KELLER ISD CTE
INNOVATE • COLLABORATE • EDUCATE

# 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, ventilation, and refrigeration technician.

## *Program of Study: HVAC (Heating, Ventilation, Air Conditioning, and Refrigeration)*

The HVAC 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

| | |
|---|---|
| **9th Grade** | • Principles of Construction |
| **10th Grade** | • HVAC 1<br>• Electrical Technology 1 |
| **11th Grade** | • HVAC 2 |
| **12th Grade** | • Practicum in Construction Technology |
| **Optional Electives** | • Entrepreneurship<br>• Career Prep 1 |

### Internship and Practicum Opportunities

Students have the opportunity to gain hands-on experience at Keller's Center for Advanced Learning (KCAL).

### Career and Technical Student Organization (CTSO)

**TSA** — Technology Student Association

**SkillsUSA** — Workforce Development Organization

**FCCLA** — Family Career & Community Leaders of America

*Career & Technical Student Organizations (CTSOs) are student-led organizations that build leadership, career skills, and real-world experience through competitions, networking, and hands-on learning.*

## Aligned Industry-Based Certifications

- NCCER Core (Construction)
- NCCER Electrical Level 1
- NCCER HVACR
- EPA 608 (HVACR)

NCCER | National Center for Construction Education and Research

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

TEA Texas Education Agency

*Successful completion of the HVAC (Heating, Ventilation and Air Conditioning) program of study will fulfill requirements of the **Business and Industry endorsement**.*



## Example Postsecondary Opportunities

**Apprenticeships**
- Heating and 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

***HVAC Apprentice -EPA 608 Certified***
Median Wage: $43,000
Annual Openings: 2,366
10-Year Growth: 22%

***Heating, Air Conditioning, and Refrigeration Mechanics and Installers - Entry Level***
Median Wage: $52,000
Annual Openings: 3,719
10-Year Growth: 21%

***Senior/Commercial HVAC Tech***
Median Wage: $100,000
Annual Openings: 6,325
10-Year Growth: 24%

*For more information, visit the KISD Course Guide*
*https://tinyurl.com/464uxm25*

HVAC