



# 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 architects, carpenters, and construction managers to electricians, plumbers, and heating, air conditioning, and refrigeration technicians.

## Statewide Program of Study: HVAC and Sheet Metal

The HVAC and Sheet Metal program of study focuses on occupational and educational opportunities associated with installing, servicing, or repairing heating and air conditioning systems. The program of study addresses fabrication, assembly, installation, and repair of sheet metal products and equipment, such as ducts, control boxes, drainpipes, and furnace casings.

### Secondary Courses for High School Credit



<b>Level 1</b>	<ul style="list-style-type: none"> <li>Principles of Architecture</li> <li>Principles of Construction</li> </ul>
<b>Level 2</b>	<ul style="list-style-type: none"> <li>Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology I</li> <li>Building Maintenance Technology I</li> <li>Entrepreneurship I</li> </ul>
<b>Level 3</b>	<ul style="list-style-type: none"> <li>Sheet Metal Technology</li> <li>Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology II</li> </ul>
<b>Level 4</b>	<ul style="list-style-type: none"> <li>Practicum in Construction Technology</li> <li>Practicum in Construction Technology + Extended Practicum in Construction Technology</li> <li>Practicum in Entrepreneurship</li> <li>Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship</li> <li>Career Preparation for Programs of Study</li> <li>Career Preparation for Programs of Study + Extended Career Preparation</li> </ul>

### Work-Based Learning and Expanded Learning Opportunities

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>Participate in a pre-apprenticeship in HVAC and refrigeration</li> <li>Intern with an HVAC company to practice installing and repairing heating and cooling systems</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>Job shadow an HVAC technician or cost estimator</li> <li>Participate in SkillsUSA</li> </ul>

### Aligned Industry-Based Certifications

- Construction Technology Certification Level I
- Core
- Employment Ready Certification - Air Conditioning
- Employment Ready Certification - Electrical
- Employment Ready Certification - Gas Heat
- Employment Ready Certification - Heat Pumps
- Employment Ready Certification - Light Commercial Air Conditioning
- HBI Pre-Apprenticeship Certificate Training (PACT), Core
- HBI Pre-Apprenticeship Certificate Training (PACT), Heating, Ventilation and Air Conditioning
- HVAC Support Technician Certificate
- HVACR Level I
- Sheet Metal Level I



### Example Postsecondary Opportunities

#### Apprenticeships

- Heating and Air Conditioning Installer

#### Associate Degrees

- Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology
- Construction Site Management
- Property Maintenance
- Sheet Metal Technology/Sheetworking

#### Bachelor's Degrees

- Construction Engineering
- Construction Management
- Building/Construction Site Management
- Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology

#### Master's, Doctoral, and Professional Degrees

- Construction Engineering
- Construction Management



### Example Aligned Occupations

#### Helpers—Installation, Maintenance, and Repair Workers

Median Wage: \$34,574  
Annual Openings: 2,061  
10-Year Growth: 22%

#### Heating, Air Conditioning, and Refrigeration Mechanics and Installers

Median Wage: \$50,195  
Annual Openings: 3,519  
10-Year Growth: 21%

#### Construction Managers

Median Wage: \$98,294  
Annual Openings: 5,403  
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/ac-hvac-extended.pdf>