Program Description	• Interact with plumbing industry experts • Perform plumbing system installation in homes and businesses • Interpret and construct plumbing systems in homes and businesses
Program Information (costs, certifications, uniform)	Textbooks- (Provided to Students): • NCCER Plumbing Level 1 • NCCER Core Curriculum • National Standard Plumbing Code Book Uniforms- • **$80** approx. Students need to purchase more than 1 shirt/pant to comply with uniform cleanliness standards. • Orange CTC logo t-shirts and sweatshirts/ Blue dickies style work pants • Leather safety toe work boots • The school will provide all tools required for the completion of each technical program. Some programs may require students, who choose to participate in Cooperative Education, to purchase their own tools prior to employment. Program Opportunities/Certifications • OSHA 10 Hr. • NCCER Plumbing Apprentice 1 Certification • National Trac Pipe Certification • National Certification – Gastite Certified Installer
Program Outline & Pathways	State Program of Study Task Outline • Safety • Blueprints & Sketching of Pipe Systems • Hand and Power Tools • Valves • Copper Pipe Operations • Plastic Pipe & Tubing • Pipe Hangers & Supports • Water Distribution Lines • Steel Pipe Operations • Cast Iron Pipe Operations • Drains, Stacks, & Sewers • Fixtures • Appliances • Vents • Plumbing Systems Maintenance • Tests on Systems • Advanced Pipe Fabrication • Pressure Boilers State Program of Study Task Outline Cont. • Ladders & Scaffolds • Career Readiness • Demonstrate Skill in Working with Cast Iron Pipe • Demonstrate Knowledge of a Builder Leveler • Build Drains and Sewers • Install Fixtures • Install Appliances • Install Vents • Maintain Plumbing Systems • Perform Tests on Piping Systems Careers Pathways: • Commercial Plumbing Installer, OJT • Maintenance & Service Plumber, OJT • Pipe Fitter, OJT • Plumbing Apprentice, OJT • Plumbing Materials Sales, OJT • Residential Plumbing Installer, OJT • Sprinkling System Installer, OJT

	• Hydronic Heating System	* OJT- On-the-Job Training
Other Information *Include Articulation Agreements*	• Student to teacher ratio is 25:1 • 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. • ABC Accredited Apprenticeship 1 year credit for those who qualify. 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: _____

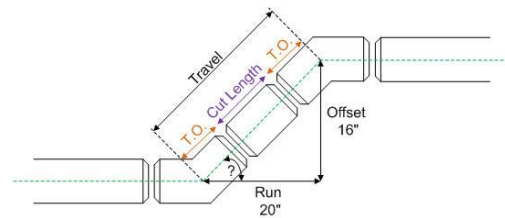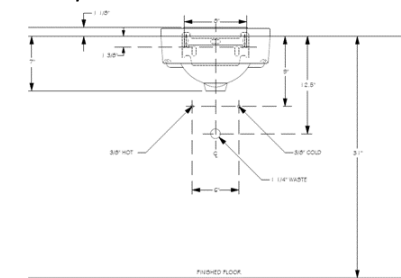*Skill Alignment Chart for:*
Plumbing – CIP Code: 46.0503

Educational and Physical Attributes	Program Expectations	Present Education Level and Current Supports
Program Safety / Physical Considerations	• Ability to lift 50 lbs. overhead • Ability to work independently • Good hand/eye coordination • No fear of heights or working in closed spaces • Physical strength and stamina • Ability to work in all weather conditions	
Action/Need:		
Program Environment Indoor/outdoor Dust/dirt/fume/noise etc. Layout of room – theory/lab	Classroom • Separate Lab/Theory Areas • Lab to simulate industry • House Project (All Weather Conditions) • Noise level high with indoor drilling, sawing, hammering • Individual assignments, both written and hands on	

	• Exposure to solvents (PVS glue and primer) Industry • Work in all weather conditions • Dusty, dirty noisy environments • Heights required from ladders, scaffolding, and lifts (training required before use) • Required to complete tasks individually under time restraints	
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:*	8th-9th Grade Reading Level • Read and comprehend textbooks • Follow multi-step proficiently • Summarize text and instruction to tasks • Independently read and interpret text • Interpret blueprint text and symbols	
Action/Need:		

Writing Levels: *Examples*	• Write a daily work log for completion • Provide clear and coherent writing • Have basic sentence structure skills • Create a resume, cover letter, and reference page • Summarize lessons and readings	
Action/Need:		
Math Levels: *Examples* 	Construction Math • Fluency in Operations with whole numbers and decimals (Grade 6) • Fraction Computations (Grade 6) • Whole number exponents (Grade 6) • Fraction to decimal conversions (Grade 7) • Percent and ratio problems (Grade 7) • Decimal to fraction conversions (Grade 8) • Problem solving with units/conversions (Algebra 1) Measurement • English/Metric units: Accuracy to the nearest 1/16 inch or mm • Reading a ruler/tape measure (to the nearest 1/32) • Unit conversions (Grade 6) Plumbing Specific Math • Trigonometry Concepts for Using Trig Table to Find Parallel Offsets in Piping Example: Offset x Cosecants= Travel Travel- Minus Fitting Allowance= Cut Length	
Action/Need:		
Science Levels: *For Medical programs and PSA*	• Basic	

Action/Need:		
Theory time	<u>Instructional Time</u> • 30 mins. – 1.5 hours daily • 40 tasks per marking period <u>Tests/Homework</u> • In-school assignments • 8 tests per marking period (estimate)	
Action/Need:		
Homework *Amount per night*	<u>Cover 1- Certification Module every week</u> • Book Module Review Questions • Module Trade Terms • Guided Notes/ Study Guide (Class time can be allotted if current in lab)	
Action/Need:		
Lab Time *Guided vs Independent Work*	<u>Up to 4 hours/day (Morning/Afternoon Session)</u> • Apply Class Teachings to Hands-on • Required to Stay Current with Class • Expectation is 1-5 tasks/day depending on tasks	
Action/Need:		
Tests *NOCTI testing – Y/N* *Frequency of tests/quizzes*	• One Certification Test every week • Quizzes/Small Assessments weekly • Vocabulary Knowledge • Formative/Summative Assessments • NOCTI Pre-test/Written Only (Fall) • NOCTI Exam/Written and Hands-On (Spring)	

Action/Need:

Behavioral Expectations *Executive Function* *Organizational skills*	• Ability to Work Independently • Active Listening and Learning • Priority to Attendance • Critical Thinking Skills • Good at Problem Solving • Completion of Tasks with Minimal Supervision • Manage time, progress and deadlines of multiple projects/assignments over both short and long timeframes (days or weeks) to reflect industry expectation	

Action/Need:

Other *Technology skills specific to the program.* *Additional skills that are valuable for program success.*	• Ability to visualize in 3 dimensions • Basic computer skills for online curriculum/tests • Strong attention to detail • Willing to work in all weather conditions • Willing to work in a team setting (Not Required but highly recommended to have driver license to participate in COOP)	

Action/Need:

District Representative Signature_____ Date _____