

# 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.

## Big Spring High School Program 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



- |                |  |
|----------------|--|
| <b>Level 1</b> | <ul style="list-style-type: none"> <li>Principles of Construction</li> <li>Principles of Architecture</li> </ul>   |
| <b>Level 2</b> | <ul style="list-style-type: none"> <li>Construction Technology I</li> <li>Entrepreneurship I (SY 2024-25)</li> </ul>   |
| <b>Level 3</b> | <ul style="list-style-type: none"> <li>Construction Technology II</li> </ul>   |
| <b>Level 4</b> | <ul style="list-style-type: none"> <li>Practicum in Construction Technology</li> <li>Practicum in Entrepreneurship (SY 2025-26)</li> <li>Career Preparation for Programs of Study</li> </ul> |

### Aligned Advanced Academic Courses

**Dual Credit** Dual credit offerings will vary by local education agency.

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

- NCCER Carpentry Level I
- NCCER Carpentry Level II
- NCCER Commercial Carpenter
- NCCER Core



### 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



### 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%

Data Source: TexasWages, Texas Workforce Commission. Retrieved 3/8/2024.



For more information visit:  
<https://tea.texas.gov/academics/college-career-and-military-prep/career-and-technical-education/programs-of-study-additional-resources>



# Architecture and Construction Career Cluster

## Statewide Program of Study: Carpentry

### Course Information

Level 1

Course	Prerequisites   Corequisites	Career Clusters
<b>Principles of Construction*</b> 13004220 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
<b>Principles of Architecture*</b> 13004210 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	

Level 2

Course	Prerequisites   Corequisites	Career Clusters
<b>Construction Technology I</b> 13005100 (2 credits)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Construction or Principles of Architecture <b>Recommended Corequisites:</b> None	
<b>Entrepreneurship I*</b> 13011101 (1 credit)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Business, Marketing and Finance <b>Recommended Corequisites:</b> None	 

Level 3

Course	Prerequisites   Corequisites	Career Clusters
<b>Construction Technology II</b> 13005200 (2 credits)	<b>Prerequisites:</b> Construction Technology I <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Principles of Construction or Principles of Architecture <b>Recommended Corequisites:</b> None	

\* Indicates course is included in more than one program of study.

For additional information on the **Architecture and Construction** career cluster, contact [cte@tea.texas.gov](mailto:cte@tea.texas.gov) or visit <https://tea.texas.gov/cte>



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# Architecture and Construction Career Cluster

## Statewide Program of Study: Carpentry

### Course Information

Level 4

Course	Prerequisites   Corequisites	Career Clusters
<b>Practicum in Construction Technology*</b> First Time Taken: 13005250 (2 credits) Second Time Taken: 13005260 (2 credits)	<b>Prerequisites:</b> Construction Technology II; Building Maintenance Technology II; Electrical Technology II; Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology II; Plumbing Technology I; or Mill and Cabinetmaking Technology <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	
<b>Practicum in Entrepreneurship*</b> First Time Taken: 13011111 (2 credits)	<b>Prerequisites:</b> None <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> Entrepreneurship I and Entrepreneurship II or successful completion of at least two courses in a CTE program of study <b>Recommended Corequisites:</b> None	
<b>Career Preparation for Programs of Study*</b> First Time Taken: 12701121 (2 credits)	<b>Prerequisites:</b> At least one Level 2 or higher Career and Technical Education course <b>Corequisites:</b> None <b>Recommended Prerequisites:</b> None <b>Recommended Corequisites:</b> None	

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