

## **Careers in Mining**

### **Management, Business and Financial Occupations**

#### **Financial Auditor**

Examine an organization's financial records and reports

#### **Accountant**

Analyze, compile, compute and prepare a wide variety of statistical reports; analyze, prepare, maintain and audit general accounting ledgers, records and reports; set up and maintain controls for employee payrolls; initiate orders for equipment, parts, supplies and repairs and expedite to delivery, completion and payment; assemble and review data for conformance with established controls relating to time, completeness and accuracy, arrangement of data and system requirements.

#### **Financial Analyst**

Using expertise in evaluating financial investments, financial analysts investigate risk and return characteristics of securities.

#### **Lawyer**

Give legal advice and represent people or companies in legal matters.

#### **Manager**

Responsible for supervising and motivating employees and for directing the progress of an organization.

#### **Top Executive**

Top executives have the authority to carry out administrative or managerial duties

### **Office, Administrative and Support Occupations**

#### **Administrative Clerks**

Work in an office and complete duties such as filing, mailing and organizing.

#### **Cleaner**

Keep buildings in clean and orderly condition. Perform heavy cleaning duties, such as cleaning floors, shampooing rugs, washing walls and glass, and removing rubbish. Duties may include tending furnace and boiler, performing routine maintenance activities, notifying management of need for repairs, and cleaning snow or debris from sidewalk.

**Communications Coordinator**

Coordinate communications on mine radio, maintaining computer reports and written records and notify mine foremen or maintenance personnel of movement of personnel or equipment to maintain mining and repair activity.

**Cook**

Prepare food professionally.

**Data Processor**

Process information using computers.

**Expediter**

Expedite ordering and procure parts and repairs; schedule employees, maintain time records and code shop cards.

**Graphic Designer**

Create original sketches, drawings, etc.

**Human Resource Manager**

Manage the company's hiring, training, benefits and employee records.

**Mailroom/ Courier Service**

Transport messages or packages

**Work Scheduler**

Prepare a variety of weekly work schedules for production and maintenance employees.

**Payroll Clerk**

Review time sheets, work charts, wage computation and other information to detect and reconcile payroll discrepancies.

**Photographer**

Determine desired images, take pictures, manipulate and enhance digital images

**Purchasing Agents**

Prepare purchase orders, solicit bid proposals and review requisitions for goods and services

**Sales, Marketing and Advertising Manager**

Formulate, direct and coordinate all sales, marketing and advertising activities related to the company's products and services

**Human Resource Specialist**

Address employee relations issues, such as harassment allegations, work complaints or other employee concerns; analyze employment-related data and prepare required reports.

**Public Relations Professional**

Establish and maintain effective working relationships with clients, government officials and media representatives and use these relationships to develop new business opportunities

**Security Guard**

Monitor and authorize entrance and departure of employees, visitors and other persons to guard against theft and maintain security of premises.

**Translator/Interpreter**

Identify and resolve conflicts related to the meanings of words, concepts, practices or behaviors; proofread, edit and revise translated materials

**Professional and Scientific Occupations****Chemical Engineer**

Develop safety procedures to be employed by workers operating equipment or working in close proximity to on-going chemical reactions; conduct research to develop new and improved chemical manufacturing processes.

**Chemist**

Analyze organic or inorganic compounds to determine chemical or physical properties, composition, structure, relationships or reactions

**Computer Programmer**

Write, update and maintain computer programs or software packages to handle specific jobs such as tracking inventory, storing or retrieving data, or controlling other equipment.

**Computer System Analyst**

Test, maintain and monitor computer programs and systems, including coordinating the installation of computer programs and systems

### **Drafting Technologist**

Develop engineering designs and drawings from preliminary concepts and specifications, and prepare technical reports, construction specifications, cost and materials estimates and contract documents.

### **Electrician**

Inspect, repair, and install and wire all electrical apparatus, devices and circuits of any voltage in the plant or assigned area.

### **Electrical Engineer**

Prepare technical drawings, specifications of electrical systems or topographical maps to ensure that installation and operations conform to standards and customer requirements

### **Electronic Service Technician**

Diagnose problems in malfunctioning equipment, determine the faulty part and then decide if it can be fixed or must be replaced.

### **Engineering Technician**

Assist Mining Engineering staff.

### **Environmental Technician**

Collect and prepare data and information in connection with environmental engineering studies; make required investigations and conduct tests relative to the environmental impacts of mining.

### **Geochemist**

Study the composition, structure, and other physical aspects of the Earth. May use geological, physics, and mathematics knowledge in exploration for oil, gas, minerals, or underground water; or in waste disposal, land reclamation, or other environmental problems.

### **Geological Engineer**

Conduct sub-surface surveys to identify the characteristics of potential land or mining development sites. May specify the ground support systems, processes and equipment for safe, economical, and environmentally sound extraction or underground construction activities. May inspect areas for unsafe geological conditions, equipment, and working

conditions

**Geological Technician**

Assist scientists or engineers in the use of electronic, sonic, or nuclear measuring instruments in both laboratory and production activities to obtain data indicating potential resources such as metallic ore, minerals, gas, coal, or petroleum.

**Geologist**

Study the composition, structure, and other physical aspects of the Earth.

**Geophysical Technician**

Measure, record or evaluate geological data

**Geophysicist**

Specialized scientists who study the Earth's physical properties.

**Mechanical Engineer**

Perform engineering duties in planning and designing tools, engines, machines and other mechanically functioning equipment

**Matallurgical Control Analyst**

Analyze product failure data and laboratory test results to determine causes of problems and develop solutions.

**Matallurgical Engineer**

Evaluate materials and develop machinery and processes to manufacture materials for use in products that must meet specialized design and performance specifications.

**Mine Drafting**

Draw new stadia charts and trace maps of pits, dumps, and other properties

**Mine Engineering Analyst**

Collect, compile and analyze data related to crude ore and waste production with respect to quantity and quality control.

**Mining Engineer**

Design, implement, and monitor the development of mines, facilities, systems, or equipment.

**Physical Tester**

Collect and prepare samples for analysis and perform physical tests.

### **Process Engineer**

Develops and optimize economical industrial processes to make the huge range of products on which modern society depends; assessing processes for their relevance, and assessing the adequacy of engineering equipment.

### **Prospector**

Explores likely regions to discover valuable mineral deposits, using topographical maps, surveys, reports, and knowledge of geology and mineralogy: Examines outcrops, placer, and stream channels for mineral content.

### **Quality Control Engineer**

Plans and directs activities concerned with development, application, and maintenance of quality standards for industrial processes, materials, and products: Develops and initiates standards and methods for inspection, testing, and evaluation, utilizing knowledge in engineering fields such as chemical, electrical, or mechanical.

### **Surveyor**

Make exact measurements and determine property boundaries. Provide data relevant to the shape, contour, gravitation, location, elevation, or dimension of land or land features on or near the earth's surface for engineering, mapmaking, mining, land evaluation, construction, and other purposes.

### **Technical Drafting**

Prepare design layouts and design drawings of equipment and structures, or equipment alteration; photograph, develop and print pictures for use of Engineering and other departments.

## **Construction and Extraction Occupations**

### **Blaster**

Load blast holes with explosives and detonate charge.

### **Borer operator**

Operate drilling machines to drill, bore, ream, mill or countersink metal or plastic work pieces

### **Concentrator Operator**

Control panel board, data loggers, alarm systems, 18 taconite concentrating lines

**Construction Equipment Operator**

Operate one or several types of power construction equipment, such as front end loaders or shovels

**Crane Operator**

Move and operate truck crane.

**Crusher Operator**

Control the taconite crushing process.

**Diamond Driller**

Fabricate, finish, or evaluate the quality of gems and diamonds used in jewelry or industrial tools.

**Electrician**

Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems.

**Explosives Handler and Packer**

Place and detonate explosives to demolish structures or to loosen, remove, or displace earth, rock, or other materials. May perform specialized handling, storage, and accounting procedures.

**Extraction Worker**

Examine and inspect work progress, equipment, and construction sites to verify safety and to ensure that specifications are met.

**Iron Worker**

Lay out, fabricate, assemble, erect, or make repairs for all types of structural and plate work; perform all kinds of welding.

**Manager of Construction Trades and Extraction Workers**

Directly supervise and coordinate activities of construction or extraction workers.

**Mine Cutting and Channeling**

Operate machinery such as longwall shears, plows, and cutting machines to cut or channel along the face or seams of coal mines, stone quarries, or other mining surfaces to facilitate blasting, separating, or removing minerals or materials from mines

**Mine Equipment Operator**

Perform a variety of tasks associated with the mine equipment operation: operate a crawler, tractors with front-end loaders or forks to load, semi-tractor, various types of powered mobile equipment, service trucks, crawler crane, powered graders, mobile (rubber-tired) and boom truck type cranes, rubber-tired backhoe; operates and attends pumps, services equipment.

**Machine Operator**

Set up, operate or tend more than one type of machine

**Mason**

Lay brick and perform other masonry work.

**Mine Safety Inspector**

Inspect mining areas for unsafe structures, equipment, and working conditions.

**Miner**

Extract mineral deposits.

**Mining Machine Operator**

Operate self-propelled mining machines that rip coal, metal and nonmetal ores, rock, stone, or sand from the mine face and load it onto conveyors or into shuttle cars in a continuous operation

**Painter**

Perform interior and exterior hand and spray painting.

**Rock Splitter**

Separate blocks of rough dimension stone from quarry mass using jackhammer and wedges.

**Roof Bolter**

Operate machinery to install roof support bolts in underground mine.

**Rotary Drill Operator**

Move, set up, and operate mobile, crawler mounted, rotary blast hole drill.

**Stationary Engineer**



Operate or maintain stationary engines, boilers, or other mechanical equipment to provide utilities for buildings or industrial processes. Operate equipment, such as steam engines, generators, motors, turbines, and steam boilers.

## **Transportation and Material Moving Occupations**

### **Bulldozer Operator**

### **Conveyor Operator**

Control or tend conveyors or conveyor systems that move materials or products to and from stockpiles, processing stations, departments, or vehicles. May control speed and routing of materials or products.

### **Excavator Operator**

Operate or tend machinery equipped with scoops, shovels, or buckets, to excavate and load loose materials.

### **Freight, Stock and Material Mover**

Manually move freight, stock, or other materials.

### **Hand Shuttle Car Operator**

Operate diesel or electric-powered shuttle car in underground mine to transport materials from working face to mine cars or conveyor.

### **Hoistman**

Operate or tend hoists or winches to lift and pull loads using power-operated cable equipment.

### **Industrial Truck and Tractor Operator**

Operate industrial trucks or tractors equipped to move materials around a warehouse, storage yard, factory, construction site, or similar location.

### **Loading Machine Operator**

Operate or tend machinery equipped with scoops, shovels, or buckets, to excavate and load loose materials.

### **Train Operator**

Operate train for haulage, switching and servicing work in and about mine, plant and shops by remote portable radio control.

## **Truck Driver**

### **Installation, Maintenance and Repair Occupations**

#### **Automotive Mechanic**

Make repairs to gasoline, diesel or diesel-electric powered automotive equipment.

#### **Carpenter**

Perform any type of rough and finish carpentry work.

#### **Construction Millwright**

Install, dismantle, or move machinery and heavy equipment according to layout plans, blueprints, or other drawings.

#### **Electrical Repairing**

Perform bench work required in repairing, testing, and assembling parts for electrical and electronic equipment.

#### **Industrial Mechanic**

Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems.

#### **Heavy-Duty Equipment Mechanic**

Diagnose, adjust, repair, or overhaul mobile mechanical, hydraulic, and pneumatic equipment, such as cranes, bulldozers, graders, and conveyors, used in construction, logging, and surface mining.

#### **Locomotive Mechanic**

Make repairs to diesel, diesel electric, electric and steam locomotives.

#### **Laborer**

Do general manual labor in and about the plant.

#### **Machinist**

Set up and operate machine tools, perform any dismantling, fitting or assembly required for plant maintenance or construction.

**Maintenance Analyst**

Prepares schedules for preventive maintenance of equipment to ensure uninterrupted operation of equipment: Reviews maintenance schedule to determine preventive maintenance to be performed on equipment.

**Millwright**

Inspect, repair, replace, install, adjust, and maintain all mechanical equipment in a major producing unit or assigned area.

**System Repairing**

Install, repair, construct, adjust, modify and service all types of electronic equipment.

**Production Occupations****Agglomerator Operator**

Control panel, data loggers and alarm systems, 3 agglomerating lines; control the taconite pelletizing process following specified procedure to meet product specifications.

**Mill Operator**

Set up, operate, or tend milling or planing machines to mill, plane, shape, groove, or profile metal or plastic work pieces.

**Plant and System Operator****Production Worker**

Typically [work](#) in a manufacturing, warehouse or service setting, and can have a variety of responsibilities depending on the type of environment they work in. Production workers typically work in labor intensive positions, continually repeating a process in a team environment to mass produce a product or service.

**Solderer**

Braze or solder together components to assemble fabricated metal parts, using soldering iron, torch, or welding machine and flux.

**Welder**

Use hand-welding or flame-cutting equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.

## **Health and Safety Occupations**

### **Health and Safety Training Supervisor**

Plan, implement, and coordinate safety programs, requiring application of engineering principles and technology, to prevent or correct unsafe environmental working conditions.

### **Health and Safety Worker**

Review, evaluate, and analyze work environments and design programs and procedures to control, eliminate, and prevent disease or injury caused by chemical, physical, and biological agents or ergonomic factors. May conduct inspections and enforce adherence to laws and regulations governing the health and safety of individuals.

### **Nursing Supervisor**

Under general direction, provides nursing care of patients; plans and oversees departmental staff nursing activities, ensuring customer satisfaction and adherence to policies, procedures, standards, and regulations.

### **Registered Nurse**

Assess patient health problems and needs, develop and implement nursing care plans, and maintain medical records. Administer nursing care to ill, injured, convalescent, or disabled patients. May advise patients on health maintenance and disease prevention or provide case management. Licensing or registration required.

Definitions obtained from: <http://www.onetonline.org/>