

Masonry

Recommended High School Courses/Levels

- Reading level - 7
- Math Courses
 - Algebra I – First year
 - Geometry – Second year
 - Algebra II – Third year
- Science Courses
 - Biology - Second/ Third year

**relates to student's years in program at ICTC and expectations during that year*

**detailed list of math skills noted in academic skills*

Recommendations for Success

- Basic skills to handle materials accurately, efficiently, and safely
- Read and interpret blueprints & other technical documents
- Physical fitness
- Manual dexterity
- Focus on detail
- Discrimination by touch
- Physical stamina/able to lift 20 pounds
- Good sense of balance/no fear of heights
- Ability to solve arithmetic problems quickly and accurately
- Excellent eye-hand coordination
- Able to follow written and oral directions
- Able to retain mechanical and structural detail
- Good attendance/homework completion



**This document is strictly intended to provide an overview of the program and to be used as an informative tool. Essentials skills is a tool to assist districts, parents, and students in the decision making process for program decisions, transition planning, and possible placement here at ICTC.*

**This document is not intended to and should not be used as a screening tool for student placement.*



Indiana County Career and Technology Center	Program Area Masonry
Objective of field	A bricklayer: takes units of brick, block, or stone, trowel, mortar, skilled hands, an eye for perfection and molds them into that will be around for generations to enjoy.
Classroom Tests	*CEP students – 8 for one semester First Year – 15 for the year Second Year – 15 for the year Third Year – 15 for the year *Career Exploration Program offered in 9 th grade
Certification Tests	NIMS* PA Skills
Books	1 text 3-4 reference - <u>Masonry Skills</u> - <u>Masonry (Brick and Block Construction)</u> - Workbook - <u>Building Trades – Blueprint Reading</u>
Lecture Time	First Year and CEP students – 1.5 hours per week Second year – 1.5 hours per week Third year –1.5 hours per week
Co-op/Clinical	- Instructors recommendation - Transportation - ICTC requirements
Homework	- Chapter reviews - Completion of assignments given
Task Lists	CEP students – 20 per semester First Year– 40 for the year Second Year – 40 for the year Third Year – 40 for the year
Planned Courses	- Development and Manufacture of Masonry Materials (First year) - The Use and Care of Tools and Equipment (First year) - Mortar Mixing, Uses and Strengths (First year) - Essentials of Bonding (First year) - Masonry Practices and Details of Construction (First, second, and third year) - Safety Practice (First, second, and third year) - Laying Brick and Block (First, second, and third year) - Estimation of Materials and Labor (First, second, and third year) - Concrete Finishing, Forming, Strengths and Uses (First, second, and third year) - Cleaning Masonry Work (Second year) - Fundamental Use of the Transit and Level (Second year) - Understanding and Reading Construction Drawing (Third year) - Design and Construction of Fireplace and Flue (Third year)
Prerequisites	- Algebra fundamentals - Hand-eye-foot coordination - Gross motor skills - Fine motor - Ability to work independently - Self-paced
Academic Skills	<u>Reading level 7.3</u> <u>Math skills</u> - Fractions - Decimals, - Measurement - Geometry/volume - Multiply/add/divide/subtract fractions - Percentage problems - Estimation skills - Metric/standard conversations - Decimal/fraction/percent conversions
Soft Skills	- Communication - Patience - Ability to pace work
Computer Skills	Microsoft Words and CADD file manage

Physical Requirements	<ul style="list-style-type: none"> - Lift 15 pounds - Stand for extended periods of time
Vocational Testing Essential Aptitudes for lab recommended levels	<ul style="list-style-type: none"> - Structural mechanical visualization/reasoning - Discrimination by size/shape - Gross/fine motor skills - Discrimination by touch/color - Manual dexterity - Retention of mechanical and structural detail
Job Duties/Training	<p>Masonry may lead students to careers in:</p> <ul style="list-style-type: none"> - Bricklaying or stone- and cement-masonry - Architecture and architectural engineering - Estimator - Job foreman - Self-employed mason
Uniform Requirements	<ul style="list-style-type: none"> - Shop apron - Approved safety shoes - Z87 glasses - Uniform (<i>Student expense \$65.00 per year</i>)
Articulation/Agreements (refer to course catalog for more)	<p>Penn College Full Year – 3 credits per class</p>
Employment/Job Outlook	<p>Brick masons, block masons, and stonemasons held 177,000 jobs in 2004. The vast majority were brick masons. Nearly 1 out of 3 brick masons, block masons, and stonemasons are self-employed. Many of the self-employed are contractors that work on small jobs, such as patios, walkways, and fireplaces. Salary can range from 36,000-45,000 or more. Job opportunities for brick masons, block masons, and stonemasons are expected to be very good through 2014. A large number of masons are expected to retire over the next decade and in some areas there are not enough applicants for the skilled masonry jobs to replace those that are leaving.</p> <p>Median hourly earnings of brick masons and block masons in May 2004 were \$20.07. Median hourly earnings of stonemasons in 2004 were \$16.82. http://www.bls.gov/oco/ocos201.htm</p> <p>Career Opportunities</p> <ul style="list-style-type: none"> - Bricklayer - Tile Setter - Stonemason - Cement Mason - Bricklayer Supervisor* - Business Owner* - Estimator* - Contractor* - Building Inspector* <p><i>*Post-secondary education required</i></p>
How to find out more?	<p>http://www.ictc.ws/Secondary/mason/p_home.htm US Department of Labor http://www.bls.gov/oco/ocos201.htm http://www.khake.com/page24.html</p>

* National Institute for Metal Workers