

Architecture and Construction Career Cluster

The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

HVAC and Sheet Metal Statewide Program of Study



The HVAC and Sheet Metal program of study explores the occupations and educational opportunities associated with installing, serving, or repairing heating and air conditioning systems and also the fabrication, assembly, installation, and repair of sheet metal products and equipment, such as ducts, control boxes, drainpipes, and furnace casings. This program of study may also include exploration into preparing cost estimates for certain construction projects involving heating and air conditioning and sheet metal.

Secondary Courses for High School Credit

Level 1

- Principles of Construction

Level 2

- Heating, Ventilation Air Conditioning (HVAC) and Refrigeration Technology I

Level 3

- Heating, Ventilation Air Conditioning (HVAC) and Refrigeration Technology II
- Sheet Metal

Level 4

- Practicum in Construction Technology
- Practicum in Entrepreneurship
- Career Preparation I

Postsecondary Opportunities

Associates Degrees

- Business Administration and Management, General
- Mechanical Engineering
- Heating, Ventilation, Air Conditioning and Refrigeration Engineering Technology/ Technician
- Business/ Commerce, General

Bachelor's Degrees

- Business Administration and Management
- Mechanical Engineering
- Construction Engineering Technology/ Technician
- Business/ Commerce, General

Master's, Doctoral, and Professional Degrees

- Business Administration and Management
- Mechanical Engineering
- Construction Engineering
- Business/Commerce, General

Work-Based Learning and Expanded Learning Opportunities

Exploration Activities

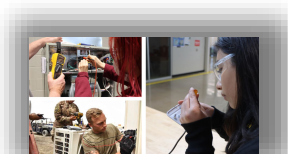
- Shadow an HVAC worker or cost estimator
- Participate in SkillsUSA

Work-Based Learning Activities

- Intern with an HVAC and/or sheet metal company

Industry-Based Certifications

- 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
 - Heating, Electrical, & Air Conditioning Technology (H.E.A.T)
 - HBI Pre-Apprenticeship Certificate Training (PACT), Core
 - HBI Pre-Apprenticeship Certificate Training (PACT), Heating, Ventilation and Air Conditioning
 - CCER Construction Technology Certification Level I
 - NCCER Core
 - NCCER Heating, Ventilation, Air Conditioning Level I
 - NCCER Sheet Metal Level I
 - Refrigerant Handling (EPA 608)
 - OSHA 30 Hour Construction*
 - OSHA 30 Hour General*
- *IBC sunseting 8/31/24



Aligned Occupations

| Occupations | Median Wage | Annual Openings | % Growth |
|--|-------------|-----------------|----------|
| Heating, Air Conditioning, and Refrigeration Mechanics | \$41,808 | 3,356 | 26% |
| Sheet Metal Workers | \$37,419 | 1,479 | 17% |
| Cost Estimators | \$63,939 | 2,239 | 21% |

HVAC and Sheet Metal Course Information

Level 1

| COURSE NAME | SERVICE ID | PREREQUISITES | COREQUISITES |
|----------------------------|---------------------|---------------|--------------|
| Principles of Construction | 13004220 (1 credit) | None | None |

Level 2

| COURSE NAME | SERVICE ID | PREREQUISITES | COREQUISITES |
|--|---------------------|---------------|--------------|
| Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology I | 13005800 (1 credit) | None | None |

Level 3

| COURSE NAME | SERVICE ID | PREREQUISITES | COREQUISITES |
|---|----------------------|--|--------------|
| Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology II | 13005900 (2 credits) | Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology I | None |
| Sheet Metal | N1300430 (1 credit) | None | None |

Level 4

| COURSE NAME | SERVICE ID | PREREQUISITES | COREQUISITES |
|--------------------------------------|--|---|--------------|
| Practicum in Construction Technology | 13005250 (2 credits) 13005255 (3 credits) 13005260 (2 credits) 13005265 (3 credits) | Construction Technology II; Building Maintenance Technology II; Electrical Technology II; Heating, Ventilation Air Conditioning (HVAC) and Refrigeration Technology II; Plumbing Technology I; or Mill and Cabinetmaking Technology | None |
| Practicum in Entrepreneurship | N1303425 (2 credits) | None | None |
| Career Preparation I | 12701300 (2 credits) 12701305 (3 credits) | None | None |

FOR ADDITIONAL INFORMATION ON THE ARCHITECTURE AND CONSTRUCTION CAREER CLUSTER, PLEASE CONTACT: CTE@tea.texas.gov
<https://tea.texas.gov/cte>

[LEA name] does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: [title, address, telephone number, email.]

Further nondiscrimination information can be found at [Notification of Nondiscrimination in Career and Technical Education Programs](#).