

Program Information & Skill Alignment Chart for:

**Architectural CAD/Design – CIP Code 15.1303**

**Brownstown Campus**

**Form to be submitted to IU 13 with PIF**

<b>Program Description</b>	<ul style="list-style-type: none"> <li>• Work with experienced home building designers.</li> <li>• Create, design and produce complex working drawings from conception to completion</li> <li>• Use advances state-of-the-art software and hardware identical to professional architects and engineers.</li> </ul>
<b>Program Information (costs, certifications, uniform)</b>	<p><u>Textbooks</u>- (Provided to Students):</p> <ul style="list-style-type: none"> <li>• Beginning AutoCAD 20XX</li> <li>• Architecture - Residential Drafting and Design</li> <li>• Softplan Textbook</li> </ul> <p><u>Uniforms</u>- \$45.00 (approximate) - <b>Students are required to be in uniform daily.</b> (Students will need to purchase multiple pairs of pants/shirts to comply with uniform cleanliness standards)</p> <ul style="list-style-type: none"> <li>• Blue CTC logo T-shirts and Sweatshirts (link to online store can be found on school website)</li> <li>• Khaki colored dress/ work style pants</li> </ul> <p><u>Program Opportunities/Certifications</u></p> <ul style="list-style-type: none"> <li>• International Residential Code 2021</li> <li>• OSHA</li> <li>• Autodesk Certified User (optional, cost of approximately \$100 to be paid by student)</li> </ul>
<b>Program Outline &amp; Pathways</b>	<p><u>State Program of Study Task Outline:</u></p> <ul style="list-style-type: none"> <li>• Orientation &amp; Safety</li> <li>• Career Opportunities</li> <li>• Architectural Styles</li> <li>• Basic Home Design</li> <li>• Designing for Health &amp; Safety</li> <li>• Primary Considerations</li> <li>• The Floor Plans</li> <li>• Sleeping Area</li> <li>• Living Area</li> <li>• Service Area</li> <li>• Plot Plans</li> <li>• Footing, Foundations, and Concrete</li> <li>• Sill and Floor Construction</li> <li>• Wall and Ceiling Construction</li> <li>• Doors and Windows</li> <li>• Stairs</li> <li>• Fireplaces and Chimneys</li> <li>• Building Sections</li> <li>• Roof Designs</li> <li>• Elevations</li> <li>• Residential Electrical</li> <li>• The Electric Plan</li> <li>• Residential Plumbing</li> </ul> <p><u>Careers Pathways:</u></p> <ul style="list-style-type: none"> <li>• Architectural Drafter, AD</li> <li>• Architectural Illustrator, AD</li> <li>• Architectural Illustrator, AD</li> <li>• Architecture &amp; Civic Drafter, AD</li> <li>• CAD Drafter, AD</li> <li>• Entry Level Drafter, AD</li> <li>• Structural Drafter, AD</li> </ul> <p>*AD- Associate Degree</p> <p><u>Post-Secondary and Continuing Education Options:</u></p> <ul style="list-style-type: none"> <li>• Local or State Colleges (ex. Thaddeus Stevens, Penn College of Technology, &amp; HACC)</li> </ul>

	<ul style="list-style-type: none"> <li>• Operating Systems</li> <li>• Basic CAD Commands</li> <li>• Edit &amp; Modify Commands</li> <li>• Manipulate</li> <li>• Softplan</li> <li>• IRC Coursework</li> </ul>	
<b>Other Information</b> <i>Include Articulation Agreements</i>	<ul style="list-style-type: none"> <li>• Student / Teacher Ratio = 25:1</li> <li>• SOAR Articulations</li> </ul> <p><b><u>SOAR Articulation</u></b>  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.</p>	

**Student Name:** \_\_\_\_\_ **District:** \_\_\_\_\_

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Educational and Physical Attributes	Program Expectations	Present Education Level and Current Supports
<b>Program Safety / Physical Considerations</b>	Safety/Physical <ul style="list-style-type: none"> <li>• Ability to work independently</li> <li>• Depth perception</li> <li>• Average fine motor skills</li> <li>• Excellent self-discipline to focus for extended periods</li> <li>• Stamina (ability to focus on the workstation for extended periods)</li> </ul>	
Action/Need:		
<b>Program Environment</b> Indoor/outdoor Dust/dirt/fume/noise etc. Layout of room – theory/lab	<ul style="list-style-type: none"> <li>• Indoor work environment in a professional office setting.</li> <li>• Each student has their own computer work station with provided laptop and monitors.</li> <li>• Large touchscreen in the front of the classroom is utilized for most learning of CAD software and general theory lessons.</li> </ul>	
Action/Need:		
<b>Typical level of support</b>	At CTC, we have itinerant IU13 support teachers and paraeducators. In the itinerant model, the	

	<p>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.</p> <p>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.</p>	
Action/Need:		
<b>Reading / ELA Levels:</b>	<ul style="list-style-type: none"> <li>• <b><u>12<sup>th</sup> Grade Reading Level</u></b></li> <li>• Read and comprehend textbooks independently and proficiently</li> <li>• Follow multi-step procedures</li> <li>• Understand and use industry vocabulary</li> <li>• Explain and perform tasks from text</li> </ul>	
Action/Need:		
<b>Writing Levels:</b>	<ul style="list-style-type: none"> <li>• Ability to generate independent thoughts into writing.</li> <li>• Microsoft word is and acceptable in this program.</li> <li>• Have basic sentence structure skills</li> <li>• Summarize lessons and readings to notebook</li> </ul>	
Action/Need:		
<b>Math Levels:</b>  You are designing a triangular roof for a small pavilion. The roof will be an equilateral triangle. The side length of the triangular roof needs to be calculated to fit within a given space.	<ul style="list-style-type: none"> <li>• Fluency in operations with whole numbers</li> <li>• Fraction computations</li> <li>• Fraction to/ from decimal conversions</li> <li>• Percent and ration problems</li> <li>• Ability to read and understand measurements</li> <li>• Unit conversions</li> <li>• Understand algebraic concepts</li> <li>• Understand geometry concepts</li> </ul>	

<p>Calculate the height of the equilateral triangle if the side length is 12 meters.</p> <p>Determine the area of the triangular roof.</p> <p>If the roof needs to be covered with tiles, and each tile covers an area of 0.5 square meters, how many tiles are required to cover the entire roof?</p>		
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Action/Need:

<p><b>Theory time</b></p>	<ul style="list-style-type: none"> <li>• <b><u>Up to 2 hours per day</u></b></li> <li>• Presentations in front of room on touch screen computer</li> <li>• Demonstrations</li> <li>• Structured notes</li> <li>• Chapter reading</li> <li>• Vocabulary</li> <li>• Formative and Summative Assessments</li> </ul>	
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Action/Need:

<p><b>Homework</b></p> <p><i>Amount per night</i></p>	<ul style="list-style-type: none"> <li>• Minimal homework is required</li> <li>• Review of notes/ vocabulary</li> <li>• Test/ quiz preparation</li> </ul>	
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Action/Need:

<p><b>Lab Time</b></p> <p><i>Guided vs Independent Work</i></p>	<ul style="list-style-type: none"> <li>• <b><u>4-6 hours daily (on student provided computer)</u></b></li> <li>• 1-3 chapters per month</li> <li>• 35 tasks per week</li> </ul>	
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Action/Need:

<b>Tests</b> <i>NOCTI testing – Y/N</i> <i>Frequency of tests/quizzes</i>	<ul style="list-style-type: none"><li>• Quiz, biweekly,</li><li>• Test, weekly</li><li>• Vocabulary list, biweekly</li><li>• NOCTI (pre-test, written, &amp; hands on)</li></ul>	
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Action/Need:

<b>Behavioral Expectations</b> <i>Executive Function</i> <i>Organizational skills</i>	<ul style="list-style-type: none"><li>• Organization</li><li>• Ability to work in small groups</li><li>• Ability to visualize</li><li>• Ability to work independently</li><li>• Time Management</li><li>• Attention to Detail</li><li>• Prioritize Attendance</li><li>• Critical Thinking Skills</li><li>• Self-Advocacy Skills</li><li>• Problem Solving Skills</li><li>• Cooperation and respect for all peers and staff</li><li>• Completion of tasks with minimal supervision</li></ul>	
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Action/Need:

<b>Other</b> <i>Technology skills specific to the program.</i>  <i>Additional skills that are valuable for program success.</i>	<ul style="list-style-type: none"><li>• Computer Aided Drafting Software</li><li>• Ability to navigate school issued computer and Learning Management System</li><li>• Comply with school internet acceptable use policy</li><li>• Ability to attend Virtually if a virtual instructional day is enacted</li></ul>	
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Action/Need:

*District Representative Signature* \_\_\_\_\_ *Date* \_\_\_\_\_