

Automotive Technology

Recommended High School Courses/Levels

- Reading level 11
- Math Courses
 - Algebra I – First year
 - Geometry – Second year
 - Algebra II – Third year
- Science Courses
 - Chemistry - Second year (*not required*)
 - Physics - Third year

**relates to student's years in program at ICTC and expectations during that year*

**detailed list of math skills noted in academic skills*

Recommendations for Success

- Good mechanical aptitude
- Adapt and become familiar with changing technology and computers
- Manual dexterity
- Physical stamina/able to lift 60 pounds overhead
- Discrimination by size/shape
- Discrimination by touch
- Structural mechanical visualization/reasoning
- Excellent eye-hand coordination
- Able to follow written and oral directions
- Able to retain mechanical and structural detail
- Good attendance/homework completion



**This document is strictly intended to provide an overview of the program and to be used as an informative tool. Essentials skills is a tool to assist districts, parents, and students in the decision making process for program decisions, transition planning, and possible placement here at ICTC.*

**This document is not intended to and should not be used as a screening tool for student placement.*



Indiana County Career and Technology Center	Program Area Automotive Technology
Objective of field	To understand that specialized training in automotive technology is the key to an exciting, high-paying career. Students enrolled in the automotive technology program enjoy the benefits of a fully comprehensive ASE certified program. The course of study, facilities and program equipment have been evaluated by the National Automotive Technicians Education Foundation (NATEF) and meet the National Institute for Automotive Service Excellence (ASE) standards of quality for the training of automobile technicians.
Classroom Tests	*CEP students – 1 per week First Year – 1 per week Second Year – 1-2 per week Third Year – 1-2 per week *Career Exploration Program offered in 9 th grade
Certification Tests	PA Safety Inspection Mechanic PA Skills
Books	2 text including <u>Automotive Excellence</u> <u>Small Engines</u>
Lecture Time	First Year/CEP students – 60 minutes a day and may vary to 2 hours depending on content Second Year – 60 minutes a day and may vary to 2 hours depending on content being covered Third Year – 60 minutes a day and may vary to 2 hours depending on content being covered
Co-op/Clinical	- Instructors recommendation - ICTC requirements
Homework	- Completion of all homework - Preparation for tests done after hours of instruction
Task Lists	CEP students – 15-25 per semester First Year– 15-25 per semester Second Year – 15-25 per semester Third Year – 15-25 per semester
Planned Courses	- Safe Use of Tools and Equipment (First Year) - General Automotive and Engine Maintenance (First Year) - *NATEF Brakes (Second Year) - *NATEF Suspensions and Steering Systems (Second Year) - *NATEF Engine Performance (Third Year) - NATEF Electrical/Electronics Systems (Third Year) - Engine Repair (Third Year) *National Automotive Technicians Education Foundation
Prerequisites	- Hand/eye coordination - Good mechanical aptitude - Manual dexterity - Physical stamina/able to lift 60 pounds - Discrimination by size/shape - Discrimination by touch - Structural mechanical visualization/reasoning
Academic Skills	<u>Reading Level 11</u> <u>*Math Skills</u> - Fractions (add, subtract, multiply, divide) - Decimals - Order of operations - Measurement - Proportions - Decimal/fractions/percent conversions - Volume - Solve equations - Linear measure in Standard and Metric units - Area/volume - Calculate compression ratio - Force pressure - Temperature, work, torque, and percentage (Ethylene)
Soft Skills	Communication/work well in a team
Computer Skills	Basic (Internet, email, and Word)
Physical Requirements	- Lift 60 pounds - No fear of heights

	- Able to distinguish colors
Vocational Testing Essential Aptitudes for lab recommended levels	- Structural mechanical visualization/reasoning - Discrimination by size/shape - Gross/fine motor skills - Discrimination by touch/color - Manual dexterity - Retention of mechanical and structural detail
Job Duties	All aspects of automotive repair and diagnosis
Training	Students enrolled in the automotive technology program enjoy the benefits of a fully comprehensive ASE certified program. The course of study, facilities, and program equipment have been evaluated by the National Automotive Technicians Education Foundation (NATEF) and meet the National Institute for Automotive Service Excellence (ASE) standards of quality for the training of automobile technicians. Qualified Auto Tech students earn the additional benefit of state inspection certification training as they finish their final year in the program.
Uniform Requirements	- School supplied uniforms. <i>Student expense \$60.00 per year</i> - Hard leather shoes or boots - Safety glasses (first pair is free)
Articulation/Agreements (refer to course catalog for more)	Community College of Allegheny County – 5 credits Penn College 3-15 credits and application fee waved Full Year – 3 credits per class
Employment/Job Outlook	<p>Automotive service technicians and mechanics held about 803,000 jobs in 2004. The majority worked for automotive repair and maintenance shops, automobile dealers, and retailers and wholesalers of automotive parts, accessories, and supplies.</p> <p>Job opportunities in this occupation are expected to be very good for Individual who complete automotive training programs in high school, vocational and technical schools, or community colleges as employers report difficulty in finding workers with the right skills. Individuals with good diagnostic and problem-solving abilities, and whose training includes basic electronics and computer courses, should have the best opportunities.</p> <p>Employment of automotive service technicians and mechanics is expected to increase over the next few years into 2014. Over the 2004-14 period, demand for technicians will grow as the number of vehicles in operation increases, reflecting continued growth in the number of multi-car families.</p> <p>Salary 27,000 -38,000 per year depending on location of job. http://www.bls.gov/oco/ocos181.htm</p> <p>Career Opportunities</p> <ul style="list-style-type: none"> - Automotive Engineer* - Front End Mechanic - Automobile Mechanic Helper - Brake Repaired - Automotive Retail Salesperson - Heavy Duty Truck Technician* - Automotive Service Manager/Writer* - Dispatcher* - Transmission Specialist - Automobile Mechanic ~ - Electrician-Maintenance* <p>*Post-secondary education required ~May or may not require post-secondary education</p>
How to find out more?	http://www.ictc.ws/Secondary/at/p_home.htm US Department of Labor www.bls.gov http://www.natef.org/

* National Occupational Competency Testing Institute