



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

- Principles of Construction
- Electrical Technology I
- Electrical Technology II
- Practicum in Construction Technology

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
- Commercial Electrician
- Construction Technology Certification Level I
- Core
- Electrical Apprenticeship Certificate Level I
- Electrical Level I
- Electrical Level II
- Electronic System Technician Level I
- Electronic System Technician Level II
- Fundamentals of Industrial Wiring
- HBI Pre-Apprenticeship Certificate Training (PACT), Basic Electrical
- HBI Pre-Apprenticeship Certificate Training (PACT), Core
- Industrial Technology Maintenance (ITM) – Electrical Systems
- Interim Credential
- Residential Appliance Installer
- Residential Wireman
- TRIO Electrical Pre-Apprenticeship (EPP) Certification



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: \$42,692
Annual Openings: 1,299
10-Year Growth: 20%

Electricians

Median Wage: \$55,891
Annual Openings: 7,798
10-Year Growth: 27%

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-electrical-extended.pdf>



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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 in this career cluster.

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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