



Architecture and Construction

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.



Program of Study: Electrical (Dual Credit Program)

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.

Courses

9 th Grade	Principles of Architecture
10 th Grade	Entrepreneurship I
11 th Grade	Electrical Technology I @ San Jacinto College
12 th Grade	Electrical Technology II @ San Jacinto College

Students must maintain a 2.5 GPA or higher to qualify for dual credit.

Work-Based Learning/Expanded Learning Opportunities

Work-Based Learning Activities	<ul style="list-style-type: none"> Earn industry certification Intern or shadow an electrician
Expanded Learning Opportunities	<ul style="list-style-type: none"> SkillsUSA Earn dual credit hours



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%

Successful completion of this program of study will fulfill requirements of the Business and Industry Endorsement.
Approved Statewide Program of Study. C. E. King High School – 2026-27



Electrical Course Information

Level 1

Principles of Architecture

13004210

Grade: 9-10

Credit: 1

Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management. Achieving proficiency in decision making and problem solving is an essential skill for career planning and lifelong learning. Students use self-knowledge, education, and career information to set and achieve realistic career and educational goals. Job-specific training can be provided through training modules that identify career goals in trade and industry areas. Classroom studies include topics such as safety, work ethics, communication, information technology applications, systems, health, environment, leadership, teamwork, ethical and legal responsibility, employability, and career development and include skills such as problem solving, critical thinking, and reading technical drawings.

Level 2

Entrepreneurship I

13011101

Grade: 10-12

Credit: 1

In Entrepreneurship I, students will gain the knowledge and skills needed to become an entrepreneur in a free enterprise system. Students will learn the key concepts necessary to begin and operate a business. The primary focus of the course is to help students identify the types and selection criteria of business structures, understand the components of a business plan, determine feasibility of an idea using research, and develop and present a business concept. In addition, students will understand the basics of management, accounting, finance, marketing, risk, and product development.

Electrical Technology I @ San Jacinto College

13005600

Grade: 11-12

Credit: 1

Prerequisite: Meet the San Jacinto College entrance requirements

In Electrical Technology I, students will gain knowledge and skills needed to enter the workforce as an electrician or building maintenance supervisor, prepare for a postsecondary degree in a specified field of construction or construction management, or pursue an approved apprenticeship program. Students will acquire knowledge and skills in safety, electrical theory, tools, codes, installation of electrical equipment, and the reading of electrical drawings, schematics, and specifications.

Level 3

Electrical Technology II @ San Jacinto College

13005700

Grade: 11-12

Credit: 2

Prerequisite: Electrical Technology I

In Electrical Technology II, students will gain advanced knowledge and skills needed to enter the workforce as an electrician, a building maintenance technician, or a supervisor; prepare for a postsecondary degree in a specified field of construction or construction management; or pursue an approved apprenticeship program. Students will acquire knowledge and skills in safety, electrical theory, tools, codes, installation of electrical equipment, alternating current and direct current motors, conductor installation, installation of electrical services, and electric lighting installation.