Program Information & Skill Alignment Chart for:
Introduction to Manufacturing – CIP Code 48.0508
Brownstown/Mount Joy/Willow Street Campus

Form to be submitted to IU 13 with PIF

Program Description	• Fabricate and build custom metal projects • Operate the same welding and cutting equipment as industry professionals • Learn the basics of electrical and mechanical systems • Operate both manual and CNC machining equipment	
Program Information (costs, certifications, uniform)	Textbooks- (Provided to Students): Uniforms- • **$200-400** approx. Depending on the number of uniforms purchased, brand of pants and brand of boots. • Students need to purchase a minimum of two shirts/pants to comply with the cleanliness standard. • Leather work boots (steel toe is recommended), royal blue CTC uniform shirt, dark blue pants (Dickies, Carhart). Program Opportunities/Certifications • Ladder Safety Certification	
Program Outline & Pathways	State Program of Study Task Outline • Hand & Power Tool Safety • Brand Saw • Drill Press • CNC Machining • Manual Machining • Industrial Electricity • Metal Fabrication • Shielded Metal Arc Welding • Gas Metal Arc Welding • Flux Core Arc Welding • Gas Tungsten Arc Welding • Plasma Cutting • Oxyfuel Cutting	Careers Pathways: • Welder/Fabricator • Sheetmetal Worker • Electrician • Industrial Mechanic • Maintenance Machinist • CNC Operator/Programmer • Tool & Die Maker Post-Secondary and Continuing Education Options: • Welding Technology • Electro-Mechanical Engineering • Metal Fabrication • Precision Machining • CAD/CAM Programming
Other Information *Include Articulation Agreements*	• Student to teacher ratio is 17:1 • Students of this program are held to a standard much like is expected of people employed in these lines of work. Because this class is held in a public building proper behavior is expected and assumed. Any departure from that will be dealt with accordingly. 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.

Student Name: _____ District: _____

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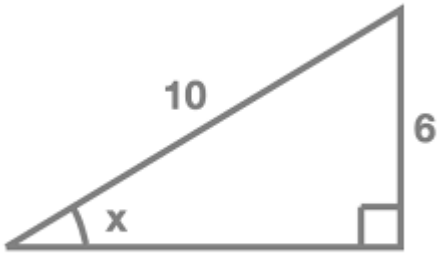
Educational and Physical Attributes	Program Expectations	Present Education Level and Current Supports
Program Safety / Physical Considerations	• Sitting, standing, walking, and repetitive tasks • Climb ladders, work at heights • Ability to lift 50 lbs. • Hand-eye coordination • Ability to work independently • Excellent self-discipline to focus for extended periods • Visual acuity • Depth perception • Fine motor dexterity • Color differentiation	
Action/Need:		
Program Environment Indoor/outdoor Dust/dirt/fume/noise etc. Layout of room – theory/lab	• These industries are typically hot, heavy, dirty, dangerous, and have flashlights. That is why they pay so well. • Noise above 100 dB requires ear protection.	
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: *Examples:*	• Technical Reading Skills • 9th grade reading level	
Action/Need:		
Writing Levels: *Examples*	• Technical Writing Skills • 9th grade writing level	
Action/Need:		
Math Levels: *Examples*	• 9th grade • Conversions • Fractions • Decimals • Algebra • Right angle Trigonometry <u>Examples:</u> The company that you work for produces metal alloys. The alloy you are working on requires a make-up of 20% iron and 80% nickel, by weight. How many grams of iron should be added to 40 grams of nickel?	

	 X=?	
Action/Need:		
Science Levels: *For Medical programs and PSA*	• 9th Grade	
Action/Need:		
Theory time	• 20%	
Action/Need:		
Homework *Amount per night*	• None	

Action/Need:		
Lab Time *Guided vs Independent Work*	• 80% (10% guided, 70% Independent)	
Action/Need:		
Tests *NOCTI testing – Y/N* *Frequency of tests/quizzes*	• No NOCTI or NIMS testing • Weekly Test and/or Quizzes	
Action/Need:		
Behavioral Expectations *Executive Function* *Organizational skills*	• MUST be able to follow school and classroom rules • Demonstrate initiative, responsibility, time management, and critical thinking skills • Good attendance • Good physical health • Neat and clean, well-groomed in appearance • Ability to work independently • Ability to work in small groups • Good problem-solving skills • Self-Control • Follows oral and written directions • Time management skills • Critical Thinking Skills	
Action/Need:		

Other *Technology skills specific to the program.* *Additional skills that are valuable for program success.*	• Basic Computer and Keyboarding skills • Organization of material and time prioritization • Attention to detail • Mechanical ability • Ability to pass a drug test	
Action/Need:		

*District Representative Signature*_____ *Date* _____