

# 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.

## Electrical Statewide Program of Study



The Electrical program of study explores the occupations and educational opportunities associated with installing, maintaining, and repairing electrical wiring, equipment, and fixtures. This program of study may also include exploration into installing and repairing telecommunications cable including fiber optics.

### Secondary Courses for High School Credit

#### Level 1

- Principles of Construction

#### Level 2

- Electrical Technology I

#### Level 3

- Electrical Technology II

#### Level 4

- Career Preparation I

### Postsecondary Opportunities

#### Associates Degrees

- Electrician
- Communications Systems Installation and Repair Technology

#### Bachelor's Degrees

- Construction Science

#### Master's, Doctoral, and Professional Degrees

- Construction Management

### Work-Based Learning and Expanded Learning Opportunities

#### Exploration Activities

- Participate in SkillsUSA

#### Work-Based Learning Activities

- Intern or shadow an electrician

### Industry-Based Certifications

- NCCER Core
- NCCER Electrical Level I
- NCCER Electrical Level II

### Aligned Occupations

Occupations	Median Wage	Annual Openings	% Growth
Electrical Linemen	\$54,184	1,314	28%
Electricians	\$44,013	8,460	21%
Electrical and Electronics Installers	\$37,544	245	19%
Security and Fire Alarm Installers	\$43,638	1,112	22%
Telecommunication Line Installers and Repairers	\$49,150	1,228	10%

Successful completion of the Electrical program of study will fulfill requirements of the Business and Industry endorsement and STEM endorsement if the math and science requirements are met. Revised – August 2022

# COURSE INFORMATION

COURSE NAME	COURSE NUMBER AND CREDITS	PREREQUISITES (PREQ) COREQUISITES (CREQ)	GRADE
Principles of Construction	8410 (1 credit)	None	9-10
Electrical Technology I	8416 (1 credit)	Principles of Construction	10-11
Electrical Technology II	8417 (2 credits)	Electrical Technology I	11-12
Career Preparation I	8606 (3 credits)	For POS or Endorsement: Electrical Technology II	12

## COURSE DESCRIPTIONS

### Principles of Construction:

This course helps build foundation skills in construction. Jobsite safety, construction math, hand tools and power tools training coupled with communication and employability skills provide an excellent opportunity and insight into the career paths of the construction industry.

### Electrical Technology I:

This is a two-hour class where students start learning and developing skills in basic electrical theory and installation methods. The class begins with an orientation into the Electrical Trade and Electrical Safety. National Electrical Codes, Ohm's law, conduit bending, wire pulling, and electrical testing equipment are all topics discussed in the classroom and practiced in the lab.

### Electrical Technology II:

This is a two-hour class for students to continue their electrical technology education. Classroom instruction coupled with hands-on training in the lab involves electric motors, light fixtures, circuit breakers and panel boards. An added bonus is that qualified students are sent around campus to perform various work-orders. These students develop a plan, order materials, select the necessary tools, and do the electrical work while practicing safety and report back to the instructor on the status of the project. Real work using real tools and real electricity!

### Career Prep I:

Career Preparation I provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with business and industry employment experiences.

**Courses in yellow are advanced courses for endorsement purposes.**



San Felipe Del Rio CISD 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: Coordinator of Title IX, 315 Griner St., Del Rio, TX 78840, 830-778-4073, sandra.hernandez@sfd-r-cisd.org