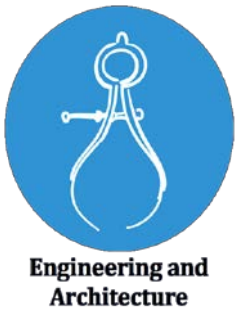
Engineering and Architecture



Do you have: an aptitude in mathematics and/or science?
the ability to communicate? a preference to work with your hands?
the curiosity and ability to solve problems using creativity?
an interest in figuring out how things work?
the ability to operate and fix machines?
an interest working with metals, plastics, and wood?
an interest in planning and supervising a project or completing parts of a project?

About this Sector

Students are engaged in an instructional program that integrates academic and technical preparation and focuses on career awareness, career exploration, and career preparation in four pathways that emphasize real-world, occupationally relevant experiences of significant scope and depth: Architectural Design; Engineering Technology; Engineering Design; and Environmental Engineering. To prepare students for continued training, advanced educational opportunities, and direct entry to a career, the Engineering and Architecture programs offer the following components: classroom, laboratory, and hands-on contextual learning; project- and work-based instruction; and leadership and interpersonal skills development.

Sample Careers in Engineering and Architecture

Entry Level Careers
(with high school diploma)
Junior Drafter
CAD Technician
Construction Apprentice
Engineering Aide
Drafting Apprentice
Apprentice Electrician
Computer Equipment Installer
Security Equipment Installer

Technical Level Careers
(with AA or AS degree or certificate)
Drafter/Designer
Plan Checker
Surveyor
Estimator
Electrical Engineering Technician
Mechanical Engineering Technician
Laboratory Technician
Civil Engineering Technician
Chemical Engineering Technician
Aerospace Engineering Technician
Architectural Drafters
Telecommunications Technician
Journeyman Electrician

Professional Level Careers
(with BS or BA degree)
Mechanical Engineer
Aerospace Engineer
Agricultural Engineer
Electrical Engineer
Computer Hardware Engineer
Telecommunications Engineer
Landscape Architect
Materials Engineer
Nuclear Engineer
Architect
Industrial Designer
Civil Engineer
Structural Engineer

Students seeking an advanced college degree are recommended to fulfill UC/CSU (a-g) requirements, beyond that, students are encouraged to take the following elective credits:

Architectural Design
Pre-Engineering & Design (g)
Technical Drawing
Drafting – Adv/CAD
Digital Art CP (f)
Advanced Digital Art (f)
Tech I
Tech II
Drawing CP (f)
Sculpture CP (f)
Psychology

Comp Science
AP Computer **Science** (c)
Physics (d)
AP Physics (d)
AP Biology (d)
AP Chemistry (d)
AP Statistics (c)
AP Calculus AB/BC (c)
Multi Media Design CP (f)
Adv Multi Media Design (f)
Sociology

CVHS Pathways for this Sector:

Engineering:
Architectural Design
Technical Drawing
Pre-Engineering Design
Drafting Tech/Adv CAD (capstone course)

@ articulated course - **bold courses need pre-requisite/concurrent enrollment**

Dual Enrollment Community College extension courses to consider:
Engineering 101