



MONTANA CAREER PATHWAYS

Career and Technical Education



Area of Study: Industrial Technology Education

Career Pathway: Design and Construction

Get the Facts

A Design & Construction professional will learn and practice designing, planning, managing, building and maintaining structures. Courses in the pathway include drafting, architecture, construction, electricity, sheet metal, HVAC and painting.

Workforce Trends

With the continuous need of skilled and knowledgeable employees in the design and construction industry, this pathway will help provide employees that are trained and work ready.

With a current annual growth rate of 10.1%, the demand for individuals with design and construction skills continues to increase in Montana.

CAREER AND TECHNICAL EDUCATION

Recommended Pathway Courses

Courses listed below provide a suggested sequence of courses for career and curriculum planning. Schools may offer additional courses beyond those listed within local Pathways.

CLASS AVAILABILITY MAY VARY AT YOUR SCHOOL

Course #	Foundation Courses (required)	Credit
21102	Drafting—General	.50/1.0
21103	Drafting—Architectural	.50/1.0
21107	CAD Design & Software	.50/1.0
17006	Woodworking	.50/1.0
17002	Construction—Comprehensive	.50/1.0
13003	Industrial Arts	.50/1.0
17001	Construction Careers Exploration	.50/1.0
Elective Courses		
17003	Carpentry	.50/1.0
17004	Framing Carpentry	.50
17011	Wall Finishing	.50
17010	Home Maintenance	.50
21007	Engineering Design & Development	.50
21108	Blueprint Reading	.50
21101	Drafting Careers Exploration	.50
21148	Drafting—Workplace Experience	.50
17998	Architecture and Construction—Workplace Experience	.50

1.0 credit

1.0 credit

2.0 credits for completion

Foundation courses taken beyond the required credits can be used as elective credit
Any High School CTE course(s) required for graduation may count towards Pathway completion
Additional CTE Credits are recommended for Pathway completion

Careers in Design & Construction are:

- High Skill; High Wage; In-Demand

Career Examples

- Builder
- CAD Draftsperson
- Carpenter
- Cost Estimator
- Dry Waller
- Electrician
- Interior Designer
- Landscape Architect
- Plumber
- Stonemason
- Tile Setter

According to the Montana Department of Labor & Industry, the median hourly wage for occupations within the Design & Construction Career Pathway is \$30.68.

State Graduation Requirements		Suggested High School Plan of Study				College and Career
High School <small>Administrative Rules of Montana 10.55.905</small>		9th Grade Suggested	10th Grade Suggested	11th Grade Suggested	12th Grade Suggested	Beyond High School There are many options for education and training beyond high school, depending on your career goals. <ul style="list-style-type: none"> • Certificate • Associate degree • Bachelor's degree • On-the-job training • Apprenticeship For more information on salary projections, labor market demand, and training options, visit lmi.mt.gov .
English/Language Arts	4.0	English 9 1.0	English 10 1.0	English 11 1.0	English 12 1.0	
Mathematics	2.0	Math* 1.0	Math* 1.0	Math* 1.0	Math* 1.0	
Social Studies	2.0	Social Studies* .50/1.0	Social Studies* .50/1.0	U.S History 1.0	U.S. Government 1.0	
Science	2.0	Earth Science 1.0	Biology 1.0	Science Elective*		
Health Enhancement	1.0	P.E./Health* .50	P.E./Health* .50	P.E./Health Electives*		
Arts	1.0	Arts Courses* 1.0				
Career and Technical Education	1.0	Pathway Foundation Course .50/1.0	Pathway Foundation Course .50/1.0	Pathway Elective Course .50/1.0	Pathway Elective Course .50/1.0	
Work-Based Learning	Participation in a Pathway-related work-based learning experience					
Career and Technical Student Organization	SkillsUSA					
<ul style="list-style-type: none"> • *Talk to your school counselor about requirements in the core curriculum. Core curriculum and elective requirements vary district to district. • Many CTE courses may qualify for dual enrollment credit, which in some cases may earn up to 1.0 credit toward Pathway completion. Talk to your school counselor about availability. 		<ul style="list-style-type: none"> • Dual enrollment course offerings vary by school and district. • Many Montana post-secondary programs accept high school courses toward a two- and four-year degree through dual enrollment. Check with post-secondary campuses for details. 				