

Architecture and Construction Career Cluster

The Architecture and Construction career cluster focuses on designing, planning, managing, building, and maintaining the built environment. This career cluster includes occupations ranging from architect, carpenter, and construction manager to electrician, plumber, and heating, air conditioning, and refrigeration technician.

TivyProgram of Study: *Carpentry*

The Carpentry program of study focuses on occupational and educational opportunities related to constructing, installing, and repairing structures and fixtures made of wood (including frameworks, partitions, joists, studding, rafters, and stairways). The program of study includes installing, dismantling, or moving machinery and heavy equipment according to layout plans, blueprints, or other drawings.



Secondary Courses for High School Credit

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| Level 1 | • Principles of Construction |
| Level 2 | • Construction Technology I |
| Level 3 | • Construction Technology II |
| Level 4 | • Career Preparation for Programs of Study |



Example Postsecondary Opportunities

Apprenticeships

- Carpenter

Associate Degrees

- Construction Management
- Construction Engineering Technology
- Building Construction Technology

Bachelor's Degrees

- Construction Engineering
- Construction Science
- Construction Site Management

Master's, Doctoral, and Professional Degrees

- Construction Engineering Technology
- Construction Engineering
- Construction Management
- Project Management



Aligned Advanced Academic Courses

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| Dual Credit | Dual credit offerings will vary by local education agency. |
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Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program of study.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities

- Intern with a carpenter to practice skills such as measuring materials and assembling structures
- Participate in a pre-apprenticeship that includes activities like installing cabinets, drywall, and siding

Expanded Learning Opportunities

- Shadow a construction manager to learn more about how construction teams work together to complete projects
- Participate in SkillsUSA

Aligned Industry-Based Certifications

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| • HBI Pre-Apprenticeship Certificate Training (PACT), Basic Carpentry | • NCCER Construction Technology Certification Level I |
| • HBI Pre-Apprenticeship Certificate Training (PACT), Core | • NCCER Core |
| • HBI Pre-Apprenticeship Certificate Training (PACT), Green Core | • NCCER Painting: Commercial and Residential Level I |
| • NCCER Carpentry Level I | • LEED Green Associate |
| • NCCER Carpentry Level II | |



Example Aligned Occupations

Drywall and Ceiling Tile Installers

Median Wage: \$44,699
Annual Openings: 758
10-Year Growth: 14%

Carpenters

Median Wage: \$46,272
Annual Openings: 5,623
10-Year Growth: 15%

Construction Managers

Median Wage: \$95,072
Annual Openings: 6,325
10-Year Growth: 24%

