

# 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.

## Statewide Program of Study: *Electrical*

The Electrical program of study focuses on occupational and educational opportunities associated with installing, maintaining, and repairing electrical wiring, equipment, and fixtures. The program of study also addresses installing and repairing telecommunications cable including fiber optics.



### Secondary Courses for High School Credit

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|---------|---|
| Level 1 | <ul style="list-style-type: none"> <li>Principles of Architecture</li> <li>Principles of Construction</li> </ul>  |
| Level 2 | <ul style="list-style-type: none"> <li>Electrical Technology I</li> <li>Entrepreneurship I</li> </ul>   |
| Level 3 | <ul style="list-style-type: none"> <li>Electrical Technology II</li> </ul>  |
| Level 4 | <ul style="list-style-type: none"> <li>Practicum in Entrepreneurship</li> <li>Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship</li> <li>Practicum in Construction Technology</li> <li>Practicum in Construction Technology + Extended Practicum in Construction Technology</li> <li>Career Preparation for Programs of Study</li> <li>Career Preparation for Programs of Study + Extended Career Preparation</li> </ul> |

### Aligned Advanced Academic Courses

<b>Dual Credit</b>	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

<b>Work-Based Learning Activities</b>	<ul style="list-style-type: none"> <li>Participate in an internship with an electrical company to develop installation skills</li> <li>Join a pre-apprenticeship program that involves determining if electrical wiring is up to code</li> <li>Interview an electrician about their training and education</li> </ul>
<b>Expanded Learning Opportunities</b>	<ul style="list-style-type: none"> <li>Participate in SkillsUSA</li> <li>Participate in trade competitions</li> </ul>

### Aligned Industry-Based Certifications

- C-200 Certified Industry 4.0 Automation Systems Specialist I—201 Electrical Systems 1
- Electrical Apprenticeship Certificate Level 1
- HBI Pre-Apprenticeship Certificate Training (PACT), Basic Electrical
- HBI Pre-Apprenticeship Certificate Training (PACT), Core
- NCCER Commercial Electrician
- NCCER Construction Technology Certification Level I
- NCCER Core
- NCCER Electrical Level I
- NCCER Electrical Level II
- NCCER Electronic System Technician Level I
- NCCER Electronic System Technician Level II
- TRIO Electrical Pre-Apprenticeship (EPP) Certification
- Industrial Technology Maintenance (ITM) — Electrical Systems



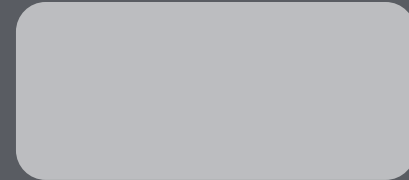
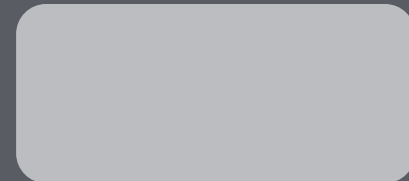
### Example Postsecondary Opportunities

- Apprenticeships**
  - Electrician
- Associate Degrees**
  - Electrical and Power Transmission Installation
  - Electrical Power and Controls
  - Electromechanical Technology
- Bachelor's Degrees**
  - Construction Engineering
  - Electrical, Electronic, and Communications
  - Engineering Electrical Engineering
- Master's, Doctoral, and Professional Degrees**
  - Construction Engineering
  - Construction Management
- Additional Stackable IBCs/License**
  - Journeyman Electrician
  - Master Electrician

### Example Aligned Occupations

#### Electricians Helpers

Median Wage: \$38,140



Electrical

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

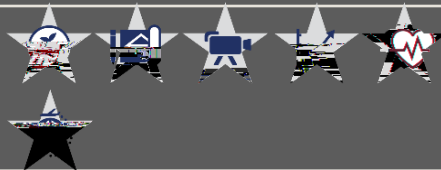
## Statewide Program of Study: *Electrical*

### Course Information

Level 1

Course	Prerequisites   Corequisites	Career Clusters
Principles of Architecture* 13004210 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	1. Architecture and Construction 2. Engineering
Principles of Construction* 13004220 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	1. Architecture and Construction

Level 2



Course	Prerequisites   Corequisites	Career Clusters
Electrical Technology I 13005600 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Principles of Architecture or Principles of Construction Recommended Corequisites: None	1. Architecture and Construction 3. Manufacturing
Entrepreneurship I* 13011101 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Principles of Business, Marketing and Finance Recommended Corequisites: None	

# Architecture and Construction Career Cluster

## Statewide Program of Study: *Electrical*

### Course Information

Level 4

Course	Prerequisites   Corequisites	Career Clusters
<p>Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship*</p> <p>First Time Taken: 13011121 (3 credits)</p>	<p>Prerequisites: None</p> <p>Corequisites: None</p> <p>Recommended Prerequisites: Entrepreneurship I and Entrepreneurship II or successful completion of at least two courses in a CTE program of study</p> <p>Recommended Corequisites: None</p>	
<p>Practicum in Construction Technology*</p> <p>First Time Taken: 13005250 (2 credits)</p> <p>Second Time Taken: 13005260 (2 credits)</p>	<p>Prerequisites: 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</p> <p>Corequisites: None</p> <p>Recommended Prerequisites: None</p> <p>Recommended Corequisites: None</p>	<p>▲</p> <p>1. Architecture and Construction</p>
<p>Practicum in Construction Technology + Extended Practicum in Construction Technology*</p> <p>First Time Taken: 13005255 (3 credits)</p> <p>Second Time Taken: 13005265 (3 credits)</p>	<p>Prerequisites: Construction Technology II; Building Maintenance Technology II; Electrical Technology II; Heating, Ventilation, and Air Conditioning (HVAC) and Refrigeration Technology II; Plumbing Technology; or Mill and Cabinetmaking Technology</p> <p>Corequisites: None</p> <p>Recommended Prerequisites: None</p> <p>Recommended Corequisites: None</p>	<p>▲</p> <p>1. Architecture and Construction</p>
<p>Career Preparation for Programs of Study*</p> <p>First Time Taken: 12701121 (2 credits)</p>	<p>Prerequisites: At least one Level 2 or higher CTE course</p> <p>Corequisites: None</p> <p>Recommended Prerequisites: None</p> <p>Recommended Corequisites: None</p>	 <ul style="list-style-type: none"> <li>1. Agriculture, Food and Natural Resources</li> <li>2. Architecture and Construction</li> <li>3. Arts, Audio Visual Technology and Communication</li> <li>4. Business, Marketing, and Finance</li> <li>5. Education and Training</li> <li>6. Energy</li> <li>7. Health Science</li> <li>8. Hospitality and Tourism</li> <li>9. Human Services</li> <li>10. Information Technology</li> <li>11. Law and Public Service</li> <li>12. Manufacturing</li> <li>13. Transportation, Distribution and Logistics</li> </ul>