



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

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

Aligned Advanced Academic Courses

Dual Credit	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

Work-Based Learning Activities

- Participate in an internship with an electrical company to develop installation skills
- Join a pre-apprenticeship program that involves determining if electrical wiring is up to code
- Interview an electrician about their training and education

Expanded Learning Opportunities

- Participate in SkillsUSA
- Participate in trade competitions

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
Annual Openings: 1,632
10-Year Growth: 20%

Electricians

Median Wage: \$54,769
Annual Openings: 9,221
10-Year Growth: 27%

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>




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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	 
Principles of Construction* 13004220 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	











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	  
Entrepreneurship I* 13011101 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisites: Principles of Business, Marketing and Finance Recommended Corequisites: None	         

Level 3

Course	Prerequisites Corequisites	Career Clusters
Electrical Technology II 13005700 (2 credits)	Prerequisites: Electrical Technology I Corequisites: None Recommended Prerequisites: Principles of Architecture or Principles of Construction Recommended Corequisites: None	 

Level 4

Course	Prerequisites Corequisites	Career Clusters
Practicum in Entrepreneurship* First Time Taken: 13011111 (2 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: Entrepreneurship I and Entrepreneurship II or successful completion of at least two courses in a CTE program of study Recommended Corequisites: None	         

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* 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 or visit <https://tea.texas.gov/cte>



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Statewide Program of Study: *Electrical*

Course Information

Level 4

Course	Prerequisites Corequisites	Career Clusters
Practicum in Entrepreneurship + Extended Practicum in Entrepreneurship* First Time Taken: 13011121 (3 credits)	Prerequisites: None Corequisites: None Recommended Prerequisites: Entrepreneurship I and Entrepreneurship II or successful completion of at least two courses in a CTE program of study Recommended Corequisites: None	
Practicum in Construction Technology* First Time Taken: 13005250 (2 credits) Second Time Taken: 13005260 (2 credits)	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 Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Practicum in Construction Technology + Extended Practicum in Construction Technology* First Time Taken: 13005255 (3 credits) Second Time Taken: 13005265 (3 credits)	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 Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Career Preparation for Programs of Study* First Time Taken: 12701121 (2 credits)	Prerequisites: At least one Level 2 or higher CTE course Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	
Career Preparation for Programs of Study + Extended Career Preparation* First Time Taken: 12701141 (3 credits)	Prerequisites: At least one Level 2 or higher CTE course Corequisites: None Recommended Prerequisites: None Recommended Corequisites: None	

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