

# BUILDING & CONSTRUCTION TRADES INDUSTRY SECTOR

The Building and Construction Trades industry needs people who can work with their heads and hands to design and build office buildings, hospitals, shopping malls and housing communities. Once architects come up with a design, it takes a team of skilled trades people like plumbers, electricians, masons, roofers, framers and more to turn it into a finished structure. Craftsmen in this industry sector need a strong math background, good technology skills, and solid on-the-job experience.



The sector encompasses four career pathways: Cabinetry, Millwork, and Woodworking; Engineering and Heavy Construction; Mechanical Systems Installation and Repair; and Residential and Commercial Construction. These pathways emphasize processes, systems, and the way in which structures are built.

## CAREER PATHWAYS

### IS THIS INDUSTRY A GOOD MATCH FOR YOU?

#### Are you?

- Good at math
- Interested in building things
- A team player
- Good at working with your hands
- Comfortable working with tools

#### Do you?

- Want to build massive infrastructures that connect and support our world
- Want to create the machines that will build our future
- Dream of creating a city skyline
- Have a passion for handcrafted precision

### EDUCATION & RELATED OCCUPATIONS

#### High School

Machine Operator  
Apprentice Engineer  
Construction  
Mechanical Construction Instructor

#### Certificate and/or AA degree

CNC Technician  
Contractor/Electrician/Heavy Construction  
HVAC Technician

#### Bachelors+

Designer/Engineer  
Engineering & Heavy Construction  
Carpentry Instructor

FOR MORE INFORMATION ON THE BUILDING & CONSTRUCTION TRADES INDUSTRY SECTOR, GO TO THE CALIFORNIA CAREERZONE.

# CAREER PATHWAYS



## CABINETRY, MILLWORK AND WOODWORKING

The Cabinetry, Millwork, and Woodworking pathway provides learning opportunities for students interested in preparing for careers in cabinet construction, millwork, finish carpentry, and furniture making for both production and custom products.

### Sample occupations associated with this pathway:

- Cabinetmaker
- Cabinet Installer
- Woodworking Machinery Operator
- Custom Millwork Project Estimator
- Woodworking Engineer/Drafter (CAD)

## ENGINEERING AND HEAVY CONSTRUCTION

The Engineering and Heavy Construction pathway provides learning opportunities for students interested in preparing for careers in engineering and heavy industrial construction (roads, highways, subdivisions). The pathway includes instruction in the way in which these structures are built (Class A California License).

### Sample occupations associated with this pathway:

- Cement Mason
- Heavy Equipment Operator
- Iron Worker
- Welder
- Civil Engineer

## MECHANICAL SYSTEMS INSTALLATION AND REPAIR

The Mechanical Systems Installation and Repair pathway provides students with competencies fundamental for preparing for employment or advanced training in heating, ventilation, air-conditioning (HVAC) and appliance installation, maintenance, and repair. The pathway includes preparation for a Class C California License and EPA certification.

### Sample occupations associated with this pathway:

- HVAC Installation and Maintenance Specialist
- Plumbing Installer
- Sheet Metal Fabricator
- Mechanical Engineer/Technician
- Mechanical Construction Field Manager

## RESIDENTIAL AND COMMERCIAL CONSTRUCTION

The Residential and Commercial Construction pathway provides learning opportunities for students interested in preparing for careers in construction and building design, performance, and sustainability. The focus is on the manner in which residential and commercial structures are designed and built (Class B California License).

### Sample occupations associated with this pathway:

- Plumber
- Electrician
- Building Inspector
- Estimator
- Carpenter