Program Information & Skill Alignment Chart for:
Automotive Technology – CIP Code 47.0604
Willow Street Campus
Form to be submitted to IU 13 with PIF

Program Description	To provide the student with the opportunity to acquire the skills necessary to become an entry level tech in the auto repair field
Program Information (costs, certifications, uniform)	Textbooks- • Modern Automotive Technology 9th Edition James Duffy Uniforms- • **$65** approx. • Maroon Shirt can be purchased from our on-line store. • Jackets and hats also available on school website. Must be school approved otherwise. • Blue work pants-not jeans. • Hard toed shoes (no sneakers or open toed footwear). • Student should have 3 sets of uniforms to maintain professional appearance Program Opportunities/Certifications • State Inspection License (No support during testing) • State Emission License (No support during testing) • Air Conditioning certification ASE 609 • Snap on meter certification • OSHA 10 certification
Program Outline & Pathways	**State Program of Study Task Outline** • Orientation • Safety • Tools/Fasteners • Certifications • Suspension and Steering • Brakes • Electrical/Electronic Systems • Engine Performance • Engine Repair • Automatic transmission and Transaxle • Manual Drive Train and Axles • Heating and Air Conditioning **Career Pathways** • Entry level Auto Technician • Parts Person • General Service Technician • Tire Service Technician • Basic systems troubleshooting (Electrical, suspension, alignment, tires) • Pre- delivery inspection Post-Secondary and Continuing Education
Other Information *Include Articulation Agreements*	Student to teacher ratio 25:1 SOAR Articulation SOAR is a Pennsylvania Department of Education (PDE) program which enables high school students who successfully complete a PDE approved career and technical program to earn college credits. The number of credits available varies by school, program and from one school year to another. Please discuss these options with your counselor.

	Local Articulation Agreement with • HACC • Automotive Training Center • Universal Technical Institute • LCCTC Automotive Technology Associates Degree program

Student Name: _____ District: _____

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Educational and Physical Attributes	Program Expectations	Present Education Level and Current Supports
Program Safety / Physical Considerations	• A focus on safety around moving equipment, hand tools and other automotive equipment found in industry • Good hand/eye coordination specifically as it relates to the use of a variety of tools, equipment and measuring devices • Ability to follow directions, work independently • Ability to stand for long periods of time • Ability to focus and work in small tight areas for extended time • Ability to follow flow charts and diagnostic charts in order to solve problems • Good hand and upper body strength • Ability to lift 50 lbs. repeatedly and anywhere from 40-70 lbs. at times	
Action/Need:		
Program Environment *Indoor/outdoor* *Dust/dirt/fume/noise etc* *Layout of room – theory/lab*	• The program has a high amount of dust, dirt, fumes and noise. This can be distracting for some of the student body • Lab area mirrors industry. Tasks are assigned and with instructor support and support staff guidance. Tasks are to be completed to industry standards	
Action/Need:		
Typical Level of Support	At CTC, we have itinerant IU13 support teachers and paraeducators. In the itinerant model, the support teachers have multiple programs and provide check-ins during the	

	day. The itinerant model does not include co-taught classes where teachers are in classes for extended periods of time. IU13 paraeducators also support several teachers, spreading out their day between multiple programs. The learning center is available at scheduled times for testing accommodations, study/instructional groups, and work completion support. Since time there takes away from lab time, students are encouraged to use it strategically.	
Action/Need:		
Reading / ELA levels	• Textbook Modern Automotive Technology 9th Edition: Average reading level 13.54 • Explain main ideas and draw accurate conclusions after reading text • Learn and apply content specific symbols correctly • Apply content specific vocabulary correctly • Read and be able to apply diagnostic and schematic data to solve problems • Comprehend written text, tables and charts to diagnose and repair problems • Summarize information from multiple sources • Follow complex multi-step procedures independently to solve problems	
Action/Need:		
Math Levels <u>Engine Displacement</u> What are the cubic inches of displacement of a single cylinder with a 3.5" bore and a 4.5" stroke; what is the total engine displacement if the engine has 8 cylinders?	• Operations with whole numbers and decimals • Fraction calculations • Fluency in rational numbers, operations, whole numbers, decimals, fractions, • Fraction to decimals, Percentage, • Ratios • Decimal to rational numbers fractions conversions • Algebra 1 problem solving with real world units, including conversions	

To reduce engine blow-by (gases leaking past the piston rings) the gaps on the piston rings should be evenly spaced. On a typical 3-ring piston the gaps would be (a) _____ degrees apart & (b) _____ degrees apart on a 4-ring piston.	- Measurement - Precision measurement 0.0001"inch - Unit measure conversion within and between measuring systems - Apply volume formulas - Algebraic concepts - One -step equation solutions -one variable all non-negative components - Two step equations solutions one variable - Interpret data on various displays and use to make predictions	
Action/Need:		
Theory time	1-2 Hours daily with student breaks as necessary	
Action/Need:		
Homework *Amount per night*	Approx. 3 hours weekly not including test preparation	
Action/Need:		
Lab Time *Guided vs Independent Work*	- Lab Area :2-3 Hours daily depending on topic being instructed - This time is independent work with guidance from the instructor	
Action/Need:		

Tests *NOCTI testing – Yes* *Frequency of tests/quizzes*	• CareerSafe (used to prepare for industrial career) • OSHA Certification • NOCTI Pre- and Post-tests • State inspection testing • State Emission Testing • ASE 609 Air Conditioning certification • Tests and quizzes on textbook material	
Action/Need:		
Behavioral Expectations *Executive Function* *Organizational skills*	• Grade level organizational skills • Ability to work independently • Ability to work as a team member • Ability to work /concentrate in noisy, distractive surroundings • Able to multi task on many different tasks at the same time • Willingness to learn and apply new concepts • Highly motivated to succeed • Enjoys challenges • Exhibit mature behavior traits when unsupervised	
Action/Need:		
Other *Technology skills specific to the program*	• Use basic industry diagnosis tools (scanners laptops factory and aftermarket supported web-based information) • Battery charging /testing tools and equipment • Lab Scope • DVOM test equipment (Digital volt ohm meter) multi meter	
Action/Need:		

District Representative Signature_____ Date _____