Program Information & Skill Alignment Chart for:
Precision Machining – CIP Code 48.0501
Mount Joy Campus

Form to be submitted to IU 13 with PIF

Program Description	• Earn a National Institute of Metalworking Skills (NIMS) certificate and an OSHA 10-hour General Industry Training Certificate • Successfully transition into a first career job and/or related post-secondary training. • Be proficient in their career major and demonstrate proficiency through hands-on performance and theoretical testing	
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 more than 2 shirts/pants to comply with uniform cleanliness standards in the industry. • Leather work boots (safety toe is required, steel toe or composite), gray CTC uniform t-shirts, and dark blue work pants (Dickies, Carhart). • The school will provide all tools require for the completion of this program. The program may require students, who choose to participate in Cooperative Education, to purchase their own tools prior to employment. Program Opportunities/Certifications • NIMS – National Institute for Metal Working Skills • OSHA 10 Certification • Ladder Certification	
Program Outline & Pathways	State Program of Study Task Outline • Orientation/Safety • Performing Layout Work • Part Inspection • Bench Work • Drill Presses • Grinding Machines • Lathes • Milling Machines • Power Saw • Machines and Tools • Metallurgy • Charts and References • Blueprint Reading • CNC Programming/ Operations	Careers Pathways: • CNC Machine Tool Programmer, OJT/AD • Computer Controlled Machine Tool Operator, OJT • Machinist, OJT/AD • Mechanical Engineer, BD/AD • Tool and Die Maker, OJT *OJT- On-the-Job Training Post-Secondary and Continuing Education Options: AD – Associate Degree, BD – Bachelor's Degree
Other Information *Include Articulation Agreements*	• Student to teacher ratio is 25:1	

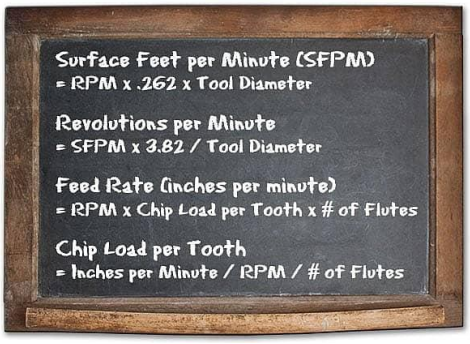
	SOAR Articulation SOAR is a Pennsylvania Department of Education (PDE) program which enables high school students who successfully complete a PDE approved career and technical program to earn college credits. The number of credits available varies by school, program and from one school year to another. Please discuss these options with your counselor. Thaddeus Stevens College of Technology – Credits towards program if all criteria are met by the deadline.

Student Name: _____ District: _____

Skill Alignment Chart for:
Precision Machining – CIP Code: 48.0501

Educational and Physical Attributes	Program Expectations	Present Education Level and Current Supports
Program Safety / Physical Considerations	• A focus on safety around machining equipment, hand tools, power tools and other equipment is needed in the industry • Able to lift 50lbs. • Ability to work independently, read and follow directions • Good eye/hand coordination • **Stamina** to stand for extended periods • Excellent self-discipline to focus for extended periods of time independently • Fine motor dexterity • Color differentiation • Visual acuity • Depth perception	
Action/Need:		
Program Environment Indoor/outdoor Dust/dirt/fume/noise etc. Layout of room – theory/lab	• This industry is typically hot, dirty, dangerous and has flashing lights. This industry does pay well due to the environment and high level of skill required. • Noise levels can be above 100dB and may require ear protection. • Shop layout is not suitable for handicapped or disabled individuals	

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 • 12th grade reading level	
Action/Need:		
Writing Levels: *Examples*	• Technical Writing skills • 12th grade level	

Action/Need:		
Math Levels: *Examples*	• Technical Math skills • 10-12+ grade math • Math conversions • Fractions • Decimals • Algebra • Right angle trigonometry • Geometry Example:  	
Action/Need:		
Science Levels: *For Medical programs and PSA*	• Metallurgy, computer sciences, physics, and chemistry	
Action/Need:		
Theory time	• 20% of classroom time.	

Action/Need:		
Homework *Amount per night*	• 20-30 minutes per night.	
Action/Need:		
Lab Time *Guided vs Independent Work*	• 80% (20% guided, 60% independent.)	
Action/Need:		
Tests *NOCTI testing – Y/N* *Frequency of tests/quizzes*	• NOCTI – NO • NIMS- Yes • Weekly test and or Quizzes	
Action/Need:		
Behavioral Expectations *Executive Function* *Organizational skills*	• Must be self-disciplined • MUST be able to follow classroom rules • Demonstrate initiative, responsibility, time management and critical thinking skills • Good attendance • Good physical health • Neat and clean, well-groomed for this industry • Ability to work in small groups	

	• Good problem-solving skills • Maintain Self-control • Ability to follow oral and written directions • Time management skills • Critical thinking skills • Respectful to all	
Action/Need:		
Other *Technology skills specific to the program.* *Additional skills that are valuable for program success.*	• Basic computer and keyboarding skills • Organization of materials and time prioritization • Attention to detail • Mechanical ability • Ability to pass drug test	
Action/Need:		

*District Representative Signature*_____ *Date* _____