

Architecture & Construction Course Descriptions

Principles of Architecture and Construction

TEA # 13004210

Course # 0480

Grade Placement: 9-12

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.

Career Preparation I

TEA # 12701300

Course # 0531 & 2531

Grade Placement: 11-12

Credit: 2

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. The goal is to prepare students with a variety of skills for a changing workplace. Career preparation is relevant and rigorous, supports student attainment of academic standards, and effectively prepares students for college and career success.

Note: This course requires a Course Interest Form to be submitted and requires students to have either paid or unpaid employment. The employment site is typically selected by each individual student to ensure it correlates to their specific career interest area. Most employment sites are located out in our surrounding community.

Civil Engineering and Architecture

TEA # N1303747

Course # 0914

Grade Placement: 10-12

Credit: 1

Prerequisite: Introduction to Engineering Design

In this course, students learn important aspects of building and site design and development, applying math, science, and standard engineering practices to design both residential and commercial projects. They document designs using 3D architecture design software. Some students have seen these designs come to life through partnerships with local housing organizations.

Note: This course has an application process in place.

Construction Technology I

TEA # 13005100

Course # 0482 & 2482

Grade Placement: 10-12

Credits: 2

Recommended Prerequisite: Principles of Construction or Principles of Architecture

In Construction Technology I, students will gain knowledge and skills needed to enter the workforce as carpenters or building maintenance supervisors or to prepare for a postsecondary degree in construction management, architecture, or engineering. Students will acquire knowledge and skills in safety, tool usage, building materials, codes, and framing.

Construction Technology II

TEA # 13005200

Course # 0484 & 2484

Grade Placement: 11-12

Credits: 2

Prerequisite: Construction Technology I

In Construction Technology II, students will gain advanced knowledge and skills needed to enter the workforce as carpenters, building maintenance technicians, or supervisors or to prepare for a postsecondary degree in construction management, architecture, or engineering. Students will build on the knowledge base from Construction Technology I and are introduced to exterior and interior finish out skills.

Electrical Technology I

TEA # 13005600

Course # 0486

Grade Placement: 10–12

Credit: 1

Recommended Prerequisites: Principles of Architecture or Principles of Construction

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.

Electrical Technology II

TEA # 13005700

Course # 0488 & 2488

Grade Placement: 11–12

Credit: 2

Prerequisite: Electrical Technology I

Recommended Prerequisites: Principles of Architecture or Principles of Construction

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.

Interior Design I

TEA # 13004300

Course # 0461

Grade Placement: 10–12

Credit: 1

Prerequisites: Algebra I and English I

Recommended Prerequisites: Principles of Architecture

Interior Design I is a technical course that addresses psychological, physiological, and sociological needs of individuals by enhancing the environments in which they live and work. Students will use knowledge and skills related to interior and exterior environments, construction, and furnishings to make wise consumer decisions, increase productivity, promote sustainability, and compete in industry.

Interior Design II

TEA # 13004400

Course # 0460 & 2460

Grade Placement: 11–12

Credit: 2

Prerequisites: English II, Geometry, and Interior Design I

Interior Design II is a technical laboratory course that includes the application of the employability characteristics, principles, processes, technologies, communication, tools, equipment, and materials related to interior design to meet industry standards.

STC Architectural & Engineering Design Technology Program

Course # 0797 & 2797

Grade Placement: 11-12

Credits: 1 per course

Prerequisite: Meet South Texas College acceptance criteria

The purpose of this program is to prepare the students for employment in architectural, visual, and civil engineering technology industries. The student will be required to have an understanding of, but not limited to, the following areas:

principles of drafting, architectural drafting, civil drafting, layout and design, application of the latest drawing software programs, current knowledge of building standards and codes, and construction materials and specifications. Refer to the following STC website for a listing of the actual courses in this certificate program: <https://bt.southtexascollege.edu/aedt/>

Note: Since the courses under this program are taught by college instructors at the South Texas College Technology Campus, bus transportation will be provided. When courses are offered 1st block, the bus will leave from the high school at 7:30 a.m. therefore, students must be able to commit to arriving early at school in order to board the bus. Personal transportation is allowed pending pre-approval and will be contingent upon obtaining a parking permit from the student's home campus and STC. Course offerings are dependent on the availability of STC staff, and specific courses will only be offered if the minimum enrollment requirements are met. See your counselor for more detailed information regarding this off-campus program.