## CAREER PATHWAYS FOR ADULT EDUCATION

# **ABOUT CAREER PATHWAYS**

Career Pathways combine education, work readiness and job training to attain necessary skills and credentials for specific in-demand occupations or industries. Career Pathway maps illustrate how students can move along a career path in a specific occupational area from adult education through post-secondary or advanced job-training programs and into employment. To advance along a career pathway more quickly, explore opportunities to participate in education and training concurrently. It is suggested that this map be used in conjunction with information on specific education and training programs in Wyoming or in your local area.

Building & Construction

Industrial & Engineering Technology Career Cluster

**Sector Description**:

This sector includes the construction of commercial, industrial, and residential buildings and engineering projects like

roads, bridges, and utility systems. It includes both new construction and remodeling, additions, maintenance, and

repairs. Construction offers many jobs with high projections for new employment opportunities in Wyoming. Positions

vary, ranging from unskilled laborer and apprentice jobs to skilled construction jobs that require extensive training

and education.

 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **Sample Entry or Certificate Options**

Construction Laborer

 **Sample Associates & Bachelor (or higher) Degree Options**

Construction Manager

Cost Estimator

Trade Apprentice (Electrician, Plumber, Carpenter, HVAC, Roofer)

 **Sequential -or- Concurrent**

#### Adult Education

-Core Skills: Reading, Writing, Math

-English Language Skills

-Career Exploration & Planning

-High School Equivalency Preparation

-Employability Skills & Digital Literacy

-Integrated Education and Training

-Work Experience Trainings

Trades Professional (Electrician, Plumber, Carpenter, HVAC, Roofer)

Heavy Equipment Excavator

Site Foreman

Engineer (Chemical, Electric, Mechanical)

Heavy Equipment Operating Engineer

Pre-Construction (Surveyor, Drafter, Interior Designer)

Welder

Pipefitters

##### Additional Occupational Options

* Brick Mason/Concrete Finisher **Customized Pathway-Jobs/Courses**
* Crane Operator
* Drywall/Tile Installer
* Sheet Metal Worker
* Landscaper
* Solar Energy Installer/ Weatherization Technician

## CAREER PATHWAYS FOR ADULT EDUCATION- Building & Construction

**ADULT EDUCATION-High School Equivalency (HSE)**

**Median Wages: $10.49 Hourly / $21,818 Annual**

Many jobs require a high school diploma/equivalent. The official HSE tests (GED or HiSET) require that students demonstrate proficiency in English, reading, writing, math, science and social studies.

**SKILLS**

* Reading for comprehension
* Understanding math applications & analyzing data
* Developing clear & organized written communication
* Expressing ideas clearly & listening for understanding
* Interacting with others collaboratively & using negotiation and compromise to resolve conflicts
* Using computers, MS Office software & the internet to communicate, complete tasks and conduct research
* Thinking logically, critically, and strategically to solve problems

CONSTRUCTION LABORER

Median Wages: $19.59 Hourly / $40,4750 Annual

**Description**: Perform various physical tasks at construction sites that help work run smoother, including cleaning & preparing sites to ensure debris is properly removed, building scaffolding and other temporary structures, operating and maintaining equipment and digging trenches.

**Job Duties**

* Tend pumps, compressors, or generators to provide power for tools machinery, or equipment or to

heat or move materials, such as asphalt or debris

* Lubricate, clean, or repair machinery, equipment, or tools
* Signal equipment operators to facilitate alignment, movement or adjustment of machinery, equipment, or materials
* Read plans, instructions, or specifications to determine work activities
* Measure, mark or record openings or distance to layout areas at construction sites

**TRADES APPRENTICE**

**Median Wages: $29.81 Hourly / $ 57,243 Annual**

**Description:**  Skilled trades in the construction sector include electricians, plumbers, carpenters, HVAC technicians and roofers; specializing in the installation and repair for a specific trade.

**Job Duties**

* Read blueprints
* Measure, cut, install and/ or repair building materials related to specific trade
* Perform appropriate tests to ensure proper functioning of installed materials
* Use hand and power tools and operate machinery
* Follow safety protocols
* Clean equipment or facilities

**OTHER OCCUPATION**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Median Wages:**

**Description**:

**Job Duties**

**SURVEYING AND MAPPING TECHNICIAN**

**Median Wages: $22.68 Hourly / $47,180 Annual**

**Description:** Perform surveying and mapping duties, usually under the direction of an engineer, surveyor, cartographer, or photogrammetrist, to obtain data used for construction, mapmaking, boundary location, mining, or other purposes.

**Job Duties**

* Produce/update overlay maps to show information boundaries, water locations or topographic features
* Determine scales, line sizes or colors to be used for card copies of computerized maps, using plotters
* Analyze aerial photographs to detect & interpret significant data
* Monitor mapping work or the updating of maps to ensure accuracy

**HEAVY EQUIPMENT OPERATOR**

**Median Wages: $28.28 Hourly / $58,826 Annual**

**Description:** Drive or control construction equipment, including bulldozers, forklifts, backhoes, dump trucks, cargo trucks, and hydraulic truck crates, operate this equipment to assist in the construction of structures, including bridges, roads, and buildings

**Job Duties.**

* Learn and follow safety regulations
* Take actions to avoid potential hazards or obstructions, such as utility lines, other equipment, other workers, or falling objects
* Start engines, move throttles, switches, or levers, of depress pedals to operate machines, such as bulldozers, trench excavators, road grades, or backhoes.
* Coordinate machine actions with other activities, positioning or moving loads in response to hand or audio signals from crew members
* Align machines, cutter heads or depth gauge makers with reference stakes and guidelines or ground or positon equipment, following hand signals of other workers

**CONSTRUCTION MANAGER**

**Median Wages: $50.19 Hourly / $104,400 Annual**

**Description:** Oversee construction sites, general contractors, and workers to ensure a high level of quality and safety, guarantee that all work is performed in accordance with approved manuals, budgets and procedures, ensure that the project is constructed and documented in accordance with the contract documents and good engineering practices.

**Job Duties**

* Plan, schedule, or coordinate construction project activities to meet deadlines
* Prepare & submit budget estimates, progress reports, or cost tracking reports
* Interpret & explain plans and contracts to workers or clients
* Direct & supervise construction or related workers
* Prepare contracts or negotiate revisions to contractual agreements