



Building Trades and Construction Industry Sector

A strong demand for workers continues in the Building Trades and Construction industry sector, and that demand increases as populations, businesses, and local economies expand. According to the U.S. Bureau of Labor Statistics, construction is among the top ten of the nation's industries, constituting almost 5 percent of the total national gross domestic product. In California, the long-term (2004–14) occupational projection for the Building Trades and Construction industry includes a need to fill 17,790 new jobs and provide 17,920 replacement workers as members of the current workforce retire or leave. In some trades in the state, an increase of more than 30 percent in the number of available jobs is expected over the next 10 years. Nationally, more than one million construction jobs will be created over the next decade, with job categories ranging from laborers to engineers to contractors.

In Building Trades and Construction industry sector classes, activities range from general or exploratory skills to job-specific skills that prepare students to select and pursue career paths through postsecondary training, work experience education, apprenticeships, and postsecondary education. The classes incorporate and apply academic core content to career-related education. These interdisciplinary approaches provide students with strong foundation skills and advanced skills in the career field of their choice, allowing students to exit programs and enter occupations directly or pursue further specialty training.

Building Trades and Construction Industry Sector Pathways:

- *Cabinetmaking and Wood Products*
- *Engineering and Heavy Construction*
- *Mechanical Construction*
- *Residential and Commercial Construction*

Entry Level Careers

(with high school diploma)

Carpenter Apprentice
Cabinetmaking Apprentice
Machine Operator
Draftsman
Electrical Repair Person
Electronic Equipment Installer
Maintenance Technician
Laborer

Technical Level Careers

(with AA or AS degree or certificate)

Electronic Technician
Maintenance Supervisor
Heating/Ventilation/AC (HVAC) Technician
Environmental Materials Technician
Electrician
Construction Supervisor
Computerized Numerical Control Tech
CAD Technician
Building Constructor
Cabinetmaking Journeyman
Automated Control System Technician
Furniture Maker
Production Manager
Iron Worker
Heavy Construction Journeyman
Plumber
Contractor

Professional Level Careers

(with BS or BA degree)

Quality Control Manager
Environmental and Safety Manager
Product Designer
Manufacturing Engineer
Construction Manager
Building Instructor
Architect
Engineer
Designer
Building Trades Instructor
Construction Manager
Business Owner



Cabinetmaking and Wood Products Pathway

Sample CTE Courses*

Education Level and Related Occupations**

Introductory	Concentration	Capstone	High School Diploma	Certification and/or AA Degree	Bachelor's Degree or Higher
<ul style="list-style-type: none"> ▪ Exploring Technology ▪ Technology Core ▪ Wood Technology 	<ul style="list-style-type: none"> ▪ Woodworking 1 ▪ Woodworking 2 	<ul style="list-style-type: none"> ▪ Cabinetmaking ▪ Furniture Design 	<ul style="list-style-type: none"> ▪ Cabinetmaking Apprentice+ ▪ Machine Operator 	<ul style="list-style-type: none"> ▪ Cabinetmaking Journeyman+ ▪ CNC Technician 	<ul style="list-style-type: none"> ▪ Cabinetmaking Instructor+ ▪ Designer ▪ Engineer

Engineering and Heavy Construction Pathway

Sample CTE Courses*

Education Level and Related Occupations**

Introductory	Concentration	Capstone	High School Diploma	Certification and/or AA Degree	Bachelor's Degree or Higher
<ul style="list-style-type: none"> ▪ Exploring Technology ▪ Technology Core 	<ul style="list-style-type: none"> ▪ Construction 1 ▪ Wood 1 	<ul style="list-style-type: none"> ▪ Equipment Operator ▪ Carpentry 	<ul style="list-style-type: none"> ▪ Apprentice Engineer+ ▪ Laborer 	<ul style="list-style-type: none"> ▪ Contractor+ ▪ Electrician+ ▪ Heavy Construction Journeyman+ ▪ Iron Worker ▪ Plumber+ 	<ul style="list-style-type: none"> ▪ Business Owner ▪ Engineer ▪ Engineering and Heavy Construction Instructor+

Mechanical Construction Pathway

Sample CTE Courses*

Education Level and Related Occupations**

Introductory	Concentration	Capstone	High School Diploma	Certification and/or AA Degree	Bachelor's Degree or Higher
<ul style="list-style-type: none"> ▪ Exploring Technology ▪ Technology Core ▪ Construction 1 	<ul style="list-style-type: none"> ▪ Construction 1 ▪ Construction 2 	<ul style="list-style-type: none"> ▪ Building Construction ▪ Electrical Wiring ▪ Plumbing 	<ul style="list-style-type: none"> ▪ Electrician's Helper ▪ Mechanical Construction Apprentice+ 	<ul style="list-style-type: none"> ▪ Electrician+ ▪ HVAC Technician+ ▪ Mechanical Construction Journeyman+ ▪ Plumber+ 	<ul style="list-style-type: none"> ▪ Contractor+ ▪ Engineer+ ▪ Mechanical Construction Instructor+

Residential and Commercial Construction Pathway

Sample CTE Courses*

Education Level and Related Occupations**

Introductory	Concentration	Capstone	High School Diploma	Certification and/or AA Degree	Bachelor's Degree or Higher
<ul style="list-style-type: none"> ▪ Construction 1 ▪ Exploring Technology ▪ Construction 1 	<ul style="list-style-type: none"> ▪ Construction 2 	<ul style="list-style-type: none"> ▪ Carpentry ▪ Construction Technology 	<ul style="list-style-type: none"> ▪ Carpenter Apprentice+ ▪ Heavy Equipment Operator ▪ Laborer 	<ul style="list-style-type: none"> ▪ Carpenter Journeyman+ ▪ Contractor+ ▪ Iron Worker ▪ Surveyor ▪ Welder+ 	<ul style="list-style-type: none"> ▪ Carpentry Instructor+ ▪ Engineer

*Sample CTE Courses are from the Career Technical Education Framework for California Public Schools (California Department of Education: 2007, <http://www.cde.ca.gov/re/pn/fd/>)

**Visit ASSIST (www2.assist.org/browseAreas.do) for community college and UC/CSU information and California Career Zone (www.cacareerzone.org) for occupation information.

+This occupation requires certification or licensure.

Related Career Technical Student Organization: SkillsUSA (<http://www.skillsusaca.com>)

Additional Industry Sector information available through the California Industrial and Technology Education Consortium (<http://www.citeonline.org>).