO 105 Transportation Fundamentals</li> <li>AUTO 110/L Electrical Systems</li> </ul>

### Introduction to Transportation

An introductory course designed to help students become familiar with fundamental principles in modes of land, sea, air, and space transportation, including basic mechanical skills and processes involved in transportation of people, cargo and goods. Students will gain and apply knowledge and skills in the safe application, design, production, and assessment

of products, services, and systems as it relates to the transportation industries. Content of this course includes the study of how transportation impacts individuals, society, and the environment. This course allows students to reinforce, apply, and transfer their academic knowledge and skills to a variety of interesting and relevant transportation related activities, problems, and settings.

### Auto Services Tech I

A one year course that encompasses the sub topics of the NATEF/ASE identified areas of Steering and Suspension and Braking Systems. This one year course offering may be structured in a series of two topics per year offered in any combination of instructional strategies of semester based or year long instruction. Additional areas of manual transmissions and differentials, automatic transmissions, air

conditioning, engine repair as time permits. Mathematical skills will be reinforced through precision measuring activities and cost estimation/calculation activities. Scientific principles taught and reinforced in this course include the study of viscosity, friction, thermal expansion, and compound solutions. Written and oral skills will also be emphasized to help students communicate with customers, colleagues, and supervisors.

### Auto Services Tech II

A one year course that encompasses the sub topics of the NATEF/ASE identified areas of Electrical Systems and Engine Performance. This one year course offering may be structured in a series of two topics per year offered in any combination of instructional strategies of semester based or yearlong instruction. Additional areas of manual transmissions and differentials, automatic transmissions, air

conditioning, engine repair as time permits. This one year offering must meet the NATEF program certifications for the two primary areas offered in this course. Mathematical skills will be reinforced through precision measuring activities and cost estimation/calculation activities. Scientific principles taught and reinforced in this course include the study of viscosity, friction, thermal expansion, and compound solutions.

### GARY MCMILLAN South Adams



Auto Service Tech I  
Auto Service Tech II

Instead of heading to college as he had originally planned, Gary McMillan was so enthused following a high school auto mechanics class that he headed to Lincoln Technical Institute instead and has never looked back. A strong proponent for students, he employs a self-discovery model when they work in the shop. Students in his classes often compete in regional and national auto troubleshooting contests earning scholarship money for demonstrated technical knowledge.

### KEVIN MORRIS Norwell



Auto Service Tech I

Straight from his automotive and truck repair shop into the classroom is expert Kevin Morris who returned to his alma mater as a teacher to restart the auto service program that had disappeared. With years of practical experiences behind him, Morris is intent on training his students in a way that is sorely needed by local shops and businesses. In his first year at Norwell, Morris hopes to someday expand to include a second year of study and offering additional dual credit for the area.

### DAN NIEBAUER Huntington North



Auto Service Tech I  
Auto Service Tech II

Career teacher Dan Niebauer says students who take his auto services classes are exposed to "real world" work experiences. "I could doctor up a car, but what the students do in this class is try to solve real problems." Faculty members and local residents often bring in their vehicles for the students to look over and repair. Niebauer also feels that being a good auto mechanic is being a good communicator. "You have to ask questions to get the right information."