

Classify Cognofile

11-1021.00 General and Operations Managers Senior level position assuming education and experience prerequisite

Plan, direct, or coordinate the operations of companies or public and private sector organizations. Duties and responsibilities include formulating policies, managing daily operations, and planning the use of materials and human resources, but are too diverse and general in nature to be classified in any one functional area of management or administration, such as personnel, purchasing, or administrative services. Includes owners and managers who head small business establishments whose duties are primarily managerial.

11-1031.00 Legislators Senior level position assuming education and experience prerequisite Develop laws and statutes at the Federal, State, or local level.

11-3011.00 Administrative Services Managers Senior level position assuming education and experience prerequisite

Coordinates activities of clerical and administrative personnel in establishment or organization. Prepares and reviews operational reports and schedules to ensure accuracy and efficiency. Formulates budgetary reports. Hires and terminates clerical and administrative personnel. Conducts classes to teach procedures to staff. Recommends cost saving methods, such as supply changes and disposal of records to improve efficiency of department. Analyzes internal processes and plans or implements procedural and policy changes to improve operations.

11-3051.00 Industrial Production Managers Senior level position assuming education and experience prerequisite Directs and coordinates production, processing, distribution, and marketing activities of industrial organization. Coordinates and recommends procedures for facility and equipment maintenance or modification. Develops budgets and approves expenditures for supplies, materials, and human resources. Resolves personnel grievances. Hires, trains, evaluates, and discharges staff. Prepares and maintains production reports and personnel records. Examines samples of raw products or directs testing during processing to ensure finished products conform to prescribed quality standards. Reviews plans and confers with research and support staff to develop new products and processes or the quality of existing products. Analyzes production, quality control, maintenance, and other operational reports to detect production problems. Reviews operations and confers with technical or administrative staff to resolve production or processing problems. Negotiates materials prices with suppliers. Initiates and coordinates inventory and cost control programs. Reviews processing schedules and production orders to determine staffing requirements, work procedures, and duty assignments.

11-3061.00 Purchasing Managers Mid – Senior level position assuming education and experience prerequisite Directs and coordinates activities of personnel engaged in buying, selling, and distributing materials, equipment, machinery, and supplies. Develops and implements office, operations, and systems instructions, policies, and procedures. Conducts inventory and directs buyers in purchase of products, materials, and supplies. Determines merchandise costs and formulates and coordinates merchandising policies and activities to ensure profit. Represents company in formulating policies and negotiating contracts with suppliers. Prepares, reviews, and processes requisitions and purchase orders for supplies and equipment. Analyzes market and delivery systems to determine present and future material availability. Prepares report regarding market conditions and merchandise costs.

11-3071.01 Transportation Managers Senior level position assuming education and experience prerequisite
Directs and coordinates, through subordinates, activities of operations department to obtain use of equipment, facilities, and human resources. Participates in union contract negotiations and settlement of grievances. Negotiates and authorizes contracts with equipment and materials suppliers. Oversees procurement process, including research and testing of equipment, vendor contacts, and approval of requisitions. Inspects or oversees repairs and maintenance to equipment, vehicles, and facilities to enforce standards for safety, efficiency, cleanliness, and appearance. Acts as organization representative before commissions or regulatory bodies during hearings, such as to increase rates and change routes and schedules. Oversees workers assigning tariff classifications, and preparing billing according to mode of transportation and destination of shipment. Oversees process of investigation and response to customer or shipper complaints relating to operations department. Recommends or authorizes capital expenditures for acquisition of new equipment or property to increase efficiency and services of operations department. Enforces compliance of operation personnel with administrative policies, procedures, safety rules, and government regulations. Reviews transportation schedules, worker assignments and routes to ensure compliance with standards for personnel selection, safety, and union contract terms. Conducts investigations in cooperation with government agencies to determine cause of transportation accidents and to improve safety procedures. Prepares management recommendations, such as need for increasing fares, tariffs, or



expansion or changes to existing schedules. Oversees activities relating to dispatching, routing, and tracking transportation vehicles, such as aircraft and railroad cars. Analyzes expenditures, and other financial reports to develop plans, policies, and budgets for increasing profits and improving services. Confers and cooperates with management and other in formulating and implementing administrative, operational and customer relations, policies and procedures.

11-3071.02 Storage and Distribution Managers Senior level position assuming education and experience prerequisite

Establishes standard and emergency operating procedures for receiving, handling, storing, shipping, or salvaging products or materials. Examines products or materials to estimate quantities or weight and type of container required for storage or transport. Interacts with customers or shippers to solicit new business, answer questions about services offered or required, and investigate complaints. Prepares or directs preparation of correspondence, reports, and operations, maintenance, and safety manuals. Schedules air or surface pickup, delivery, or distribution of products or materials. Interviews, selects, and trains warehouse and supervisory personnel. Examines invoices and shipping manifests for conformity to tariff and customs regulations and contacts customs officials to effect release of shipments. Reviews invoices, work orders, consumption reports, and demand forecasts to estimate peak delivery periods and issue work assignments. Supervises the activities of worker engaged in receiving, storing, testing, and shipping products or materials. Inspects physical condition of warehouse and equipment and prepares work orders for testing, maintenance, or repair. Develops and implements plans for facility modification or expansion, such as equipment purchase or changes in space allocation or structural design. Negotiates contracts, settlements, and freight-handling agreements to resolve problems between foreign and domestic shippers. Plans, develops, and implements warehouse safety and security programs and activities. Confers with department heads to coordinate warehouse activities, such as production, sales, records control, and purchasing.

11-9011.01 Nursery and Greenhouse Managers Mid – Senior level position assuming education and experience prerequisite

Manages nursery to grow horticultural plants for sale to trade or retail customers, for display or exhibition, or for research. Confers with horticultural personnel in planning facility renovations or additions. Negotiates contracts for lease of lands or trucks or for purchase of trees. Coordinates clerical, record keeping, inventory, requisition, and marketing activities. Tours work areas to observe work being done, to inspect crops, and to evaluate plant and soil conditions. Determines type and quantity of horticultural plants to be grown, such as trees, shrubs, flowers, ornamental plants, or vegetables, based on budget, projected sales volume, or executive directive. Grows horticultural plants under controlled conditions hydroponically. Selects and purchases sees, plant nutrients, and disease control chemicals. Considers such factors as whether plants need hothouse/greenhouse or natural weather growing conditions. Hires workers and directs supervisors and workers planting seeds, controlling plant growth and disease, potting, or cutting plants for marketing.

11-9011.02 Agricultural Crop Farm Managers Senior level position assuming education and experience prerequisite

Directs and coordinates worker activities, such as planting, irrigations, chemical application, harvesting, grading, payroll, and record keeping. Contracts with farmers or independent owners for raising of crops or for management of crop production. Analyzes market conditions to determine acreage allocations. Coordinates growing activities with those of engineering, equipment maintenance, packing houses, and other related departments. Hires, discharges, transfers, and promotes workers, enforces safety regulations, and interprets policies. Purchases machinery, equipment, and supplies, such as tractors, sees, fertilizer, and chemicals. Plans and directs development and production of hybrid plant varieties with high yield or disease and insect resistant characteristics. Inspects orchards and fields to determine maturity dates of corps or to estimate potential crop damage from weather. Inspects equipment to ensure proper functioning. Analyzes soil to determine type and quantity of fertilizer required for maximum production. Determines procedural changes in drying, grading, storage, and shipment for greater efficiency and accuracy. Records information, such as production, farm management practices, and parent stock, and prepares financial and operational reports. Confers with purchasers and arranges for sale of crops. Negotiates with bank officials to obtain credit from bank. Evaluates financial statements and makes budget proposals.

11-9011.03 Fish Hatchery Managers Senior level position assuming education and experience prerequisite Determines, administers, and executes policies relating to administration, standards of hatchery operations, and facility maintenance. Prepares reports required by state and federal laws. Approves employment and discharge of employees, signs payrolls, and performs personnel duties. Accounts for and dispenses funds. Prepares budget reports. Oversees trapping and spawning of fish, egg incubation, and fry rearing, applying knowledge of management and fish culturing techniques. Oversees movement of mature fish to lakes, ponds, streams or commercial tanks. Collects information



regarding techniques for collecting, fertilizing, incubating spawn, and treatment of spawn and fry. Confers with biologists and other fishery personnel to obtain data concerning fish habits, food, and environmental requirements.

11-9012.00 Farmers and Ranchers Mid – Senior level position assuming education and experience prerequisite Harvests crops and collects specialty products, such as royal jelly from queen bee cells and honey from honeycombs. Sets up and operates farm machinery to till soil, plant, prune, fertilize, apply herbicides and pesticides, and haul harvested crops. Inspects growing environment to maintain optimum growing or breeding conditions. Determines kind and quantity of crops or livestock to be raised, according to market conditions, weather, and farm size. Breeds and raises stock, such as animals, poultry, honeybees, or earthworms. Arranges with buyers for sale and shipment of crops. Hires and directs workers engaged in planting, cultivating, irrigating, harvesting, and marketing crops and raising livestock. Assembles, positions, and secures structures, such as trellises or beehives, using hand tools. Lubricates, adjusts, and makes minor repairs on farm equipment, using oilcan, grease gun, and hand tools. Grades and packages crop for marketing. Maintains employee and financial records. Demonstrates and explains farm work techniques and safety regulations to workers. Installs irrigation systems and irrigates fields. Selects and purchases supplies and equipment, such as seed, tree stock, fertilizers, farm machinery, implements, livestock, and feed. Destroys diseased or superfluous crops, such as queen bee cells, bee colonies, parasites, and vermin. Plans harvesting considering ripeness and maturity of crop and weather conditions. Grows out of season crops in greenhouse or early crops in cold-frame bed, or buds and grafts plant stock.

11-9021.00 Construction Managers Mid – Senior level position assuming education and experience prerequisite Plans, organizes, and directs activities concerned with construction and maintenance of structures, facilities, and systems. Investigates reports of damage at construction sites to ensure proper procedures are being carried out. Dispatches workers to construction sites to work on specified project. Formulates reports concerning such areas as work progress, costs, and scheduling. Studies job specifications to plan and approve construction of project. Directs and supervises workers on construction site to ensure project meets specifications. Contracts workers to perform construction work in accordance with specifications. Interprets and explains plans and contract terms to administrative staff, workers, and clients. Requisitions supplies and materials to complete construction project. Inspects and reviews construction work, repair projects, and reports to ensure work conforms to specifications. Confers with supervisory personnel to discuss such matters as work procedures, complaints, and construction problems.

11-9031.00 Education Administrators, Preschool and Child Care Center/Program Senior level position assuming education and experience prerequisite

Establishes program philosophy plans, policies, and academic codes of ethics to maintain educational standards for student screening, placement and training. Prepares and submits budget requests or grant proposals to solicit program funding. Coordinates outreach activities with businesses, communities, and other institutions or organizations to identify educational needs, and establish and coordinate programs. Directs and coordinates activities of teachers or administrators at daycare centers, schools, public agencies, and institutions. Organizes and directs committees of specialists, volunteers, and staff to provide technical and advisory assistance for programs. Recruits, hires, trains, and evaluates primary and supplemental staff and recommends personnel actions for programs and services. Plans and coordinates consumer research and educational services to assist organizations in product development and marketing. Teaches classes or courses to students. Completes, maintains, or assigns preparation of attendance, activity, planning, or personnel reports and records for officials and agencies. Reviews and interprets government codes and develops programs to ensure facility safety, security, and maintenance. Counsels and provides guidance to students regarding personal, academic, or behavioral problems. Confers with parents and staff to discuss educational activities, policies, and student behavioral or learning problems. Writes articles, manuals, and other publications and assists in the distribution of promotional literature. Contacts and addresses commercial, community, or political groups to promote educational programs and services or lobby for legislative changes. Determines allocations of funds for staff, supplies, materials, and equipment and authorizes purchases. Collects and analyzes survey data, regulatory information, and demographic and employment trends to forecast enrollment patterns and curriculum changes. Determines scope of educational program offerings and prepares drafts of course schedules and descriptions to estimate staffing and facility requirements. Evaluates programs to determine effectiveness, efficiency and utilization and to ensure activities comply with federal, state, and local regulations. Plans, directs, and monitors instructional methods and content for educational, vocational, or student activity programs. Reviews and approves new programs or recommends modifications to existing programs.

11-9032.00 Education Administrators, Elementary and Secondary School Senior level position assuming education and experience prerequisite

Establishes program philosophy plans, policies, and academic codes of ethics to maintain educational standards for student screening, placement and training. Confers with parents and staff to discuss educational activities, policies, and student behavioral or learning problems. Writes articles, manuals, and other publications and assists in the distribution of



promotional literature. Contacts and addresses commercial, community, or political groups to promote educational programs and services or lobby for legislative changes. Recruits, hires, trains, and evaluates primary and supplemental staff and recommends personnel actions for programs and services. Plans and coordinates consumer research and educational services to assist organizations in product development and marketing. Organizes and directs committees of specialists, volunteers, and staff to provide technical and advisory assistance for programs. Determines allocations of funds for staff, supplies, materials, and equipment and authorizes purchases. Directs and coordinates activities of teachers or administrators at daycare centers, schools, public agencies, and institutions. Teaches classes or courses to students, Completes, maintains, or assigns preparation of attendance, activity, planning, or personnel reports and records for officials and agencies. Reviews and interprets government codes and develops programs to ensure facility safety, security, and maintenance. Counsels and provides guidance to students regarding personal, academic, or behavioral problems. Evaluates programs to determine effectiveness, efficiency and utilization and to ensure activities comply with federal, state, and local regulations. Prepares and submits budget requests or grant proposals to solicit program funding. Determines scope of educational program offerings and prepares drafts of course schedules and descriptions to estimate staffing and facility requirements. Collects and analyzes survey data, regulatory information, and demographic and employment trends to forecast enrollment patterns and curriculum changes. Coordinates outreach activities with businesses, communities, and other institutions or organizations to identify educational needs, and establish and coordinate programs. Reviews and approves new programs or recommends modifications to existing programs. Plans, directs, and monitors instructional methods and content for educational, vocational, or student activity programs.

11-9041.00 Engineering Managers Senior level position assuming education and experience prerequisite Establishes procedures, and directs testing, operation, maintenance, and repair of transmitter equipment. Evaluates contract proposals, directs negotiation of research contracts, and prepares bids and contracts. Plans and directs installation, maintenance, testing, and repair of facilities and equipment. Directs, reviews, and approves product design and changes, and directs testing. Plans, coordinates, and directs engineering project, organizes and assigns staff, and directs integration of technical activities with products. Plans and directs oil field development, gas and oil production, and geothermal drilling. Analyzes technology, resource needs, and market demand, and confers with management, production, and marketing staff to plan and assess feasibility of project. Plans, directs, and coordinates survey work with activities of other staff, certifies survey work, and writes land legal descriptions. Administers highway planning, construction, and maintenance, and reviews and recommends or approves contracts and cost estimates. Directs engineering of water control, treatment, and distribution projects. Confers with and prepares reports for officials and speaks to public to solicit support.

11-9051.00 Food Service Managers Mid – Senior level position assuming education and experience prerequisite Monitors compliance with health and fire regulations regarding food preparation and serving and building maintenance in lodging and dining facility. Plans menus and food utilization based on anticipated number of guests, nutritional value, palatability, popularity, and costs. Organizes and directs worker training programs, resolves personnel problems, hires new staff, and evaluates employee performance in dining and lodging facilities. Estimates food, liquor, wine, and other beverage consumption to anticipate amount to be purchased or requisitioned. Monitors budget, payroll records, and reviews financial transactions to ensure expenditures are authorized and budgeted. Monitors food preparation and methods, size of portions, and garnishing and presentation of food to ensure food is prepared and presented in accepted manner. Creates specialty dishes and develops recipes to be used in dining facility. Tests cooked food by tasting and smelling to ensure palatability and flavor conformity. Keeps records required by government agencies regarding sanitation and regarding food subsidies where indicated. Establishes and enforces nutrition standards for dining establishment based on accepted industry standards. Reviews menus and analyzes recipes to determine labor and overhead costs, and assigns prices to menu items. Investigates and resolves complaints regarding food quality, service, or accommodations. Coordinates assignments of cooking personnel to ensure economical use of food and timely preparation.

11-9061.00 Funeral Directors Senior level position assuming education and experience prerequisite

Arranges and directs funeral services. Interviews family or other authorized person to arrange details, such as selection of casket and location and time of burial. Closes casket and leads funeral cortege to church or burial site. Directs placement and removal of casket from hearse. Plans placement of casket in parlor or chapel and adjusts lights, fixtures, and floral displays. Directs preparations and shipment of body for out-of-state burial.

11-9131.00 Postmasters and Mail Superintendents Senior level position assuming education and experience prerequisite

Organizes and supervises directly, or through subordinates, such activities as processing incoming and outgoing mail to



ensure efficient service to patrons. Directs and coordinates operational, management, and supportive services of associate post offices within district area known as sectional center. Directs and coordinates operations of several sectional centers within district. Prepares and submits detailed and summary reports of post office activities to designated supervisors. Confers with suppliers to obtain bids for proposed purchases, requisitions supplies, and disburses funds as specified by law. Selects, trains, and evaluates performance of employees and prepares work schedules. Negotiates labor disputes. Selects, trains, and terminates postmasters and managers of associate postal units. Resolves customer complaints and informs public of postal laws and regulations.

11-9141.00 Property, Real Estate, and Community Association Managers Senior level position assuming education and experience prerequisite

Manages and oversees operations, maintenance, and administrative functions for commercial, industrial, or residential properties. Directs collection of monthly assessments, rental fees and deposits, and payment of insurance premiums, mortgage, taxes, and incurred operating expenses. Meets with clients to negotiate management and service contracts, determine priorities, and discuss financial and operational status of property. Plans, schedules, and coordinates general maintenance, major repairs, and remodeling or construction projects for commercial or residential property. Investigates complaints, disturbances, and violations and resolves problems following management rules and regulations. Recruits, hires, and trains managerial, clerical, and maintenance staff, or contracts with vendors for security, maintenance. extermination, or grounds keeping personnel. Directs and coordinates the activities of staff and contract personnel and evaluates performance. Maintains records of sales, rental or usage activity, special permits issued, maintenance and operating costs, or property availability. Purchases building and maintenance supplies, equipment, or furniture. Develops and administers annual operating budget. Negotiates for sale, lease, or development of property, and completes or reviews appropriate documents and forms. Inspects facilities and equipment and inventories building contents to document damage and determine repair needs. Assembles and analyzes construction and vendor service contract bids. Confers with legal authority to ensure transactions and terminations of contracts and agreements are in accordance with court orders, laws, and regulations. Maintains contact with insurance carrier, fire and police departments, and other agencies to ensure protection and compliance with codes and regulations. Prepares reports summarizing financial and operational status of property or facility. Meets with prospective leasers to show property, explain terms of occupancy, and provide information about local area.

11-9151.00 Social and Community Service Managers Mid – Senior level position assuming education and experience prerequisite

Confers and consults with individuals, groups, and committees to determine needs, and plan, implement, and extend organization's programs and services. Observes workers to evaluate performance and ensure work meets established standards. Interviews, recruits, or hires volunteers and staff. Instructs and trains agency staff or volunteers in skills required to provide services. Advises volunteers and volunteer leaders to ensure quality of programs and effective use of resources. Speaks to community groups to explain and interpret agency purpose, programs, and policies. Coordinates volunteer service programs, such as Red Cross, hospital volunteers, or vocational training for disabled individuals. Assigns duties to staff or volunteers. Plans, directs, and prepares fund-raising activities and public relations materials. Researches and analyzes member or community needs as basis for community development. Prepares, distributes, and maintains records and reports, such as budgets, personnel records, or training manuals. Participates in program activities to serve clients of agency. Establishes and maintains relationships with other agencies and organizations in community to meet and not duplicate community needs and services. Determines organizational policies, defines scope of services offered, and administration of procedures.

13-1021.00 Purchasing Agents and Buyers, Farm Products Entry – Mid – Senior level position assuming education and experience prerequisite

Negotiates contracts with farmers for production or purchase of agricultural products such as milk, grains, and Christmas trees. Inspects and tests crops or other farm products to determine quality and to detect evidence of disease or insect damage. Maintains records of business transactions. Estimates production possibilities by surveying property and studying factors such as history of crop rotation, soil fertility, and irrigation facilities. Writes articles for publication. Coordinates and directs activities or workers engaged in cutting, transporting, storing, or milling products and in maintaining records. Advises farm groups and growers on land preparation and livestock care to maximize quantity and quality of production. Plans and arranges for transportation for crops, milk, or other products to dairy or processing facility. Arranges sales, loans, or financing for supplies, such as equipment, seed, feed, fertilizer, and chemicals. Reviews orders and determines product types and quantities required to meet demand.



13-1023.00 Purchasing Agents, Except Wholesale, Retail, and Farm Products Entry – Mid – Senior level position assuming education and experience prerequisite

Negotiates or renegotiates, and administers contracts with suppliers, vendors, and other representatives. Formulates policies and procedures for bid proposals and procurement of goods and services. Locates and arranges for purchase of goods and services necessary for efficient operation of organization. Analyzes price proposals, financial reports, and other data and information to determine reasonable prices. Directs and coordinates workers' activities involving bid proposals and procurement of goods and services. Arbitrates claims and resolves complaints generated during performance of contract. Confers with personnel, users, and vendors to discuss defective or unacceptable goods or services and determines corrective action. Maintains and reviews computerized or manual records of items purchased, costs, delivery, product performance, and inventories. Evaluates and monitors contract performance to determine need for changes and to ensure compliance with contractual obligations. Prepares purchase orders or bid proposals and reviews requisitions for goods and services.

13-1031.01 Claims Examiners, Property and Casualty Insurance Mid – Senior level position assuming education and experience prerequisite

Analyzes data used in settling claim to determine its validity in payment of claims. Reports overpayments, underpayments, and other irregularities. Confers with legal counsel on claims requiring litigation.

13-1031.02 Insurance Adjusters, Examiners, and Investigators Mid – Senior level position assuming education and experience prerequisite

Investigates and assesses damage to property. Collects evidence to support contested claims in court. Communicates with former associates to verify employment record and to obtain background information regarding persons or businesses applying for credit. Prepares report of findings of investigation. Obtains credit information from banks and other credit services. Refers questionable claims to investigator or claims adjuster for investigation or settlement. Examines claims form and other records to determine insurance coverage. Interviews or corresponds with claimant and witnesses, consults police and hospital records, and inspects property damage to determine extent of liability. Analyzes information gathered by investigation and reports findings and recommendations. Examines titles to property to determine validity and acts as company agent in transactions with property owners. Negotiates claim settlements and recommends litigation when settlement cannot be negotiated. Interviews or corresponds with agents and claimants to correct errors or omissions and to investigate questionable entries.

13-1032.00 Insurance Appraisers, Auto Damage Mid – Senior level position assuming education and experience prerequisite

Estimates parts and labor to repair damage, using standard automotive labor and parts cost manuals and knowledge of automotive repair. Prepares insurance forms to indicate repair cost estimates and recommendations. Evaluates practicality of repair as opposed to payment of market value of vehicle before accident. Arranges to have damage appraised by another appraiser to resolve disagreement with shop on repair cost. Determines salvage value on total loss vehicle. Reviews repair cost estimates with automobile repair shop to secure agreement on cost of repairs. Examines damaged vehicle to determine extent of structural, body, mechanical, electrical, or interior damage.

13-1061.00 Emergency Management Specialists Mid – Senior level position assuming education and experience prerequisite

Coordinate disaster response or crisis management activities, provide disaster preparedness training, and prepare emergency plans and procedures for natural (e.g., hurricanes, floods, earthquakes), wartime, or technological (e.g., nuclear power plant emergencies, hazardous materials spills) disasters or hostage situations.

19-1031.01 Soil Conservationists Mid – Senior level position assuming education and experience prerequisite

Plans soil management practices, such as crop rotation, reforestation, permanent vegetation, contour plowing, or terracing, to maintain soil and conserve water. Develops plans for conservation, such as conservation cropping systems, woodlands management, pasture planning and engineering systems. Analyzes results of investigations to determine measures needed to maintain or restore proper soil management. Monitors projects during and after construction to ensure projects conform to design specifications. Surveys property to mark locations and measurements, using surveying instruments. Revisits land users to view implemented land use practices and plans. Discusses conservation plans, problems, and alternative solutions with land users, applying knowledge of agronomy, soil science, forestry, or agricultural sciences. Computes cost estimates of different conservation practices based on needs of land users, maintenance requirements and life expectancy of practices. Develops or participates in environmental studies. Computes design specification for implementation of conservation practices, using survey and field information technical guides,



engineering manuals, and calculator. Conducts surveys and investigations of various land uses, such as rural or urban, agriculture, construction, forestry or mining.

19-1031.02 Range Managers Entry – Mid – Senior level position assuming education and experience prerequisite Studies rangelands to determine best grazing seasons. Develops methods for protecting range from fire and rodent damage. Plans and directs construction of range improvements, such as fencing, corrals, stock watering reservoirs and soil erosion control structures. Plans and directs maintenance of range improvements. Develops methods for controlling poisonous plants in rangelands. Studies rangelands to determine number and kind of livestock that can be most profitably grazed. Develops improved practices for range reseeding. Studies forage plants and their growth requirements to determine varieties best suited to particular range.

19-4011.01 Agricultural Technicians Entry – Mid level position assuming education and experience prerequisite Sets up laboratory and field equipment to assist research workers. Cleans and maintains laboratory and field equipment and work areas. Plants seeds in specified area, and counts plants that grow, to determine germination rate of seeds. Pricks animals, and collects blood samples for testing, using hand-held devices. Records production and test data for evaluation by personnel. Measures or weighs ingredients used in testing or as animal feed. Adjusts testing equipment and prepares culture media, following standard procedures. Waters and feeds rations to livestock and laboratory animals. Examines animals and specimens to determine presence of disease or other problems.

19-4011.02 Food Science Technicians Entry – Mid level position assuming education and experience prerequisite Conducts standardized tests on food, beverages, additives, and preservatives to ensure compliance to standards for factors such as color, texture, nutrients, and coloring. Tastes or smells food or beverages to ensure flavor meets specifications or to select samples with specific characteristics. Computes moisture or salt content, percentage of ingredients, formulas, or other product factors, using mathematical and chemical procedures. Mixes, blends, or cultivates ingredients to make reagents or to manufacture food or beverage products. Prepares slides and incubates slides with cell cultures. Orders supplies to maintain inventory in laboratory or in storage facility of food or beverage processing plant. Measures, tests, and weighs bottles, cans, and other containers to ensure hardness, strength, and dimensions meet specifications. Cleans and sterilizes laboratory equipment. Records and compiles test results, and prepares graphs, charts, and reports. Examines chemical and biological samples to identify cell structure, bacteria, or extraneous material, using microscope. Analyzes test results to classify product, or compares results with standard tables.

19-4061.00 City Planning Aides Entry – Mid level position assuming education and experience prerequisite Summarizes information from maps, reports, investigations, and books. Answers public inquiries. Prepares reports, using statistics, charts, and graphs, to illustrate planning studies in areas, such as population, land use, or zoning. Prepares and updates files and records. Conducts interviews and surveys and observes conditions, which affect land usage.

19-4091.00 Environmental Science and Protection Technicians, Including Health Entry – Mid level position assuming education and experience prerequisite

Collects samples of gases, soils, water, industrial wastewater, and asbestos products to conduct tests on pollutant levels. Performs chemical and physical laboratory and field tests on collected samples to assess compliance with pollution standards, using test instruments. Examines and analyzes material for presence and concentration of contaminants such as asbestos in environment, using variety of microscopes. Calculates amount of pollutant in samples or computes air pollution or gas flow in industrial processes, using chemical and mathematical formulas. Determines amounts and kinds of chemicals to use in destroying harmful organisms and removing impurities from purification systems. Prepares samples or photomicrographs for testing and analysis. Discusses test results and analyses with customers. Calibrates microscopes and test instruments. Develops procedures and directs activities of workers in laboratory. Records test data and prepares reports, summaries, and charts that interpret test results and recommend changes.

19-4093.00 Forest and Conservation Technicians Entry – Mid level position assuming education and experience prerequisite

Compile data pertaining to size, content, condition, and other characteristics of forest tracts, under direction of foresters. Train and lead forest workers in forest propagation, fire prevention and suppression. May assist conservation specialists in managing, improving, and protecting rangelands and wildlife habitats. Provide technical assistance regarding the conservation of soil, water, and related natural resources.

21-1092.00 Probation Officers and Correctional Treatment Specialists Entry – Mid level position assuming education and experience prerequisite

Counsels offender and refers offender to social resources of community for assistance. Provides guidance to inmates or offenders, such as development of vocational and educational plans and available social services. Interviews offender or inmate to determine social progress, individual problems, needs, interests, and attitude. Conducts follow-up interview with offender or inmate to ascertain progress made. Reviews and evaluates legal and social history and progress of offender or inmate. Determines nature and extent of inmate's or offender's criminal record and current and prospective social problems. Conducts pre-hearing or pre-sentencing investigations and testifies in court. Prepares and maintains case folder for each assigned inmate or offender. Develops and prepares informational packets of social agencies and assistance organizations and programs, for inmate or offender. Assists offender or inmate with matters concerning detainers, sentences in other jurisdictions, writs, and applications for social assistance. Makes recommendations concerning conditional release or institutionalization of offender or inmate. Confers with inmate's or offender's family to identify needs and problems, and to ensure that family and business are attended to. Informs offender or inmate of requirements of conditional release, such as office visits, restitution payments, or educational and employment stipulations. Consults with attorneys, judges, and institution personnel to evaluate inmate's social progress. Formulates rehabilitation plan for each assigned offender or inmate.

21-1093.00 Social and Human Service Assistants Entry level position assuming education and experience prerequisite

Visits individuals in homes or attends group meetings to provide information on agency services, requirements and procedures. Interviews individuals and family members to compile information on social, educational, criminal, institutional, or drug history. Advises clients regarding food stamps, childcare, food, money management, sanitation, and housekeeping. Provides information on and refers individuals to public or private agencies and community services for assistance. Assists in locating housing for displaced individuals. Monitors free, supplementary meal program to ensure cleanliness of facility and that eligibility guidelines are met for persons receiving meals. Observes clients' food selections and recommends alternate economical and nutritional food choices. Meets with youth groups to acquaint them with consequences of delinquent acts. Keeps records and prepares reports for owner or management concerning visits with clients. Submits to and reviews reports and problems with superior. Informs tenants of facilities, such as laundries and playgrounds. Demonstrates use and care of equipment for tenant use. Explains rules established by owner or management, such as sanitation and maintenance requirements, and parking regulations. Transports and accompanies clients to shopping area and to appointments, using automobile. Oversees day-to-day group activities of residents in institution. Consults with supervisor concerning programs for individual families. Cares for children in client's home during client's appointments. Observes and discusses meal preparation and suggests alternate methods of food preparation. Assists in planning of food budget, utilizing charts and sample budgets. Assists clients with preparation of forms, such as tax or rent forms.

23-2011.00 Paralegals and Legal Assistants Entry – Mid level position assuming education and experience prerequisite

Gathers and analyzes research data, such as statutes, decisions, and legal articles, codes, and documents. Prepares legal documents, including briefs, pleadings, appeals, wills, contracts and real estate closing statements. Investigates facts and law of cases to determine causes of action and to prepare cases. Appraises and inventories real and personal property for estate planning. Calls upon witnesses to testify at hearing. Arbitrates disputes between parties and assists in real estate closing process. Presents arguments and evidence to support appeal at appeal hearing. Keeps and monitors legal volumes to ensure that law library is up to date. Directs and coordinates law office activity, including delivery of subpoenas. Answers questions regarding legal issues pertaining to civil service hearings. Prepares affidavits or other documents, maintains document file, and files pleadings with court clerk.

25-1065.00 Political Science Teachers, Postsecondary Entry – Mid – Senior level position assuming education and experience prerequisite

Acts as adviser to student organizations. Serves on faculty committee providing professional consulting services to government and industry. Conducts research in particular field of knowledge and publishes findings in professional journals. Directs research of other teachers or graduate students working for advanced academic degrees. Advises students on academic and vocational curricula. Compiles bibliographies of specialized materials for outside reading assignments. Compiles, administers, and grades examinations, or assigns this work to others. Stimulates class discussions. Prepares and delivers lectures to students.

25-1072.00 Nursing Instructors and Teachers, Postsecondary Entry – Mid – Senior level position assuming education and experience prerequisite

Instructs and lectures nursing students in principles and application of physical, biological, and psychological subjects related to nursing. Participates in planning curriculum, teaching schedule, and course outline with medical and nursing

personnel. Supervises student nurses and demonstrates patient care in clinical units or hospital. Directs seminars and panels. Conducts classes for patients in health practices and procedures. Evaluates student progress and maintains records of student classroom and clinical experience. Prepares and administers examinations to nursing students. Cooperates with medical and nursing personnel in evaluating and improving teaching and nursing practices. Issues assignments to students. Conducts and supervises laboratory work.

25-1193.00 Recreation and Fitness Studies Teachers, Postsecondary Entry – Mid – Senior level position assuming education and experience prerequisite

Teach course pertaining to recreation, leisure, and fitness studies, including exercise physiology and facilities management.

25-2012.00 Kindergarten Teachers, Except Special Education Entry – Mid – Senior level position assuming education and experience prerequisite

Teaches elemental science, personal hygiene, and humanities to children to promote physical, mental, and social development. Encourages students in activities, such as singing, dancing, and rhythmic activities, to promote self-expression and appreciation of esthetic experience. Observes children to detect signs of ill health or emotional disturbance, and to evaluate progress. Instructs children in practices of personal cleanliness and self-care. Alternates periods of strenuous activity with periods of rest or light activity to avoid over stimulation and fatigue. Discusses student problems and progress with parents. Organizes and conducts games and group projects to develop cooperative behavior and assist children in forming satisfying relationships. Supervises student activities, such as field visits, to stimulate student interest and broaden understanding of physical and social environment.

27-2021.00 Athletes and Sports Competitors Entry – Mid – Senior level position assuming education and experience prerequisite

Participates in athletic events and competitive sports, according to established rules and regulations. Plays professional sport and is identified according to sport played, such as football, basketball, baseball, hockey, or boxing. Represents team or professional sports club, speaking to groups involved in activities, such as sports clinics and fundraisers. Exercises and practices under direction of athletic trainer or professional coach to prepare and train for competitive events.

27-2022.00 Coaches and Scouts Entry – Mid – Senior level position assuming education and experience prerequisite

Analyzes athletes' performance and reviews game statistics or records to determine fitness and potential for professional sports. Evaluates team and opposition capabilities to develop and plan game strategy. Evaluates athletes' skills and discusses or recommends acquisition, trade, or position assignment of players. Negotiates with professional athletes or representatives to obtain services and arrange contracts. Prepares scouting reports detailing information, such as selection or rejection of athletes and locations identified for future recruitment. Instructs athletes, individually or in groups, demonstrating sport techniques and game strategies. Plans and directs physical conditioning program for athletes to achieve maximum athletic performance. Observes athletes to determine areas of deficiency and need for individual or team improvement.

27-2023.00 Umpires, Referees, and Other Sports Officials Entry – Mid – Senior level position assuming education and experience prerequisite

Observes actions of participants at athletic and sporting events to regulate competition and detect infractions of rules. Records and maintains information regarding participants and sporting activities. Prepares reports to regulating organization concerning sporting activities, complaints, and actions taken or needed, such as fines or other disciplinary actions. Confers with other sporting officials and facility managers to provide information, coordinate activities, and discuss problems. Inspects sporting equipment or examines participants to ensure compliance to regulations and safety of participants and spectators. Clocks events according to established standards for play, or to measure performance of participants. Makes qualifying determinations regarding participants, such as qualifying order or handicap. Directs participants to assigned areas such as starting blocks or penalty areas. Signals participants or other officials to facilitate identification of infractions or otherwise regulate play or competition. Resolves claims of rule infractions, or complaints lodged by participants, and assesses penalties based on established regulations.

27-2031.00 Dancers Entry – Mid – Senior level position assuming education and experience prerequisite Performs classical, modern, or acrobatic dances in productions. Rehearses solo or with partners or troupe members. Coordinates dancing with that of a partner or dance ensemble. Works with choreographer to refine or modify dance steps.

Auditions for parts in productions. Devises and choreographs dance for self or others. Studies and practices dance moves required in role. Harmonizes body movements to rhythm of musical accompaniment.

29-1011.00 Chiropractors Entry – Mid – Senior level position assuming education and experience prerequisite Examines patient to determine nature and extent of disorder. Manipulates spinal column and other extremities to adjust, align, or correct abnormalities caused by neurological and kinetic articular dysfunction. Utilizes supplementary measure, such as exercise, rest, water, light, heat, and nutritional therapy. Performs diagnostic procedures, including physical, neurological, and orthopedic examinations, and laboratory tests, using instruments and equipment such as s-ray machine and eletrocaridiograph.

29-1031.00 Dietitians and Nutritionists Entry – Mid – Senior level position assuming education and experience prerequisite

Develops and implements dietary care plans based on assessments of nutritional needs, diet restrictions, and other current health plans. Supervises activities of workers engaged in planning, preparing, and serving meals .Plans, conducts, and evaluates dietary, nutritional, and epidemiological research, and analyzes findings for practical applications. Evaluates nutritional care plans and provides follow-up on continuity of care. Confers with design, building, and equipment personnel to plan for construction and remodeling of food service units. Plans and prepares grant proposals to request program funding. Writes research reports and other publications to document and communicate research findings. Develops curriculum and prepares manuals, visual aids, course outlines, and other materials used in teaching. Inspects meals served for conformance to prescribed diets and standards of palatability and appearance. Plans, organizes, and conducts training programs in dietetics, nutrition, and institutional management and administration for medical students and hospital personnel. Consults with physicians and healthcare personnel to determine nutritional needs and diet restrictions of patient or client. Instructs patients and their families in nutritional principles, dietary plans, and food selection and preparation. Monitors food service operations and ensures conformance to nutritional and quality standards.

29-1071.00 Physician Assistants Entry – Mid – Senior level position assuming education and experience prerequisite

Examines patients. Compiles patient medical data, including health history and results of physical examination. Counsels patients regarding prescribed therapeutic regimens, normal growth and development, family planning, emotional problems of daily living, and health maintenance. Performs therapeutic procedures, such as injections, immunizations, suturing and wound care, and managing infection. Interprets diagnostic test results for deviations from normal. Administers or orders diagnostic tests, such as x-ray, electrocardiogram, and laboratory tests. Develops and implements patient management plans, records progress notes, and assists in provision of continuity of care.

29-1111.00 Registered Nurses Entry – Mid – Senior level position assuming education and experience prerequisite

Provides health care, first aid, and immunization in facilities such as schools, hospitals, and industry. Observes patient's skin color, dilation of pupils, and computerized equipment to monitor vital signs. Records patient's medical information and vital signs. Prepares patients for and assists with examinations. Prepares rooms, sterile instruments, equipment and supplies, and hands items to surgeon. Orders, interprets, and evaluates diagnostic tests to identify and assess patient's condition. Delivers infants and performs postpartum examinations and treatment. Instructs on topics, such as health education, disease prevention, child birth, and home nursing and develops health improvement programs. Advises and consults with specified personnel concerning necessary precautions to be taken to prevent possible contamination or infection. Administers stipulated emergency measures, and contacts obstetrician when deviations from standard are encountered during pregnancy or delivery. Informs physician of patient's condition during anesthesia. Discusses cases with physician or obstetrician. Provides prenatal and postnatal care to obstetrical patients under supervision of obstetrician. Contracts independently to render nursing care, usually to one patient, in hospital or private home. Directs and coordinates infection control program in hospital. Maintains stock of supplies. Conducts specified laboratory tests. Refers students or patients to community agencies furnishing assistance and cooperates with agencies. Prescribes or recommends drugs or other forms of treatment, such as physical therapy, inhalation therapy, or related therapeutic procedures. Administers local, inhalation, intravenous, and other anesthetics.

29-1123.00 Physical Therapists Mid – Senior level position assuming education and experience prerequisite Administers manual exercises to improve and maintain function. Administers massage, applying knowledge of massage techniques and body physiology. Instructs, motivates, and assists patient to perform various physical activities and use supportive devices, such as crutches, canes, and prostheses. Administers traction to relieve pain, using traction equipment. Records treatment, response, and progress in patient's chart or enters information into computer.

Confers with medical practitioners to obtain additional information, suggest revisions in treatment, and integrate physical therapy into patient's care. Evaluates, fits, and adjusts prosthetic and orthotic devices and recommends modification to orthotist. Instructs patient and family in treatment procedures to be continued at home. Plans and prepares written treatment program based on evaluation of patient data. Reviews physician's referral and patient's condition and medical records to determine physical therapy treatment required. Tests and measures patient's strength, motor development, sensory perception, functional capacity, and respiratory and circulatory efficiency and records data. Evaluates effects of treatment at various stages and adjusts treatments to achieve maximum benefit. Administers treatment involving application of physical agents, using equipment, moist packs, ultraviolet and infrared lamps, and ultrasound machines.

29-2031.00 Cardiovascular Technologists and Technicians Entry – Mid – Senior level position assuming education and experience prerequisite

Operates diagnostic imaging equipment to produce contrast-enhanced radiographs of heart and cardiovascular system. Activates fluoroscope and camera to produce images used to guide catheter through cardiovascular system. Injects contrast medium into blood vessels of patient. Conducts electrocardiogram, phonocardiogram, echocardiogram, stress testing, and other cardiovascular tests, using specialized electronic test equipment, recording devices, and laboratory instruments. Conducts tests of pulmonary system, using sprirometer and other respiratory testing equipment. Observes gauges, recorder, and video screens of data analysis system, during imaging of cardiovascular system. Assesses cardiac physiology and calculates valve areas from blood flow velocity measurements. Alerts physician to abnormalities or changes inpatient responses. Explains testing procedures to patient to obtain cooperation and reduce anxiety. Records test results and other data into patients record. Reviews test results with physician. Prepares and positions patients for testing. Adjusts equipment and controls according to physician's orders or established protocol. Enters factors such as amount and quality of radiation beam, and filming sequence, into computer. Compares measurements of heart wall thickness and chamber sizes to standard norms to identify abnormalities. Records analyses of heart and related structures using ultrasound equipment. Operates monitor to measure and record functions of cardiovascular and pulmonary systems, as part of cardiac catheterization team.

29-2032.00 Diagnostic Medical Sonographers Entry – Mid level position assuming education and experience prerequisite

Produce ultrasonic recordings of internal organs for use by physicians.

29-2041.00 Emergency Medical Technicians and Paramedics Mid – Senior level position assuming education and experience prerequisite

Administers first-aid treatment and life support care to sick or injured persons in pre-hospital setting. Monitors patient's condition, using electrocardiograph. Assists treatment center personnel to obtain and record victim's vital statistics, and to administer emergency treatment. Communicates with treatment center personnel to arrange reception of victims and to receive instructions for further treatment. Maintains vehicles and medical and communication equipment, and replenishes first-aid equipment and supplies. Drives mobile intensive care unit to specified location, following instructions from emergency medical dispatcher. Assists treatment center personnel to obtain information relating to circumstances of emergency. Observes, records, and reports patient's condition, and reactions to drugs and treatment, to physician. Assists in removal and transport of victims to treatment center. Assesses nature and extent of illness or injury to establish and prioritize medical procedures.

29-2053.00 Psychiatric Technicians Entry – Mid level position assuming education and experience prerequisite Helps patients with their personal hygiene, such as bathing and keeping beds, clothing, and living areas clean. Intervenes to restrain violent or potentially violent or suicidal patients by verbal or physical means as required. Leads prescribed individual or group therapy sessions as part of specific therapeutic procedures. Completes initial admittance forms for new patients. Contacts patient's relatives by telephone to arrange family conferences. Administers oral medications and hypodermic injections, following physician's prescriptions and hospital procedures. Takes and records measures of patient's general physical condition, such as pulse, temperature, and respiration, to provide daily information. Observes patients to detect behavior patterns and reports observations to medical staff. Issues medications from dispensary and maintains records in accordance with specified procedures.

29-2054.00 Respiratory Therapy Technicians Entry – Mid level position assuming education and experience prerequisite

Provide specific, well-defined respiratory care procedures under the direction of respiratory therapists and physicians.

29-2061.00 Licensed Practical and Licensed Vocational Nurses Entry – Mid – Senior level position assuming education and experience prerequisite

Administers specified medication, orally or by subcutaneous or intramuscular injection, and notes time and amount on patient's charts. Dresses wounds, gives enemas, douches, alcohol rubs, and massages. Observes patients and reports adverse reactions to medication or treatment to medical personnel in charge. Applies compresses, ice bags, and hot water bottles. Washes and dresses bodies of deceased persons. Cleans rooms, makes beds, and answers patients' calls. Assists in delivery, care, and feeding of infants. Prepares or examines food trays for prescribed diet and feeds patients. Records food and fluid intake and output. Sterilizes equipment and supplies, using germicides, sterilizer, or autoclave. Collects samples, such as urine, blood, and sputum, from patients for testing and performs routine laboratory tests on samples. Assembles and uses such equipment as catheters, tracheotomy tubes, and oxygen suppliers. Inventories and requisitions supplies. Bathes, dresses, and assists patients in walking and turning. Takes and records patients' vital signs. Provides medical treatment and personal care to patients in private home settings.

29-2081.00 Opticians, Dispensing Mid – Senior level position assuming education and experience prerequisiteMeasures client's bridge and eye size, temple length, vertex distance, pupillary distance, and optical centers of eyes, using measuring devices. Verifies finished lenses are ground to specification. Recommends specific lenses, lens coatings, and frames to suit client needs. Heats, shapes, or bends plastic or metal frames to adjust eyeglasses to fit client, using pliers and hands. Assists client in selecting frames according to style and color, coordinating frames with facial and eye measurements and optical prescription. Grinds lens edges or applies coating to lenses. Instructs clients in adapting to wearing and caring for eyeglasses. Fabricates lenses to prescription specifications. Repairs damaged frames. Evaluates prescription in conjunction with client's vocational and avocational visual requirements. Determines client's current lens prescription, when necessary, using lensometer or lens analyzer and client's eyeglasses. Prepares work order and instructions for grinding lenses and fabricating eyeglasses.

29-2091.00 Orthoptists and Prosthetists Mid – Senior level position assuming education and experience prerequisite

Fits patients for device, using static and dynamic alignments. Participates in research to modify design, fit, and function of orthopedic or prosthetic devices. Lectures and demonstrates to colleagues and other professionals concerned with orthopedics or prosthetics. Supervises laboratory activities or activities of prosthetic assistants and support staff relating to development of orthopedic or prosthetic devices. Repairs and maintains orthopedic prosthetic devices, using hand tools. Selects materials and components, and makes cast measurements, model modifications, and layouts, using measuring equipment. Evaluates device on patient and makes adjustments to assure fit, function, comfort, and quality. Instructs patients in use of orthopedic or prosthetic devices. Maintains patients' records. Examines, measures, and evaluates patients' needs in relation to disease and functional loss. Designs orthopedic and prosthetic devices, according to physician's prescription. Assists physician in formulating specifications and prescription for orthopedic and/or prosthetic devices.

29-9091.00 Athletic Trainers Entry – Mid – Senior level position assuming education and experience prerequisite Evaluates physical condition of athletes and advises or prescribes routine and corrective exercises to strengthen muscles. Administers emergency first aid, treats minor chronic disabilities, or refers injured person to physician. Recommends special diets to improve health, increase stamina, and reduce weight of athletes. Wraps ankles, fingers, wrists or other body parts with synthetic skin, gauze, or adhesive tape to support muscles and ligaments. Massages body parts to relieve soreness, strains, and bruises.

31-1011.00 Home Health Aides Entry – Mid level position assuming education and experience prerequisite Changes bed linens, washes and irons patient's laundry, and cleans patient's quarters. Assists patients into and out of bed, automobiles, or wheelchair, to lavatory, and up and down stairs. Administers prescribed oral medication under written direction of physician or as directed by home care nurse and aide. Massages patient and applies preparations and treatment, such as liniment or alcohol rubs and heat-lamp stimulation. Performs variety of miscellaneous duties as requested, such as obtaining household supplies and running errands. Entertains patient, reads aloud, and plays cards and other games with patient. Maintains records of services performed and of apparent condition of patient. Purchases, prepares, and serves food for patient and other members of family, following special prescribed diets.

31-1012.00 Nursing Aides, Orderlies, and Attendants Entry – Mid level position assuming education and experience prerequisite

Feeds patients unable to feed themselves. Sets up equipment, such as oxygen tents, portable x-ray machines, and overhead irrigation bottles. Prepares food trays. Bathes, grooms, and dresses patients. Measures and records food and liquid intake and output. Measures and records vital signs. Administers medication as directed by physician or nurse. Cleans room and changes linen. Stores, prepares, and issues dressing packs, treatment trays, and other supplies.

Administers catheterizations, bladder irrigations, enemas, and douches. Sterilizes equipment and supplies. Administers massages and alcohol rubs. Transports patient to areas, such as operating and x-ray rooms. Turns and re-positions bedfast patients, alone or with assistance, to prevent bedsores. Assists patient to walk.

31-1013.00 Psychiatric Aides Entry – Mid level position assuming education and experience prerequisite Monitors patients to ensure patients remain in assigned areas and aids or restrains patients to prevent injuries. Accompanies patients to and from wards for medical and dental treatments, shopping trips, and to religious and recreational events. Encourages patients to participate in social, educational, and recreational activities. Notes and maintains records of patients' activities, such as vital signs, eating habits, and daily behavior. Administers prescribed medications, measures vital signs, and performs other nursing duties, such as collecting specimens and drawing blood samples. Serves meals and feeds patients needing assistance. Demonstrates and assists patients in bathing, dressing, and grooming. Assists patients in becoming accustomed to hospital routine.

31-2011.00 Occupational Therapist Assistants Entry – Mid level position assuming education and experience prerequisite

Assists occupational therapist to plan, implement, and administer educational, vocational, and recreational activities to restore, reinforce, and enhance task performances. Reports information and observations to supervisor verbally. Assists in evaluation of physically, developmentally, mentally retarded, or emotionally disabled client's daily living skills and capacities. Instructs or assists in instructing patient and family in home programs and basic living skills as well as care and use of adaptive equipment. Helps professional staff demonstrate therapy techniques, such as manual and creative arts, and games. Designs and adapts equipment and working-living environment. Transports patient to and from occupational therapy work area. Prepares work material, assembles and maintains equipment, and orders supplies. Fabricates splints and other assistant devices. Assists educational specialist or clinical psychologist in administering situational or diagnostic tests to measure client's abilities or progress. Maintains observed information in client records and prepares written reports.

31-2012.00 Occupational Therapist Aides Entry – Mid level position assuming education and experience prerequisite

Assists occupational therapist to plan, implement, and administer educational, vocational, and recreational activities to restore, reinforce, and enhance task performances. Assists in evaluation of physically, developmentally, mentally retarded, or emotionally disabled client's daily living skills and capacities. Instructs or assists in instructing patient and family in home programs and basic living skills as well as care and use of adaptive equipment. Reports information and observations to supervisor verbally. Transports patient to and from occupational therapy work area. Maintains observed information in client records and prepares written reports. Designs and adapts equipment and working-living environment. Prepares work material, assembles and maintains equipment, and orders supplies. Fabricates splints and other assistant devices. Assists educational specialist or clinical psychologist in administering situational or diagnostic tests to measure client's abilities or progress. Helps professional staff demonstrate therapy techniques, such as manual and creative arts, and games.

31-2021.00 Physical Therapist Assistants Entry – Mid level position assuming education and experience prerequisite

Fits patients for orthopedic braces, prostheses, and supportive devices, such as crutches. Performs clerical duties, such as taking inventory, ordering supplies, answering telephone, taking messages, and filling out forms. Cleans work area and equipment after treatment. Transports patients to and from treatment area. Records treatment given and equipment used. Administers active and passive manual therapeutic exercises, therapeutic massage, and heat, light, sound, water, and electrical modality treatments, such as ultrasound. Administers traction to relieve neck and back pain, using intermittent and static traction equipment. Instructs, motivates, and assists patients to learn and improve functional activities, such as perambulation, transfer, ambulation, and daily-living activities. Safeguards, motivates, and assists patients practicing exercises and functional activities under direction of professional staff. Trains patients in use and care of orthopedic braces, prostheses, and supportive devices, such as crutches. Adjusts fit of supportive devices for patients, as instructed. Provides routine treatments, such as hydrotherapy, hot and cold packs, and paraffin bath. Confers with physical therapy staff and others to discuss and evaluate patient information for planning, modifying, and coordinating treatment. Secures patients into or onto therapy equipment. Observes patients during treatments and compiles and evaluates data on patients' responses to treatments and progress, and reports to physical therapist. Measures patient's range-of-joint motion, body parts, and vital signs to determine effects of treatments or for patient evaluations. Assists patients to dress, undress, and put on and remove supportive devices, such as braces, splints, and slings.

31-2022.00 Physical Therapist Aides Entry - Mid level position assuming education and experience prerequisite Observes patients during treatment and compiles and evaluates data on patients' responses to treatments and progress. and reports to physical therapist. Administers active and passive manual therapeutic exercises, therapeutic massage, and heat, light, sound, water, and electrical modality treatments, such as ultrasound. Administers traction to relieve neck and back pain, using intermittent and static traction equipment. Instructs, motivates, and assists patients to learn and improve functional activities, such as perambulation, transfer, ambulation, and daily-living activities. Safeguards, motivates, and assists patients practicing exercises and functional activities under direction of professional staff. Trains patients in use and care of orthopedic braces, prostheses, and supportive devices, such as crutches. Adjusts fit of supportive devices for patients, as instructed. Provides routine treatments, such as hydrotherapy, hot and cold packs, and paraffin bath. Performs clerical duties, such as taking inventory, ordering supplies, answering telephone, taking messages, and filling out forms. Cleans work area and equipment after treatment. Transports patients to and from treatment area. Fits patients for orthopedic braces, prostheses, and supportive devices, such as crutches. Records treatment given and equipment used. Assists patients to dress, undress, and put on and remove supportive devices, such as braces, splints, and slings. Measures patient's range-of-joint motion, body parts, and vital signs to determine effects of treatments or for patient evaluations. Confers with physical therapy staff and others to discuss and evaluate patient information for planning, modifying, and coordinating treatment. Secures patients into or onto therapy equipment.

31-9092.00 Medical Assistants Entry – Mid level position assuming education and experience prerequisite Prepares treatment rooms for examination of patients. Cleans and sterilizes instruments. Computes and mails monthly statements to patients and records transactions. Contacts medical facility or department to schedule patients for tests. Performs routine laboratory tests. Gives injections or treatments to patients. Receives payment for bills. Operates x-ray, electrocardiograph (EKG), and other equipment to administer routine diagnostic tests. Gives physiotherapy treatments, such as diathermy, galvanics, and hydrotherapy. Completes insurance forms. Lifts and turns patients. Inventories and orders medical supplies and materials. Hands instruments and materials to physician. Schedules appointments. Interviews patients, measures vital signs, weight, and height, and records information. Maintains medical records.

33-1012.00 First-Line Supervisors/Managers of Police and Detectives Senior level position assuming education and experience prerequisite

Prepares work schedules, assigns duties, and develops and revises departmental procedures. Supervises and coordinates investigation of criminal cases. Disciplines staff for violation of department rules and regulations. Monitors and evaluates job performance of subordinates. Investigates and resolves personnel problems within organization .Prepares reports and directs preparation, handling, and maintenance of departmental records. Prepares budgets and manages expenditures of department funds. Requisitions and issues department equipment and supplies. Reviews contents of written orders to ensure adherence to legal requirements. Directs release or transfer of prisoners. Meets with civic, educational, and community groups to develop community programs and events and addresses groups concerning law enforcement subjects. Conducts raids and orders detention of witnesses and suspects for questioning. Cooperates with court personnel and officials from other law enforcement agencies and testifies in court. Prepares news releases and responds to police correspondence. Inspects facilities, supplies, vehicles, and equipment to ensure conformance to standards. Trains staff. Investigates charges of misconduct against staff. Assists subordinates in performing job duties. Directs collection, preparation, and handling of evidence and personal property of prisoners.

33-1021.01 Municipal Fire Fighting and Prevention Supervisors Senior level position assuming education and experience prerequisite

Coordinates and supervises firefighting and rescue activities, and reports events to supervisor, using two- way radio. Assesses nature and extent of fire, condition of building, danger to adjacent buildings, and water supply to determine crew or company requirements. Directs investigation of cases of suspected arson, hazards, and false alarms. Evaluates efficiency and performance of employees, and recommends awards for service. Directs building inspections to ensure compliance with fire and safety regulations. Keeps equipment and personnel records. Oversees review of new building plans to ensure compliance with laws, ordinances, and administrative rules for public fire safety. Writes and submits proposal for new equipment or modification of existing equipment. Compiles report of fire call, listing location, type, probable cause, estimated damage, and disposition. Studies and interprets fire safety codes to establish procedures for issuing permits regulating storage or use of hazardous or flammable substances. Orders and directs fire drills for occupants of buildings. Confers with civic representatives, and plans talks and demonstrations of fire safety to direct fire prevention information program. Inspects fire stations, equipment, and records to ensure efficiency and enforcement of departmental regulations. Trains subordinates in use of equipment, methods of extinguishing fires, and rescue operations.



33-1021.02 Forest Fire Fighting and Prevention Supervisors Senior level position assuming education and experience prerequisite

Dispatches crews according to reported size, location, and condition of forest fires. Parachutes to major fire locations and directs fire containment and suppression activities. Trains workers in parachute jumping, fire suppression, aerial observation, and radio communication. Maintains radio communication with crews at fire scene to inform crew and base of changing conditions and learn of casualties. Directs loading of fire suppression equipment into aircraft and parachuting of equipment to crews on ground. Observes fire and crews from air to determine force requirements and note changing conditions.

33-2011.01 Municipal Fire Fighters Entry – Mid – Senior level position assuming education and experience prerequisite

Positions and climbs ladders to gain access to upper levels of buildings, or to rescue individuals from burning structures. Protects property from water and smoke, using waterproof salvage covers, smoke ejectors, and deodorants. Creates openings in buildings for ventilation or entrance, using ax, chisel, crowbar, electric saw, or core cutter. Selects hose nozzle, depending on type of fire, and directs stream of water or chemicals onto fire. Administers first aid and cardiopulmonary resuscitation to injured persons and those overcome by fire and smoke. Responds to fire alarms and other emergency calls. Sprays foam onto runway, extinguishes fire, and rescues aircraft crew and passengers in air-crash emergency. Inspects buildings for fire hazards and compliance with fire prevention ordinances. Participates in courses in hydraulics, pump operation, and firefighting techniques. Participates in fire drills and demonstrations of firefighting techniques Maintains firefighting equipment and apparatus, vehicles, hydrants, and fire station. Drives and operates fire fighting vehicles and equipment. Establishes fire lines to prevent unauthorized persons from entering area. Assesses fire and situation, reports to superior, and receives instructions, using two-way radio.

33-2011.02 Forest Fire Fighters Entry – Mid – Senior level position assuming education and experience prerequisite

Fells trees, cuts and clears brush, and digs trenches, to contain fire, using ax, chain saw, or shovel. Packs parachutes. Parachutes from aircraft and guides direction of fall toward clear landing area near scene of fire. Orients self in relation to fire, using compass and map, and collects supplies and equipment dropped by parachute. Works as member of fire fighting crew. Patrols burned area after fire to watch for hot spots that may restart fire. Ascertains best method for attacking fire, and communicates plan to airplane or base camp, using two- way radio. Extinguishes flames and embers to suppress fire, using shovel, or engine or hand-driven water or chemical pumps.

33-2021.01 Fire Inspectors Mid – Senior level position assuming education and experience prerequisite Inspects interiors and exteriors of buildings to detect hazardous conditions or violations of fire codes. Issues permits and summons, and enforces fire codes. Tests equipment, such as gasoline storage tanks, air compressors, and fire extinguishing and fire protection equipment to endure conformance to fire and safety codes. Discusses violations and unsafe conditions with facility representative, makes recommendations, and instructs in fire safety practices. Prepares reports, such as inspections performed, code violations, and recommendations for eliminating fire hazards. Gives First aid in emergencies. Collects fees for permits and licenses.

33-2021.02 Fire Investigators Mid – Senior level position assuming education and experience prerequisite Examines site and collects evidence to gather information relating to cause of fire, explosion, or false alarm. Photographs damage and evidence relating to cause of fire or explosion, for future reference. Subpoenas and interviews witnesses, property owners, and building occupants to obtain information and sworn testimony. Conducts internal investigation to determine negligence and violation of laws and regulations by fire department employees. Analyzes evidence and other information to determine probable cause of fire or explosion. Tests site and materials to establish facts, such as burn patterns and flash points of materials, using test equipment. Prepares and maintains reports of investigation results, and records of convicted arsonists and arson suspects. Swears out warrants and arrests, logs, fingerprints, and detains suspected arsonists. Testifies in court for cases involving fires, suspected arson, and false alarms. Instructs children about dangers of fire.

33-2022.00 Forest Fire Inspectors and Prevention Specialists Mid – Senior level position assuming education and experience prerequisite

Inspects forest tracts and logging areas for fire hazards, such as accumulated wastes, mishandling of combustibles, or defective exhaust systems. Locates forest fires on area map, using azimuth sighter and known landmarks. Relays messages relative to emergencies, accidents, location of crew and personnel, weather forecasts, and fire hazard conditions. Patrols and maintains surveillance, looking for forest fires, hazardous conditions, and weather phenomena.

Inspects campsites to ensure camper compliance with forest use regulations. Estimates size and characteristics of fire and reports findings to base camp by radio or telephone. Gives directives and instructions regarding sanitation, fire prevention, violation corrections, and related forest regulations. Examines and inventories firefighting equipment, such as axes, fire hoses, shovels, pumps, buckets, and fire extinguishers to determine amount and condition. Gives directions to crew on fire line during forest fire. Extinguishes smaller fires with portable extinguisher, shovel, and ax. Maintains records and logbooks. Directs maintenance and repair of firefighting equipment and requisitions new equipment. Restricts public access and recreational use of forestlands during critical fire season. Observes instruments and reports meteorological data, such as temperature, relative humidity, wind direction and velocity, and types of cloud formations.

33-3021.03 Criminal Investigators and Special Agents Mid – Senior level position assuming education and experience prerequisite

Obtains and verifies evidence or establishes facts by interviewing, observing, and interrogating suspects and witnesses and analyzing records. Testifies before grand juries. Serves subpoenas or other official papers. Photographs, fingerprints, and measures height and weight of arrested suspects, noting physical characteristics, and posts data on record for filing. Reports critical information to and coordinates activities with other offices or agencies when applicable. Presents findings in reports. Maintains surveillance and performs undercover assignments. Develops and uses informants to get leads to information. Compares crime scene fingerprints with those of suspect or fingerprint files to identify perpetrator, using computer. Obtains and uses search and arrest warrants. Searches for evidence, dusts surfaces to reveal latent fingerprints, and collects and records evidence and documents, using cameras and investigative equipment. Examines records to detect links in chain of evidence or information. Assists in determining scope, timing, and direction of investigation. Analyzes charge, complaint, or allegation of law violation to identify issues involved and types of evidence needed.

33-3051.01 Police Patrol Officers Entry – Mid – Senior level position assuming education and experience prerequisite

Patrols specific area on foot, horseback, or motorized conveyance. Relays complaint and emergency request information to appropriate agency dispatcher .Provides road information to assist motorists. Investigates traffic accidents and other accidents to determine causes and to determine if crime has been committed. Evaluates complaint and emergency request information to determine response requirements. Reviews facts to determine if criminal act or statute violation is involved. Directs traffic flow and re-routes traffic in case of emergencies Monitors traffic to ensure motorists observe traffic regulations and exhibit safe driving procedures. Arrests perpetrator of criminal act or submits citation or warning to violator of motor vehicle ordinance. Draws diagram of crime or accident scene. Photographs crime or accident scene. Interviews principal and eyewitnesses. Renders aid to accident victims and other persons requiring first aid for physical injuries. Records facts and prepares reports to document activities. Testifies in court to present evidence or act as witness in traffic and criminal cases. Expedites processing of prisoners, and prepares and maintains records of prisoner bookings and prisoner status during booking and pre-trial process. Maintains order, responds to emergencies, protects people and property, and enforces motor vehicle and criminal law.

33-3051.03 Sheriffs and Deputy Sheriffs Entry – Mid – Senior level position assuming education and experience prerequisite

Serves subpoenas and summonses. Executes arrest warrants, locating and taking persons into custody and issues citations. Transports or escorts prisoners or defendants between courtroom, prison or jail, District Attorney's offices, or medical facilities. Investigates illegal or suspicious activities of persons. Patrols and guards courthouse, grand jury room, or assigned areas to provide security, enforce laws, maintain order, and arrest violators. Maintains records and submits reports of dispositions and logs daily activities. Arranges delivery of prisoner's arrest records from criminal investigation unit, at District Attorney's request. Notifies patrol units to take violators into custody, or provide needed assistance or medical aid. Questions individuals entering secured areas to determine purpose of business and directs or reroutes individuals to destinations. Confiscates real or personal property by court order, and posts notices in public places. Takes control of accident scene to maintain traffic flow, assist accident victims, and investigate causes.

33-9011.00 Animal Control Workers Entry - Mid level position assuming education and experience prerequisite

Captures or removes stray, uncontrolled, or abused animals from undesirable conditions and transports to shelter. Trains police officers in dog handling and training techniques for tracking, crowd control, and narcotics and bomb detection. Examines animals for injuries or malnutrition and arranges for medical treatment. Investigates animal bites and alleged violations, interviews witnesses, and reports violations to police or requests arrest of violators. Removes animals from vehicle and places animal in shelter cage or other enclosure. Examines animal licenses and inspects establishments housing animals for compliance with laws, and issues warnings or summonses to violators. Writes reports of activities, and maintains files of impoundment and disposition of animals. Supplies animals with food, water, and



personal care. Euthanizes rabid, unclaimed, or severely injured animals. Conducts tours of facility, demonstrates dog handling techniques, and explains use of dogs in police work, using trained dog. Instructs handlers in dog health care and handler's responsibilities.

33-9021.00 Private Detectives and Investigators Mid – Senior level position assuming education and experience prerequisite

Enforces conformance to establishment rules and protects persons or property. Questions persons to obtain evidence for cases of divorce, child custody, or missing persons, or individuals character or financial status. Observes employees or customers and patrols premises to detect violations and obtain evidence, using binoculars, cameras, and television. Assists victims, police, fire department, and others during emergencies. Evaluates performance and honesty of employees by posing as customer or employee and comparing employee to standards. Locates persons using phone or mail directories to collect money owed or to serve legal papers. Testifies at hearings and court trials to present evidence. Writes reports and case summaries to document investigations or inform supervisors. Alerts staff and superiors of presence of suspect in establishment. Confers with establishment officials, security department, police, or postal officials to identify problems, provide information, and receive instructions. Counts cash and reviews transactions, sales checks, and register tapes to verify amount of cash and shortages. Obtains and analyzes information on suspects, crimes, and disturbances to solve cases, identify criminal activity, and maintain public peace and order. Warns and ejects troublemakers from premises and apprehends and releases suspects to authorities or security personnel. Examines crime scene for clues or fingerprints and submits evidence to laboratory for analysis.

33-9032.00 Security Guards Entry – Mid level position assuming education and experience prerequisitePatrols industrial and commercial premises to prevent and detect signs of intrusion and ensure security of doors, windows, and gates. Warns persons of rule infractions or violations, and apprehends or evicts violators from premises, using force when necessary. Calls police or fire departments in cases of emergency, such as fire or presence of unauthorized persons. Operates detecting devices to screen individuals and prevent passage of prohibited articles into restricted areas. Answers telephone calls to take messages, answer questions, and provide information during non-business hours or when switchboard is closed. Escorts or drives motor vehicle to transport individuals to specified location sand to provide personal protection. Circulates among visitors, patrons, and employees to preserve order and protect property. Answers alarms and investigates disturbances. Monitors and authorizes entrance and departure of employees, visitors, and other persons to guard against theft and maintain security of premises. Inspects and adjusts security systems, equipment, and machinery to ensure operational use and to detect evidence of tampering.

33-9091.00 Crossing Guards Entry level position assuming education and experience prerequisite

Directs actions of pedestrians and traffic at intersections. Activates warning signal lights, lowers crossing gates until train passes, and raises gate when crossing is clear. Distributes traffic control and caution signs and markers at designated points. Directs movement of traffic through site, using signs, flags, and hand signals. Escorts pedestrians across street. Waves flags, signs, or lanterns in emergencies. Discusses traffic routing plans, and type and location of control points with superior. Informs drivers of detour routes through construction sites. Records license numbers of vehicles disregarding traffic signals and reports infractions to police.

33-9092.00 Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers Entry – Mid level position assuming education and experience prerequisite

Patrols or monitors recreational areas, such as trails, slopes, and swimming areas, on foot, in vehicle, or from tower. Observes activities in assigned area with binoculars to detect hazards, disturbances, or safety infractions. Contacts emergency medical services in case of serious injury. Rescues distressed persons, using rescue techniques and equipment. Cautions recreational participant regarding inclement weather, unsafe areas, or illegal conduct. Examines injured persons and administers first aid or cardiopulmonary resuscitation, utilizing training and medical supplies and equipment. Inspects recreational equipment, such as rope tows, T-bar, J-bar, and chair lifts, for safety hazards and damage or wear. Inspects facilities for cleanliness and maintains order in recreational areas. Participates in recreational demonstrations to entertain resort guests. Instructs participants in skiing, swimming, or other recreational activity. Maintains information on emergency medical treatment and weather and beach conditions, using report forms.

35-1011.00 Chefs and Head Cooks Senior level position assuming education and experience prerequisite Supervises and coordinates activities of cooks and workers engaged in food preparation. Helps cooks and workers cook and prepare food on demand. Observes workers and work procedures to ensure compliance with established standards. Trains and otherwise instructs cooks and workers in proper food preparation procedures. Estimates amounts and costs and requisitions supplies and equipment to ensure efficient operation. Collaborates with specified personnel and plans and develops recipes and menus. Determines production schedules and worker-time requirements to ensure timely

delivery of services. Evaluates and solves procedural problems to ensure safe and efficient operations. Records production and operational data on specified forms. Inspects supplies, equipment, and work areas to ensure conformance to established standards.

35-1012.00 First-Line Supervisors/Managers of Food Preparation and Serving Workers Senior level position assuming education and experience prerequisite

Observes and evaluates workers and work procedures to ensure quality standards and service. Assigns duties, responsibilities, and workstations to employees, following work requirements. Collaborates with specified personnel to plan menus, serving arrangements, and other related details. Inspects supplies, equipment, and work areas, to ensure efficient service and conformance to standards. Specifies food portions and courses, production and time sequences, and workstation and equipment arrangements. Schedules parties and reservations, and greets and escorts guests to seating arrangements. Analyzes operational problems such as theft and wastage, and establishes controls. Receives, issues, and takes inventory of supplies and equipment, and reports shortages to designated personnel. Initiates personnel actions, such as hires and discharges, to ensure proper staffing. Resolves customer complaints regarding food service. Purchases or requisitions supplies and equipment to ensure quality and timely delivery of services. Records production and operational data on specified forms. Recommends measures to improve work procedures and worker performance to increase quality of services and job safety. Trains workers in proper food preparation and service procedures.

35-2012.00 Cooks, Institution and Cafeteria Mid – Senior level position assuming education and experience prerequisite

Cooks foodstuffs according to menu, special dietary or nutritional restrictions, and number of persons to be served. Cleans, cuts, and cooks meat, fish, and poultry. Requisitions food supplies, kitchen equipment and appliances, and other supplies and receives deliveries. Apportions and serves food to residents, employees, or patrons. Washes pots, pans, dishes, utensils, and other cooking equipment. Directs activities of one or more workers who assist in preparing and serving meals. Compiles and maintains food cost records and accounts. Plans menus, taking advantage of foods in season and local availability. Bakes breads, rolls, and other pastries. Prepares and cooks vegetables, salads, dressings, and desserts. Cleans and inspects galley equipment, kitchen appliances, and work areas for cleanliness and functional operation.

35-2013.00 Cooks, Private Household Entry – Mid – Senior level position assuming education and experience prerequisite

Prepare meals in private homes.

35-2014.00 Cooks, Restaurant Mid – Senior level position assuming education and experience prerequisite Weighs, measures, and mixes ingredients according to recipe or personal judgment, using various kitchen utensils and equipment. Seasons and cooks food according to recipes or personal judgment and experience. Regulates temperature of ovens, broilers, grills, and roasters. Observes and tests food to determine that it is cooked, by tasting, smelling, or piercing, and turns or stirs food if necessary. Bakes, roasts, broils, and steams meats, fish, vegetables, and other foods. Bakes bread, rolls, cakes, and pastry. Washes, peels, cuts, and seeds fruits and vegetables to prepare fruits and vegetables for use. Inspects food preparation and serving areas to ensure observance of safe, sanitary food-handling practices. Estimates food consumption and requisitions or purchases supplies, or procures food from storage. Butchers and dresses animals, fowl or shellfish, or cuts and bones meat prior to cooking. Carves and trims meats, such as beef, veal, ham, pork, and lamb for hot or cold service, or for sandwiches. Plans items on menu. Portions, arranges, and garnishes food, and serves food to waiter or patron.

35-2021.00 Food Preparation Workers Entry – Mid level position assuming education and experience prerequisite Cleans and portions, and cuts or peels various foods to prepare for cooking or serving. Cleans, cuts, slices, or disjoints meats and poultry to prepare for cooking. Prepares and serves variety of beverages, such as coffee, tea, and soft drinks. Portions and arranges food on serving dishes, trays, carts, or conveyor belts. Prepares variety of foods according to customers' orders or instructions of superior, following approved procedures. Carries food supplies, equipment, and utensils to and from storage and work areas. Distributes food to waiters and waitresses to serve to customers. Stores food in designated containers and storage areas to prevent spoilage. Butchers and cleans fowl, fish, poultry, and shellfish to prepare for cooking or serving. Requisitions, stores, and distributes food supplies, equipment, and utensils. Cleans and maintains work areas, equipment, and utensils.

35-3011.00 Bartenders Entry – Mid – Senior level position assuming education and experience prerequisite Mixes ingredients, such as liquor, soda, water, sugar, and bitters, to prepare cocktails and other drinks.

Collects money for drinks served. Serves wine and draft or bottled beer. Arranges bottles and glasses to make attractive display. Orders or requisitions liquors and supplies. Prepares appetizers, such as pickles, cheese, and cold meats. Cleans glasses, utensils, and bar equipment. Slices and pits fruit for garnishing drinks.

35-3021.00 Combined Food Preparation and Serving Workers, Including Fast Food Entry – Mid level position assuming education and experience prerequisite

Selects food items from serving or storage areas and places food and beverage items on serving tray or in takeout bag. Cooks or re-heats food items, such as french fries. Receives payment. Notifies kitchen personnel of shortages or special orders. Requests and records customer order and computes bill. Makes and serves hot and cold beverages or desserts.

35-3022.00 Counter Attendants, Cafeteria, Food Concession, and Coffee Shop Entry – Mid level position assuming education and experience prerequisite

Serves food, beverages, or desserts to customers in variety of settings, such as take out counter of restaurant or lunchroom. Calls order to kitchen and picks up and serves order when it is ready. Replenishes foods at serving stations. Brews coffee and tea and fills containers with requested beverages. Accepts payment for food, using cash register or adding machine to total check. Carves meat. Scrubs and polishes counters, steam tables, and other equipment, and cleans glasses, dishes, and fountain equipment and polishes metalwork on fountain. Adds relishes and garnishes according to instructions. Orders items to replace stocks. Prepares sandwiches, salads, and other short order items. Wraps menu items, such as sandwiches, hot entrees, and desserts. Serves sandwiches, salads, beverages, desserts, and candies to employees in industrial establishment. Writes items ordered on tickets, totals orders, passes orders to cook, and gives ticket stubs to customers to identify filled orders. Serves salads, vegetables, meat, breads, and cocktails, ladles soups and sauces, portions desserts, and fills beverage cups and glasses. Prepares and serves soft drinks and ice cream dishes, such as sundaes, using memorized formulas and methods of following directions.

35-3031.00 Waiters and Waitresses Entry – Mid level position assuming education and experience prerequisite Takes order from patron for food or beverage, writing order down or memorizing it. Serves meals or beverages to patrons. Relays order to kitchen, or enters order into computer. Observes patrons to respond to additional requests, and to determine when meal has been completed or beverage consumed. Obtains and replenishes supplies of food, tableware, and linen. Computes cost of meal or beverage. Removes dishes and glasses from table or counter and takes them to kitchen for cleaning. Accepts payment and returns change, or refers patron to Cashier. Fills salt, pepper, sugar, cream, condiment, and napkin containers. Prepares salads, appetizers, and cold dishes, portions desserts, brews coffee, and performs other services as determined by establishment's size and practices. Carves meats, bones fish and fowl, and prepares special dishes and desserts at workstation or patron's table. Cleans and arranges assigned station, including side stands, chairs, and table pieces, such as linen, silverware, and glassware. Garnishes and decorates dishes preparatory to serving. Prepares hot, cold, and mixed drinks for patrons, and chills bottles of wine. Serves, or assists patrons to serve themselves, at buffet or smorgasbord table. Presents menu to patron, suggests food or beverage selections, and answers questions regarding preparation and service.

35-3041.00 Food Servers, Non-restaurant Entry – Mid level position assuming education and experience prerequisite

Prepares and delivers food trays. Examines filled tray for completeness. Takes order and relays order to kitchen or serving counter to be filled. Apportions and places food servings on plates and trays according to order or instructions. Carries silverware, linen, and food on tray or uses cart. Removes tray and stacks dishes for return to kitchen. Prepares food items, such as sandwiches, salads, soups, and beverages, and places items, such as eating utensils, napkins, and condiments, on trays. Records amount and types of special food items served to customers. Prepares fountain drinks, such as sodas, milkshakes, and malted milks. Washes dishes and cleans work area, tables, cabinets, and ovens; and sweeps service area with broom. Restocks service counter with items, such as ice, napkins, and straws. Totals and presents check to customer and accepts payment for service. Reads orders to determine items to place on food tray. Pushes carts to rooms and serves trays to patients or guests.

35-9011.00 Dining Room and Cafeteria Attendants and Bartender Helpers Entry level position assuming education and experience prerequisite

Carries dirty dishes to kitchen and wipes tables and seats with dampened cloth. Replenishes food and equipment at steam tables and serving counters of cafeteria to facilitate service to patrons. Cleans bar and equipment, and replenishes bar supplies, such as liquor, fruit, ice, and dishes. Sets tables with clean linens, sugar bowls, and condiments. Mixes and prepares flavors for mixed drinks. Garnishes and positions foods on table to ensure visibility to patrons and convenience in serving. Circulates among diners and serves coffee. Washes glasses, bar, and equipment, polishes bar fixtures, mops floors, and removes empty bottles and trash. Stocks refrigerating units with wines and bottled beer,

replaces empty beer kegs, and slices and pits fruit used to garnish drinks. Keeps assigned area and equipment clean, makes coffee, fills fruit juice dispensers, and stocks vending machines with food in automat. Carries trays from food counters to tables for cafeteria patrons and serves ice water and butter to patrons. Replenishes supply of clean linens, silverware, glassware, and dishes in dining room. Carries food, dishes, trays, and silverware from kitchen and supply departments to serving counters.

35-9021.00 Dishwashers Entry level position assuming education and experience prerequisite

Cleans and maintains work areas, equipment, and utensils. Carries or transfers by hand truck supplies and equipment between storage and work areas. Removes garbage and trash and places refuse in designated pick up area. Stocks serving stations with food and utensils. Loads or unloads trucks used in delivering or picking up food and supplies. Sets up banquet tables. Cleans and prepares various foods for cooking or serving. Prepares and packages individual place settings.

35-9031.00 Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop Mid – Senior level position assuming education and experience prerequisite

Greets and escorts guests to tables, and provides menus. Inspects dining room serving stations for neatness and cleanliness. Requisitions table linens and other supplies for tables and serving stations. Schedules dining reservations and arranges parties or special service for diners. Adjusts complaints of patrons. Assigns work tasks and coordinates activities of dining room personnel to ensure prompt and courteous service to patrons.

37-1011.01 Housekeeping Supervisors Mid – Senior level position assuming education and experience prerequisite

Assigns workers their duties and inspects work for conformance to prescribed standards of cleanliness. Obtains list of rooms to be cleaned immediately and list of prospective checkouts or discharges to prepare work assignments. Screens job applicants, hires new employees, and recommends promotions, transfers, and dismissals. Advises manager, desk clerk, or admitting personnel of rooms ready for occupancy. Establishes standards and procedures for work of housekeeping staff. Issues supplies and equipment to workers. Inventories stock to ensure adequate supplies. Selects and purchases new furnishings. Performs cleaning duties in cases of emergency or staff shortage. Prepares reports concerning room occupancy, payroll, and department expenses. Examines building to determine need for repairs or replacement of furniture or equipment, and makes recommendations to management. Makes recommendations to improve service and ensure more efficient operation. Attends staff meetings to discuss company policies and patrons' complaints. Evaluates records to forecast department personnel requirements. Conducts orientation training and inservice training to explain policies, work procedures, and to demonstrate use and maintenance of equipment. Records data regarding work assignments, personnel actions, and time cards, and prepares periodic reports. Coordinates work activities among departments. Investigates complaints regarding housekeeping service and equipment, and takes corrective action.

37-1011.02 Janitorial Supervisors Mid – Senior level position assuming education and experience prerequisite Supervises and coordinates activities of workers engaged in janitorial services. Assigns janitorial work to employees, following material and work requirements. Trains workers in janitorial methods and procedures and proper operation of equipment. Confers with staff to resolve production and personnel problems. Records personnel data on specified forms. Recommends personnel actions, such as hires and discharges, to ensure proper staffing. Issues janitorial supplies and equipment to workers to ensure quality and timely delivery of services. Inspects work performed to ensure conformance to specifications and established standards.

37-1012.01 Lawn Service Managers Mid – Senior level position assuming education and experience prerequisite Supervises workers who provide grounds-keeping services on a contract basis. Reviews contracts to ascertain service, machine, and work force requirements for job. Answers customers' questions about grounds keeping care requirements. Prepares service cost estimates for customers. Schedules work for crew according to weather conditions, availability of equipment, and seasonal limitations. Investigates customer complaints. Spot checks completed work to improve quality of service and to ensure contract compliance. Suggests changes in work procedures and orders corrective work done. Prepares work activity and personnel reports.

37-1012.02 First-Line Supervisors and Manager/Supervisors – Landscaping Workers Senior level position assuming education and experience prerequisite

Directs workers in maintenance and repair of driveways, walkways, benches, graves, and mausoleums. Directs and assists workers engaged in maintenance and repair of equipment such as power mower and backhoe, using hand tools and power tools. Observes ongoing work to ascertain if work is being performed according to instructions and will be



completed on time. Determines work priority, crew and equipment requirements, and assigns workers tasks, such as planting, fertilizing, irrigating, and mowing. Mixes and prepares spray and dust solutions, and directs application of fertilizer, insecticide, and fungicide. Trains workers in tasks, such as transplanting and pruning trees and shrubs, finishing cement, using equipment, and caring for turf. Confers with manager to develop plans and schedules for maintenance and improvement of grounds. Interviews, hires, and discharges workers. Assists workers in performing work when completion is critical. Tours grounds, such as par, botanical garden, cemetery, or golf course to inspect conditions. Keeps employee time records, and records daily work performed.

37-2011.00 Janitors and Cleaners, Except Maids and Housekeeping Cleaners Entry – Mid level position assuming education and experience prerequisite

Sweeps, mops, scrubs, and vacuums floors of buildings, using cleaning solutions, tools and equipment. Gathers and empties trash. Cleans or polishes walls, ceilings, windows, plant equipment and building fixtures, using steam cleaning equipment, scrapers, brooms and variety of hand and power tools. Applies waxes or sealers to wood or concrete floors. Tends, cleans, adjusts and services furnaces, air conditioners, boilers and other building heating and cooling systems. Removes snow from sidewalks, driveways, and parking areas, using snowplow, snow blower, and snow shovel, and spreads snow melting chemicals. Notifies management personnel concerning need for major repairs or additions to building operating systems. Sprays insecticides and fumigants to prevent insect and rodent infestation. Cleans laboratory equipment, such as glassware and metal instruments, using solvents, brushes, rags, and power cleaning equipment. Mows and trims lawns and shrubbery, using mowers and hand and power trimmers, and clears debris from grounds. Mixes water and detergents or acids in container to prepare cleaning solutions, according to specifications. Drives vehicles, such as van, industrial truck or industrial vacuum cleaner. Cleans chimneys, flues, and connecting pipes, using power and hand tools. Cleans and restores building interiors damaged by fire, smoke, or water, using commercial cleaning equipment. Services and repairs cleaning and maintenance equipment and machinery and performs minor routine painting, plumbing, electrical, and related activities. Moves items between departments, manually or using hand truck. Sets up, arranges, and removes decorations, tables, chairs, ladders, and scaffolding, for events such as banquets and social functions. Requisitions supplies and equipment used in cleaning and maintenance duties. Dusts furniture, walls, machines, and equipment.

37-2012.00 Maids and Housekeeping Cleaners Entry – Mid level position assuming education and experience prerequisite

Cleans rooms, hallways, lobbies, lounges, restrooms, corridors, elevators, stairways, and locker rooms and other work areas. Cleans rugs, carpets, upholstered furniture, and draperies, using vacuum cleaner. Dusts furniture and equipment. Empties wastebaskets, and empties and cleans ashtrays. Collects soiled linens for laundering, and receives and stores linen supplies in linen closet. Washes walls, ceiling, and woodwork. Polishes metalwork, such as fixtures and fittings. Prepares sample rooms for sales meetings. Cleans and removes debris from driveway and garage areas. Arranges decorations, apparatus, or furniture for banquets and social functions. Replaces light bulbs. Washes beds and mattresses, and remakes beds after dismissal of hospital patients. Moves and arranges furniture, turns mattresses, hangs draperies, dusts venetian blinds, and polishes metalwork to ready hotel facilities for occupancy. Replenishes supplies, such as drinking glasses, writing supplies, and bathroom items. Transports trash and waste to disposal area. Cleans swimming pool with vacuum. Delivers television sets, ironing boards, baby cribs, and rollaway beds to guest's rooms. Washes windows, door panels, and sills. Sweeps, scrubs, waxes, and polishes floors, using brooms and mops and powered scrubbing and waxing machines.

37-2021.00 Pest Control Workers Entry – Mid level position assuming education and experience prerequisite Sprays or dusts chemical solutions, powders, or gases into rooms, onto clothing, furnishings or wood, and over marshlands, ditches, catch-basins. Sets mechanical traps and places poisonous paste or bait in sewers, burrows, and ditches. Cuts or bores openings in building or surrounding concrete, accesses infested areas, inserts nozzle, and injects pesticide to impregnate ground. Directs and/or assists other workers in treatment and extermination processes to eliminate and control rodents, insects, and weeds. Studies preliminary reports and diagrams of infested area and determines treatment type required to eliminate and prevent recurrence of infestation. Digs up and burns or sprays weeds with herbicides. Cleans work site after completion of job. Records work activities performed. Drives truck equipped with power spraying equipment. Posts warning signs and locks building doors to secure area to be fumigated. Positions and fastens edges of tarpaulins over building and tapes vents to ensure air-tight environment and checks for leaks. Cleans and removes blockages from infested areas to facilitate spraying procedure and provide drainage, using broom, mop, shovel, and rake. Measures area dimensions requiring treatment, using rule, calculates fumigant requirements, and estimates cost for service. Inspects premises to identify infestation source and extent of damage to property, wall, and roof porosity, and access to infested locations.



37-3011.00 Landscaping and Grounds Keeping Workers Entry – Mid level position assuming education and experience prerequisite

Mows lawns, using power mower. Digs holes for plants, mixes fertilizer or lime with dirt in holes, inserts plants, and fills holes with dirt. Trims and picks flowers and cleans flowerbeds. Hauls or spreads topsoil, and spreads straw over seeded soil to hold soil in place. Decorates garden with stones and plants. Attaches wires from planted trees to support stakes. Maintains tools and equipment. Seeds and fertilizes lawns. Shovels snow from walks and driveways. Builds forms and mixes and pours cement to form garden borders. Applies herbicides, fungicides, fertilizers, and pesticides, using spreaders or spray equipment. Waters lawns, trees, and plants, using portable sprinkler system, hose, or watering can.

37-3012.00 Pesticide Handlers, Sprayers, and Applicators, Vegetation Entry – Mid level position assuming education and experience prerequisite

Lifts, pushes, and swings nozzle, hose, and tube to direct spray over designated area. Covers area to specified depth, applying knowledge of weather conditions, droplet size, elevation-to- distance ratio, and obstructions. Fills sprayer tank with water and chemicals, according to formula. Starts motor and engages machinery, such as sprayer agitator and pump. Cleans and services machinery to ensure operating efficiency, using water, gasoline, lubricants, and hand tools. Plants grass with seed spreader and operates straw blower to cover seeded area with asphalt and straw mixture. Sprays livestock with pesticides. Gives driving instructions to truck driver, using hand and horn signals, to ensure complete coverage of designated area. Connects hoses and nozzles, selected according to terrain, distribution pattern requirements, type of infestation, and velocity.

37-3013.00 Tree Trimmers and Pruners Entry – Mid – Senior level position assuming education and experience prerequisite

Cuts away dead and excess branches from trees, using handsaws, pruning hooks, sheers, and clippers. Applies tar or other protective substances to cut surfaces to seal surfaces against insects. Scrapes decayed matter from cavities in trees and fills holes with cement to promote healing and to prevent further deterioration. Uses truck-mounted hydraulic lifts and pruners and power pruners. Prunes, cuts down, fertilizes, and sprays trees as directed by tree surgeon. Climbs trees, using climbing hooks and belts, or climbs ladders to gain access to work area.

39-1011.00 Gaming Supervisors Mid – Senior level position assuming education and experience prerequisite Review operational expenses, budget estimates, betting accounts, and collection reports for accuracy. Observes and supervises operation to ensure that employees render prompt and courteous service to patrons. Establishes policies on types of gambling offered, odds, extension of credit, and serving food and beverages. Directs workers compiling summary sheets for each race or event to show amount wagered and amount to be paid to winners. Prepares work schedules, assigns work stations, and keeps attendance records. Resolves customer complaints regarding service. Interviews and hires workers. Trains new workers and evaluates their performance. Explains and interprets house rules, such as game rules and betting limits, to patrons. Records, issues receipts for, and pays off bets.

39-1012.00 Slot Key Persons Mid – Senior level position assuming education and experience prerequisiteCoordinate/supervise functions of slot department workers to provide service to patrons. Handle and settle complaints of players. Verify and payoff jackpots. Reset slot machines after payoffs. Make minor repairs or adjustments to slot machines. Recommend removal of slot machines for repair. Report hazards and enforces safety rules.

39-1021.00 First-Line Supervisors/Managers of Personal Service Workers Senior level position assuming education and experience prerequisite

Supervises and coordinates activities of workers engaged in lodging and personal services. Trains workers in proper operational procedures and functions, and explains company policy. Collaborates with personnel to plan and develop programs of events, schedules of activities, and menus. Inspects work areas and operating equipment to ensure conformance to established standards. Informs workers about interests of specific groups. Requisitions supplies, equipment, and designated services, to ensure quality and timely service and efficient operations. Furnishes customers with information on events and activities. Analyzes and records personnel and operational data and writes activity reports. Resolves customer complaints regarding worker performance and services rendered. Assigns work schedules, following work requirements, to ensure quality and timely delivery of services. Observes and evaluates workers' appearance and performance to ensure quality service and compliance with specifications.



39-3031.00 Ushers, Lobby Attendants, and Ticket Takers Entry level position assuming education and experience prerequisite

Collects admission tickets and passes from patrons at entertainment events. Refuses admittance to patrons without ticket or pass, or who are undesirable for reasons, such as intoxication or improper attire. Greets patrons desiring to attend entertainment events. Distributes programs to patrons, or door checks to patrons temporarily leaving establishment. Assists other workers to change advertising display. Runs errand for patrons of press box, such as obtaining refreshments and carrying news releases. Serves patrons at refreshment stand during intermission. Monitors patrons' activities to prevent disorderly conduct and rowdiness and to detect infractions of rules. Counts and records number of tickets collected. Examines ticket or pass to verify authenticity, using criteria such as color and date issued. Assists patrons to find seats, search for lost articles, and locate facilities, such as restrooms and telephones. Verifies credentials of patrons desiring entrance into press box and permits only authorized persons to enter.

39-3091.00 Amusement and Recreation Attendants Entry – Mid level position assuming education and experience prerequisite

Schedules use of recreation facilities, such as golf courses, tennis courts, bowling alleys, and softball diamonds. Receives, retrieves, replaces, and stores sports equipment and supplies, arranges items in designated areas, and erects or removes equipment. Assists patrons on and off amusement rides, boats, or ski lifts, and in mounting and riding animals, and fastens or directs patrons to fasten safety devices. Provides information about facilities, entertainment options, and rules and regulations. Inspects, repairs, adjusts, tests, fuels, and oils sporting and recreation equipment, game machines, and amusement rides. Cleans sporting equipment, vehicles, rides, booths, facilities, and grounds. Attends amusement booth in parks, carnivals, or stadiums and awards prizes to winning players. Sells and serves refreshments to customers. Announces and describes amusement park attractions to patrons to entice customers to games and other entertainment. Provides entertainment services, such as guessing patron's weight, conducting games, or explaining use of arcade game machines, and photographing patrons. Launches, moors, and shows demonstrates use of boats, such as rowboats, canoes, and motorboats, or caddies for golfers. Monitors activities to ensure adherence to rules and safety procedures to protect environment and maintain order, and ejects unruly patrons. Attends animals, performing such tasks as harnessing, saddling, feeding, watering, and grooming, and drives horse-drawn vehicle for entertainment or advertising purposes. Records details of attendance, sales, receipts, reservations, and repair activities. Directs patrons of establishment to rides, seats, or attractions, or escorts patrons on tours of points of interest. Operates, drives, or explains use of mechanical riding devices or other automatic equipment in amusement parks, carnivals, or recreation areas. Rents, sells, and issues sports equipment and supplies, such as bowling shoes, golf balls, swimming suits, and beach chairs. Sells tickets and collects fees from customers, and collects or punches tickets.

39-3093.00 Locker Room, Coatroom, and Dressing Room Attendants Entry level position assuming education and experience prerequisite

Explains nature and cost of services and facilities available, demonstrates use of equipment, and answers customer inquiries. Cleans and polishes footwear, using brush, sponge, cleaning fluid, polish, wax, liquid or sole dressing, and dauber. Arranges, supervises, and provides valet services such as clothes pressing, shoe shining, sending and receiving mail, and car parking. Performs general cleaning and maintenance of facilities and equipment, using mop, broom, lawn mower, and other cleaning aids. Secures boat to dock, using mooring lines, connects utility lines to boat, and pumps water from boat for patrons. Sells service-related products and collects fees for services, rent, products, or supplies. Records and reviews client's activities to assure program is followed. Transports customers and baggage, using motor vehicle. Assists persons in establishments such as apartments, hotels, or hospitals, by opening doors, carrying bags, and performing related services. Stores personal possessions for patrons, issues a claim check for articles stored, and returns articles on receipt of check. Issues keys, athletic equipment, or supplies, such as soap, towels, and weight loss aids. Inspects building and grounds, and reports or removes unauthorized or undesirable persons. Schedules appointments for client sessions, registers quests, and assigns accommodations. Interviews, evaluates, and advises client to develop personal improvement plan, such as weight loss, using scales, measures, and recommended guidelines. Conducts body conditioning therapy such as steam or electric shock, using physical or visual stimuli. Assists customer in tub or steam room, bathes or massages them, using water, brush, mitt, sponge, and towel, to clean skin. Packs equipment and uniforms and attends to needs of individual athletes in clubhouse.

39-4011.00 Embalmers Entry – Mid level position assuming education and experience prerequisite

Packs body orifices with cotton saturated with embalming fluid to prevent escape of gases or waste matter. Applies cosmetics to impart lifelike appearance. Reshapes or reconstructs disfigured or maimed bodies, using materials such as clay, cotton, plaster of paris, and wax. Dresses and places body in casket. Maintains records, such as itemized list of clothing or valuables delivered with body and names of persons embalmed. Inserts convex celluloid or cotton between eyeball and eyelid to prevent slipping and sinking of eyelid. Washes and dries body, using germicidal soap and towels or



hot air drier. Joins lips, using needle and thread or wire. Presses diaphragm to evacuate air from lungs. Makes incision in arm or thigh and drains blood from circulatory system and replaces blood with embalming fluid, using pump. Incises stomach and abdominal walls and probes internal organs, using trocar, to withdraw blood and waste matter from organs. Attaches trocar to pump-tube, starts pump, and repeats probing to force embalming fluid into organs. Closes incisions, using needle and suture.

39-5011.00 Barbers Entry – Mid – Senior level position assuming education and experience prerequisite Cuts, shapes, trims, and tapers hair, using clippers, comb, blowout gun, and scissors. Drapes and pins protective cloth around customer's shoulders. Orders supplies. Records service on ticket or receives payment. Cleans work area and work tools. Sells lotions, tonics, or other cosmetic supplies. Applies lather and shaves beard or shapes hair contour (outline) on temple and neck, using razor. Performs other tonsorial services, such as applying hairdressings or lotions, dyeing, shampooing, singeing, or styling hair, and massaging face, neck, or scalp. Questions patron regarding services and style of haircut desired.

39-5012.00 Hairdressers, Hairstylists, and Cosmetologists Entry – Mid – Senior level position assuming education and experience prerequisite

Cuts, trims and shapes hair or hairpieces, using clippers, scissors, trimmers and razors. Attaches wig or hairpiece to model head and dresses wigs and hairpieces according to instructions, samples, sketches or photographs. Massages and treats scalp for hygienic and remedial purposes, using hands, fingers, or vibrating equipment. Analyzes patron's hair and other physical features or reads makeup instructions to determine and recommend beauty treatment. Updates and maintains customer information records, such as beauty services provided. Cleans, shapes, and polishes fingernails and toenails, using files and nail polish. Shapes and colors eyebrows or eyelashes and removes facial hair, using depilatory cream and tweezers. Recommends and applies cosmetics, lotions, and creams to patron to soften and lubricate skin and enhance and restore natural appearance. Administers therapeutic medication and advises patron to seek medical treatment for chronic or contagious scalp conditions. Combs, brushes, and sprays hair or wigs to set style. Shampoos, rinses, and dries hair and scalp or hair pieces with water, liquid soap, or other solutions. Bleaches, dyes, or tints hair, using applicator or brush. Applies water, setting or waving solutions to hair and winds hair on curlers or rollers.

39-5091.00 Makeup Artist, Theatrical and Performance Entry – Mid – Senior level position assuming education and experience prerequisite

Applies makeup to performers to alter their appearance to accord with their roles. Selects desired makeup shades from stock or mixes oil, grease, and coloring to achieve special color effects. Designs rubber or plastic prostheses and requisitions materials, such as wigs, beards, and special cosmetics. Confers with stage or motion picture officials and performers to determine dress or makeup alterations. Creates character drawings or models, based upon independent research to augment period production files. Examines sketches, photographs, and plaster models to obtain desired character image depiction. Studies production information, such as character, period settings and situations to determine makeup requirements. Attaches prostheses to performer and applies makeup to change physical features and depict desired character.

39-5092.00 Manicurists and Pedicurists Entry – Mid level position assuming education and experience prerequisite

Removes previously applied nail polish, using liquid remover and swabs. Shapes and smoothes ends of nails, using scissors, files, and emery boards. Applies clear or colored liquid polish onto nails with brush. Roughens surfaces of fingernails, using abrasive wheel. Attaches paper forms to tips of customer's fingers to support and shape artificial nails. Softens nail cuticles with water and oil, pushes back cuticles, using cuticle knife, and trims cuticles, using scissors or nippers. Whitens underside of nails with white paste or pencil. Removes paper forms and shapes and smoothes edges of nails, using rotary abrasive wheel. Brushes coats of powder and solvent onto nails and paper forms with hand brush to maintain nail appearance and to extend nails to desired length. Polishes nails, using powdered polish and buffer. Forms artificial fingernails on customer's fingers. Cleans customers' nails in soapy water, using swabs, files, and orange sticks.

39-5093.00 Shampooers Entry level position assuming education and experience prerequisite Shampoo and rinse customer's hair.

39-5094.00 Skin Care Specialists Entry – Mid level position assuming education and experience prerequisite Provide skin care treatments to face and body to enhance an individual's appearance.



39-6011.00 Baggage Porters and Bellhops Entry level position assuming education and experience prerequisite Delivers, carries, or transfers luggage, trunks, and packages to/from rooms, loading areas, vehicles, or transportation terminals. Supplies guests or travelers with directions, travel information, and other information, such as available services and points of interest. Inspects guest's room and explains features, such as night-lock and operation of television. Computes and completes charge slips for services rendered and maintains records. Transports quests about premises and local area, or calls taxicabs. Weighs and bills baggage and parcels for shipment, and arranges for freight to be shipped. Completes and attaches baggage claim checks and completes baggage insurance forms. Runs errands for guests. Arranges for clothing of hotel guests to be cleaned, laundered, or repaired. Pages guests in hotel lobby, dining room, or other areas, delivers messages and room service orders. Escorts incoming hotel guests to their rooms. Sets up display tables, racks, or shelves, and arranges merchandise display for sales personnel.

39-6012.00 Concierges Mid - Senior level position assuming education and experience prerequisite Assist patrons at hotel, apartment or office building with personal services. May take messages, arrange or give advice on transportation, business or entertainment, or monitor quest requests for housekeeping and maintenance.

39-6021.00 Tour Guides and Escorts Entry - Mid level position assuming education and experience prerequisite Escorts group on city and establishment tours, describes points of interest, and responds to questions. Provides directions and other pertinent information to visitors. Monitors visitors' activities and cautions visitors not complying with establishment regulations. Assumes responsibility for safety of group. Greets and registers visitors and issues identification badges and safety devices. Monitors facilities and notifies establishment personnel of need for maintenance. Performs clerical duties, such as filing, typing, operating switchboard, and delivering and collection of mail and messages. Carries equipment, luggage, or sample cases for visitors and provides errand service. Solicits tour patronage and collects fees and tickets from group members. Speaks foreign language to communicate with foreign visitors. Plans rest stops and refreshment items. Distributes brochures, conveys background information, and explains establishment processes and operations at tour site. Drives motor vehicle to transport visitors to establishments and tour site locations.

39-6022.00 Travel Guides Entry - Mid - Senior level position assuming education and experience prerequisite Plans tour itinerary, applying knowledge of travel routes and destination sites. Instructs novices in climbing techniques, mountaineering, and wilderness survival, and demonstrates use of hunting, fishing, and climbing equipment. Pitches camp and prepares meals for tour group members. Pilots airplane or drives land and water vehicles to transport tourists to activity/tour site. Explains hunting and fishing laws to group to ensure compliance. Sells or rents equipment, clothing, and supplies. Administers first aid to injured group participants. Obtains or assists tourists to obtain permits and documents, such as visas, passports, and health certificates, and to convert currency. Verifies quantity and quality of equipment to ensure prerequisite needs for expeditions and tours have been met. Arranges for transportation, accommodations, activity equipment, and services of medical personnel. Selects activity tour sites and leads individuals or groups to location and describes points of interest.

39-6031.00 Flight Attendants Entry - Mid - Senior level position assuming education and experience prerequisite Greets passengers, verifies tickets, records destinations, and directs passengers to assigned seats. Collects money for meals and beverages. Administers first aid to passengers in distress, when needed. Prepares reports showing place of departure and destination, passenger ticket numbers, meal and beverages inventories, and lost and found articles. Explains use of safety equipment to passengers. Serves prepared meals and beverages. Assists passengers to store carry-on luggage in overhead, garment, or under-seat storage. Walks aisle of plane to verify that passengers have complied with Federal regulations prior to take off.

39-6032.00 Transportation Attendants, Except Flight Attendants and Baggage Porters Entry – Mid level position assuming education and experience prerequisite

Greets passengers boarding mode of transportation and announces stops. Responds to passengers' questions, requests, or complaints. Mails letters or arranges for dispatch of telegrams to assist passengers. Carries baggage to assigned rooms or to station platform. Cleans rooms and bathroom facilities, changes linens, and replenishes supplies to washroom. Inspects kitchen and dining area to ensure adherence to sanitation requirements. Signals transportation operator to stop or proceed, opens and closes doors, and establishes order among passengers. Counts and verifies tickets and seat reservations, and records number of passengers boarding and leaving mode of transportation. Issues and collects passenger boarding passes and transfers and tears or punches tickets to prevent reuse. Distributes sports and game equipment, magazines, newspapers, pillows, blankets, and other items to passengers and guests. Demonstrates safety procedures. Provides seating arrangements, and straightens and adjusts window shades and seat cushions to accommodate requests of passengers. Serves snacks, lunch, and refreshments.



39-9011.00 Child Care Workers Entry – Mid – Senior level position assuming education and experience prerequisite

Cares for children in institutional setting, such as group homes, nursery schools, private businesses, or schools for the handicapped. Disciplines children and recommends or initiates other measures to control behavior, such as caring for own clothing and picking up toys and books. Assists in preparing food for children and serves meals and refreshments to children and regulates rest periods. Wheels handicapped children to classes or other areas of facility, secure in equipment, such as chairs and slings. Monitors children on life-support equipment to detect malfunctioning of equipment and calls for medical assistance when needed. Instructs children regarding desirable health and personal habits, such as eating, resting, and toilet habits. Places or hoists children into baths or pools. Organizes and participates in recreational activities, such as games. Reads to children, and teaches them simple painting, drawing, handwork, and songs.

39-9021.00 Personal and Home Care Aides Entry – Mid – Senior level position assuming education and experience prerequisite

Advises and assists family members in planning nutritious meals, purchasing and preparing foods, and utilizing commodities from surplus food programs. Explains fundamental hygiene principles. Assists in training children. Gives bedside care to incapacitated individuals and trains family members to provide bedside care. Assigns housekeeping duties according to children's capabilities. Obtains information for client, for personal and business purposes. Types correspondence and reports. Drives motor vehicle to transport client to specified locations. Assists parents in establishing good study habits for children. Assists client with dressing, undressing, and toilet activities. Prepares and maintains records of assistance rendered. Evaluates needs of individuals served and plans for continuing services.

39-9031.00 Fitness Trainers and Aerobics Instructors Entry – Mid – Senior level position assuming education and experience prerequisite

Teaches individual and team sports to participants, utilizing knowledge of sports techniques and of physical capabilities of participants. Organizes, leads, instructs, and referees indoor and outdoor games, such as volleyball, baseball, and basketball. Plans physical education program to promote development of participant physical attributes and social skills. Teaches and demonstrates use of gymnastic and training apparatus, such as trampolines and weights. Selects, stores, orders, issues, and inventories equipment, materials, and supplies. Organizes and conducts competition and tournaments. Advises participants in use of heat or ultraviolet treatments and hot baths. Explains and enforces safety rules and regulations.

39-9032.00 Recreation Workers Entry - Mid level position assuming education and experience prerequisite Organizes, leads, and promotes interest in facility activities, such as arts, crafts, sports, games, camping, and hobbies. Conducts recreational activities and instructs participants to develop skills in provided activities. Arranges for activity requirements, such as entertainment, and setting up equipment and decorations. Explains principles, techniques, and safety procedures of facility activities to participants and demonstrates use of material and equipment. Meets and collaborates with agency personnel, community organizations, and other professional personnel to plan balanced recreational programs for participants. Ascertains and interprets group interests, evaluates equipment and facilities, and adapts activities to meet participant needs. Assists management to resolve complaints. Administers first aid, according to prescribed procedures, or notifies emergency medical personnel when necessary. Meets with staff to discuss rules, regulations, and work-related problems. Completes and maintains time and attendance forms and inventory lists. Evaluates staff performance and records reflective information on performance evaluation forms. Schedules maintenance and use of facilities. Supervises and coordinates work activities of personnel, trains staff, and assigns duties. Tests and documents content of swimming pool water and schedules maintenance and use of facilities. Greets and introduces new arrivals to other quests, acquaints arrivals with facilities, and encourages group participation. Enforces rules and regulations of facility, maintains discipline, and ensures safety. Schedules facility activities and maintains record of programs.

39-9041.00 Residential Advisors Entry – Mid level position assuming education and experience prerequisite Assigns room, assists in planning recreational activities, and supervises work and study programs. Orders supplies and determines need for maintenance, repairs, and furnishings. Ascertains need for and secures service of physician. Chaperons group-sponsored trips and social functions. Plans menus of meals for residents of establishment. Hires and supervises activities of housekeeping personnel. Sorts and distributes mail. Answers telephone. Escorts individuals on trips outside establishment for shopping or to obtain medical or dental services. Compiles records of daily activities of residents. Counsels residents in identifying and resolving social and other problems.



41-2021.00 Counter and Rental Clerks Entry level position assuming education and experience prerequisite
Rents item or arranges for provision of service to customer. Receives, examines, and tags articles to be altered, cleaned, stored, or repaired. Prepares rental forms, obtaining customer signature and other information, such as required licenses. Computes charges based on rental rate. Explains rental fees and provides information about rented items, such as operation or description. Answers telephone and receives orders by phone. Collects deposit or payment or records credit charges. Inspects and adjusts rental items to meet needs of customer. Greets customers of agency that rents items, such as apparel, tools, and conveyances or that provide services, such as rug cleaning. Reserves items for requested time and keeps record of items rented. Recommends to customer items offered by rental facility that meet customer needs.

41-2022.00 Parts Salespersons Entry – Mid level position assuming education and experience prerequisite Determines replacement part required, according to inspection of old part, customer request, or customer description of malfunction. Advises customer on substitution or modification of part when identical replacement is not available. Reads catalog, microfiche viewer, or computer display to determine replacement part stock number and price. Fills customer orders from stock. Examines returned part for defects, and exchanges defective part or refunds money. Receives payment or obtains credit authorization. Prepares sales slip or sales contract. Repairs parts or equipment. Takes inventory of stock. Marks and stores parts in stockroom according to prearranged system. Places new merchandise on display. Measures parts, using precision measuring instruments to determine whether similar parts maybe machined to required size. Discusses use and features of various parts, based on knowledge of machine or equipment. Demonstrates equipment to customer and explains functioning of equipment. Receives and fills telephone orders for parts.

41-2031.00 Retail Salespersons Entry – Mid level position assuming education and experience prerequisite Prepares sales slip or sales contract. Sells or arranges for delivery, insurance, financing, or service contracts for merchandise. Computes sales price of merchandise. Describes merchandise and explains use, operation, and care of merchandise to customers. Totals purchases, receives payment, makes change, or processes credit transaction. Demonstrates use or operation of merchandise. Recommends, selects, and obtains merchandise based on customer needs and desires. Cleans shelves, counters, and tables. Requisitions new stock. Inventories stock. Rents merchandise to customers. Wraps merchandise. Estimates cost of repair or alteration of merchandise. Estimates and quotes trade-in allowances. Maintains records related to sales. Tickets, arranges, and displays merchandise to promote sales. Estimates quantity and cost of merchandise required, such as paint or floor covering. Fits or assists customers in trying on merchandise. Greets customer.

41-3021.00 Insurance Sales Agents Entry – Mid level position assuming education and experience prerequisite Advises clients of broker (independent agent) in selecting casualty, life, or property insurance. Discusses advantages and disadvantages of various policies. Selects company that offers type of coverage requested by client to underwrite policy. Contacts underwriter and submits forms to obtain binder coverage. Plans and oversees incorporation of insurance program into bookkeeping system of company. Installs bookkeeping systems and resolves system problems. Establishes client's method of payment. Explains necessary bookkeeping requirements for customer to implement and provide group insurance program. Explains group insurance programs to promote sale of insurance plan. Calls on policyholders to deliver and explain policy, to suggest additions or changes in insurance program, or to change beneficiaries.

41-3041.00 Travel Agents Entry – Mid – Senior level position assuming education and experience prerequisite Plans, describes, arranges, and sells itinerary tour packages and promotional travel incentives offered by various travel carriers. Computes cost of travel and accommodations, using calculator, computer, carrier tariff books, and hotel rate books, or quotes package tour's costs. Books transportation and hotel reservations, using computer terminal or telephone. Converses with customer to determine destination, mode of transportation, travel dates, financial considerations, and accommodations required. Provides customer with brochures and publications containing travel information, such as local customs, points of interest, or foreign country regulations. Collects payment for transportation and accommodations from customer. Prints or requests transportation carrier tickets, using computer printer system or system link to travel carrier.

41-4011.01 Sales Representatives, Agricultural Entry – Mid – Senior level position assuming education and experience prerequisite

Solicits orders from customers in person or by phone. Recommends changes in customer use of agricultural products to improve production. Prepares reports of business transactions. Demonstrates use of agricultural equipment or machines. Informs customer of estimated delivery schedule, service contracts, warranty, or other information pertaining to purchased products. Consults with customer regarding installation, set-up, or layout of agricultural equipment and machines. Prepares sales contracts for orders obtained. Displays or shows customer agricultural related products. Compiles lists of prospective customers for use as sales leads. Quotes prices and credit terms.



41-9012.00 Models Entry – Mid – Senior level position assuming education and experience prerequisitePoses as subject for paintings, sculptures, and other types of art for translation into plastic or pictorial values.
Informs prospective purchasers as to model, number, and price of garments and department where garment can be purchased. Applies makeup t face and styles hair to enhance appearance, considering such factors as color, camera techniques, and facial features. Dresses in sample or completed garments and selects own accessories. Hands out samples or presents, demonstrates toys, and converses with children and adults while dressed in costume. Poses as directed or strikes suitable interpretive poses for promoting and selling merchandise or fashions during photo session. Stands, turns, and walks to demonstrate features of garment to observers at fashion shows, private showings, and retail establishments. Wears character costumes and impersonates characters portrayed to amuse children and adults.

41-9021.00 Real Estate Brokers Senior level position assuming education and experience prerequisiteOperate real estate office, or work for commercial real estate firm, overseeing real estate transactions. Other duties usually include selling real estate or renting properties and arranging loans.

41-9022.00 Real Estate Sales Agents Entry – Mid – Senior level position assuming education and experience prerequisite

Displays and explains features of property to client and discusses conditions of sale or terms of lease. Prepares real estate contracts, such as closing statements, deeds, leases, and mortgages, and negotiates loans on property. Oversees signing of real estate documents, disburses funds, and coordinates closing activities. Locates and appraises undeveloped areas for building sites, based on evaluation of area market conditions. Collects rental deposit. Conducts seminars and training sessions for sales agents to improve sales techniques. Contacts utility companies for service hookup to client's property. Secures construction financing with own firm or mortgage company. Inspects condition of premises and arranges for or notifies owner of necessary maintenance. Reviews trade journals and relevant literature and attends staff and association meetings to remain knowledgeable about real estate market. Searches public records to ascertain that client has clear title to property. Investigates client's financial and credit status to determine eligibility for financing. Plans and organizes sales promotion programs and materials, including newspaper advertisements and real estate promotional booklets. Appraises client's unimproved property to determine loan value. Reviews plans and recommends to client construction features, and enumerates options on new home sales. Solicits and compiles listings of available rental property. Answers client's questions regarding work under construction, financing, maintenance, repairs, and appraisals. Interviews prospective tenants and records information to ascertain needs and qualifications.

41-9041.00 Telemarketers Entry – Mid – Senior level position assuming education and experience prerequisite Contacts customers by phone, mail, or in person to offer or persuade them to purchase merchandise or services. Sets up and displays sample merchandise at parties or stands. Orders or purchases supplies and stocks cart or stand. Circulates among potential customers or travels by foot, truck, automobile, or bicycle to deliver or sell merchandise or services. Arranges buying party and solicits sponsorship of parties to sell merchandise. Delivers merchandise, serves customer, collects money, and makes change. Maintains records of accounts and orders and develops prospect lists. Distributes product samples or literature that details products or services. Writes orders for merchandise or enters order into computer. Explains products or services and prices and demonstrates use of products.

41-9091.00 Door-To-Door Sales Workers, News and Street Vendors, and Related Workers Entry – Mid level position assuming education and experience prerequisite

Contacts customers by phone, mail, or in person to offer or persuade them to purchase merchandise or services. Sets up and displays sample merchandise at parties or stands. Orders or purchases supplies and stocks cart or stand. Circulates among potential customers or travels by foot, truck, automobile, or bicycle to deliver or sell merchandise or services. Arranges buying party and solicits sponsorship of parties to sell merchandise. Delivers merchandise, serves customer, collects money, and makes change. Maintains records of accounts and orders and develops prospect lists. Distributes product samples or literature that details products or services. Writes orders for merchandise or enters order into computer. Explains products or services and demonstrates use of products.

43-1011.01 First-Line Supervisors, Customer Service Mid – Senior level position assuming education and experience prerequisite

Supervises and coordinates activities of workers engaged in customer service activities. Plans, prepares, and devises work schedules, according to budgets and workloads. Trains and instructs employees. Hires and discharges workers. Issues instructions and assigns duties to workers. Observes and evaluates workers' performance. Communicates with other departments and management to resolve problems and expedite work. Helps workers in resolving problems and completing work. Interprets and communicates work procedures and company policies to staff. Requisitions or purchases



supplies. Plans and develops improved procedures. Makes recommendations to management concerning staff and improvement of procedures. Prepares, maintains, and submits reports and records, such as budgets and operational and personnel reports. Reviews and checks work of subordinates such as reports, records, and applications for accuracy and content, and corrects errors. Resolves complaints and answers questions of customers regarding services and procedures.

43-1011.02 First-Line Supervisors, Administrative Support Mid – Senior level position assuming education and experience prerequisite

Supervises and coordinates activities of workers engaged in clerical or administrative support activities. Evaluates subordinate job performance and conformance to regulations, and recommends appropriate personnel action. Plans, prepares, and revises work schedules and duty assignments according to budget allotments, customer needs, problems, workloads, and statistical forecasts. Maintains records of such matters as inventory, personnel, orders, supplies, and machine maintenance. Examines procedures and recommends changes to save time, labor, and other costs and to improve quality control and operating efficiency. Participates in work of subordinates to facilitate productivity or overcome difficult aspects of work. Trains employees in work and safety procedures and company policies. Reviews records and reports pertaining to such activities as production, operation, pay roll, customer accounts, and shipping. Consults with supervisor and other personnel to resolve problems, such as equipment performance, output quality, and work schedules. Interviews, selects, and discharges employees. Verifies completeness and accuracy of subordinates' work, computations, and records. Requisitions supplies. Computes figures, such as balances, totals, and commissions. Analyzes financial activities of establishment or department and assists in planning budget. Inspects equipment for defects and notifies maintenance personnel or outside service contractors for repairs. Plans layout of stockroom, warehouse, or other storage areas, considering turnover, size, weight, and related factors pertaining to items stored. Compiles reports and information required by management or governmental agencies. Identifies and resolves discrepancies or errors. Oversees, coordinates, or performs activities associated with shipping, receiving, distribution, and transportation.

43-2021.01 Directory Assistance Operators Entry – Mid level position assuming education and experience prerequisite

Refers to alphabetical or geographical reels or directories to answer questions and provide telephone information. Types location and spelling of name on computer terminal keyboard, and scans directory or microfilm viewer to locate number. Plugs in headphones when signal light flashes on cord switchboard, or pushes switch keys on cordless switchboard to make connections. Keeps reels and directories up-to-date. Maintains record of calls received. Suggests alternate locations and spellings under which number could be listed.

43-2021.02 Central Office Operators Entry – Mid level position assuming education and experience prerequisite Observes signal light on switchboard, plugs cords into trunk jack, and dials or presses button to make connections. Consults charts to determine charges for payphone calls. Inserts tickets in calculagraph (time stamping device) to record time of toll calls. Requests coin deposits for calls. Calculates and quotes charges on long distance connections. Gives information regarding subscribers' telephone numbers.

43-3061.00 Procurement Clerks Entry – Mid level position assuming education and experience prerequisiteVerifies terminology and specifications of purchase requests. Confers with suppliers concerning late deliveries.
Approves bills for payment. Determines if material is on hand in sufficient quantity. Types or writes purchase order and sends copy to supplier and department originating request. Computes total cost of items purchased, using calculator. Verifies bills form suppliers with bids and purchase orders. Compares prices, specifications, and delivery dates, and awards contract to supplier with best bid. Types or writes invitation of bid forms and mails forms to supplier firms or distributes forms for public posting. Compiles records of items purchased or transferred between departments. Reads catalogs and interviews suppliers to obtain prices and specifications.

43-4021.00 Correspondence Clerks Entry – Mid level position assuming education and experience prerequisite Composes letter in response to request or problem identified by correspondence. Gathers data to formulate reply. Types acknowledgment letter to person sending correspondence. Processes orders for goods requested in correspondence. Reviews records pertinent to resolution of problem for completeness and accuracy and attaches records to correspondence for reply by others. Compiles data from records to prepare periodic reports. Investigates discrepancies in reports and records and confers with personnel in affected departments to ensure accuracy and compliance with procedures. Confers with company personnel regarding feasibility of complying with writer's request. Maintains files and control records to show status of action in processing correspondence. Routes correspondence to other departments for reply. Compiles data pertinent to manufacture of special products for customers. Completes form letter in response to

request or problem identified by correspondence. Reads incoming correspondence to ascertain nature of writer's concern and determine disposition of correspondence.

43-4031.01 Court Clerks Entry - Mid level position assuming education and experience prerequisite

Prepares docket or calendar of cases to be called, using typewriter or computer. Instructs parties when to appear in court. Explains procedures of forms to parties in case. Records minutes of court proceedings, using stenotype machine or shorthand, and transcribes testimony, using typewriter or computer. Notifies district attorney's office of cases prosecuted by district attorney. Administers oath to witnesses. Collects court fees or fines and records amounts collected. Records case disposition, court orders, and arrangement for payment of court fees. Examines legal documents submitted to court for adherence to law or court procedures. Prepares case folders, and posts, files, or routes documents. Secures information for judges, and contacts witnesses, attorneys, and litigants to obtain information for court.

43-4031.02 Municipal Clerks Entry – Mid level position assuming education and experience prerequisite Prepares agendas and bylaws for town council. Prepares reports on civic needs. Records minutes of council meetings. Keeps fiscal records and accounts. Answers official correspondence.

43-4031.03 License Clerks Entry – Mid level position assuming education and experience prerequisite

Questions applicant to obtain information, such as name, address, and age, and records data on prescribed forms.

Evaluates information obtained to determine applicant qualification for licensure. Conducts oral, visual, written, or performance test to determine applicant qualifications. Submits fees and reports to government for record.

Counts collected fees and applications. Collects prescribed fee. Issues driver, automobile, marriage, dog, or other license.

43-4051.02 Customer Service Representatives, Utilities Entry – Mid – Senior level position assuming education and experience prerequisite

Confers with customer by phone or in person to receive orders for installation, turn on, discontinuance, or change in service. Completes contract forms, prepares change of address records, and issues discontinuance orders, using computer. Determines charges for service requested and collects deposits. Solicits sale of new or additional utility services. Resolves billing or service complaints and refers grievances to designated departments for investigation.

43-4061.01 Claims Takers, Unemployment Benefits Mid – Senior level position assuming education and experience prerequisite

Interviews claimants returning at specified intervals to certify claimants for continuing benefits. Reviews data on job application or claim forms to ensure completeness. Assists applicants completing application forms for job referrals or unemployment compensation claims. Answers questions concerning registration for jobs or application for unemployment benefits. Assists applicants in filling out forms, using knowledge of information required or native language of applicant. Schedules unemployment insurance claimants for adjudication interview when question of eligibility arises. Refers applicants to job opening or interview with other staff, in accordance with administrative guidelines or office procedure.

43-4061.02 Welfare Eligibility Workers and Interviewers Entry – Mid – Senior level position assuming education and experience prerequisite

Interviews and investigates applicants for public assistance to gather information pertinent to their application. Initiates procedures to grant, modify, deny or terminate eligibility and grants for various assistance programs. Authorizes amounts of grants, money payments, food stamps, medical care, or other general assistance. Computes public housing rent in proportion to eligible tenant's income. Conducts annual, interim, and special housing reviews and home visits to ensure conformance to regulations. Reviews training approval forms and payment vouchers for completeness and accuracy. Receives and records security deposits and advance rents from selected tenants. Interprets and explains rules and regulations governing eligibility and grants, payment methods, and applicant's legal rights. Explains eligibility equirements, form completion requirements, community resources for financial assistance, housing opportunities, and tenant selection methods. Prepares and assists applicants in completion of routine intake and personnel forms. Prepares regular and special reports, keeps records of assigned cases, and submits individual recommendations. Selects and refers eligible applicants to public assistance or public housing agencies. Records and evaluates personal and financial data to determine initial or continuing eligibility.

43-4071.00 File Clerks Entry – Mid – Senior level position assuming education and experience prerequisite
Sorts or classifies information, according to content, purpose, user criteria, or chronological, alphabetical, or numerical
order. Scans or reads incoming materials to determine filing order or location. Inspects or examines materials or files for
accuracy, legibility, or damage. Assigns and records or stamps identification numbers or codes to index materials for
filing. Photographs or makes copies or data and records, using photocopying or microfilming equipment. Authorizes or

documents materials movement, using logbook or computer and traces missing files. Inserts additional data on file records. Removes or destroys outdated materials in accordance with file maintenance schedules of legal requirements. Locates and retrieves files upon request from authorized users. Places materials into storage receptacles, such as file cabinets, boxes, bins, or drawers, according to classification and identification information.

43-4081.00 Hotel, Motel, and Resort Desk Clerks Entry – Mid – Senior level position assuming education and experience prerequisite

Greets, registers, and assigns rooms to guests of hotel or motel. Date stamps, sorts, and racks incoming mail and messages. Deposits guests' valuables in hotel safe or safe deposit box. Answers inquiries pertaining to hotel services, registration of guest, and shopping, dining, entertainment, and travel directions. Issues room key and escort instructions to bellhop. Computes bill, collects payment, and makes change for guests. Makes and confirms reservations. Transmits and receives messages, using telephone or telephone switchboard. Posts charges, such as room, food, liquor, or telephone, to ledger, manually or using computer. Keeps records of room availability and guests' accounts, manually or using computer.

43-4111.00 Interviewers, Except Eligibility and Loan Mid – Senior level position assuming education and experience prerequisite

Contacts persons at home, place of business, or field location, by telephone, mail, or in person. Explains reason for questioning, and other specified information. Asks questions to obtain various specified information, such as person's name, address, age, religion, and state of residency. Records results and data from interview or survey, using computer or specified form. Assists person in filling out application or questionnaire. Compiles and sorts data from interview and reviews to correct errors.

43-4131.00 Loan Interviewers and Clerks Entry – Mid – Senior level position assuming education and experience prerequisite

Verifies and examines information and accuracy of loan application and closing documents. Interviews loan applicant to obtain personal and financial data and to assist in filling out application. Assembles and compiles documents for closing, such as title abstract, insurance form, loan form, and tax receipt. Prepares and types loan applications, closing documents, legal documents, letters, forms, government notices, and checks, using computer. Records applications for loan and credit, loan information, and disbursement of funds, using computer. Contacts customer by mail, telephone, or in person concerning acceptance or rejection of application. Checks value of customer collateral to be held as loan security. Answers questions and advises customer regarding loans and transactions. Calculates, reviews, and corrects errors on interest, principal, payment, and closing costs, using computer or calculator. Reviews customer accounts to determine whether payments are made on time and that other loan terms are being followed. Accepts payment on accounts. Orders property insurance or mortgage insurance policies to ensure protection against loss on mortgaged property. Files and maintains loan records. Establishes credit limit and grants extension of credit on overdue accounts. Presents loan and repayment schedule to customer. Schedules and conducts closing of mortgage transaction. Contacts credit bureaus, employers, and other sources to check applicant credit and personal references. Submits loan application with recommendation for underwriting approval.

43-4141.00 New Accounts Clerks Entry – Mid – Senior level position assuming education and experience prerequisite

Interviews customer to obtain information needed to open account or rent safe-deposit box. Assists customer in completing application forms for loans, accounts, or safe-deposit boxes, using typewriter or computer, and obtains signature. Answers customer questions, and explains available services, such as deposit accounts, bonds, and securities. Collects and records fees and funds for deposit from customer, and issues receipt, using computer. Enters account information in computer, and files forms or other documents. Schedules repairs for locks on safe-deposit box. Obtains credit records from reporting agency. Executes wire transfers of funds. Investigates and corrects errors upon customer request, according to customer and bank records, using calculator or computer. Issues initial and replacement safe-deposit key to customer, and admits customer to vault.

43-4161.00 Human Resources Assistants, Except Payroll and Timekeeping Entry – Mid level position assuming education and experience prerequisite

Examine employee files to answer inquiries and provide information for personnel actions. Processes and reviews employment application to evaluate qualifications or eligibility of applicant. Answers questions regarding examination, eligibility, salaries, benefits, and other pertinent information. Interviews applicants to obtain and verify information. Requests information from law enforcement officials, previous employer, and their references to determine applicant's employment acceptability. Selects applicants having specified job requirements and refers to employing official.

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Explains company insurance policies and options to employees and files claim and cancellation forms. Communicates with employees or applicants to explain company personnel policies and procedures. Administers and scores employee aptitude, skills, personality, and interests tests. Prepares listing of vacancies and notifies eligible workers of position availability. Maintains and updates employee records to document personnel actions and changes in employee status. Records Employee data, such as address, rate of pay, absences, and benefits, using personal computer. Compiles and types reports from employment records.

43-4171.00 Receptionists and Information Clerks Entry – Mid level position assuming education and experience prerequisite

Greets persons entering establishment, determines nature and purpose of visit, and directs visitor to specific destination, or answers questions and provides information. Registers visitors of public facility, such as national park or military base, collects fees, explains regulations, and assigns sites. Analyzes data to determine answer to customer or public inquiry. Transmits information or documents to customer, using computer, mail, or facsimile. Operates telephone switchboard to receive incoming calls. Performs duties such as taking care of plants and straightening magazines to maintain lobby or reception area. Monitors facility to ensure compliance with regulations. Receives payment and records receipts for services. Conducts tours or delivers talks describing feature of public facility, such as historic site or national park. Hears and resolves complaints from customers and public. Files and maintains records. Enrolls individuals to participate in programs, prepares lists, and notifies individuals of acceptance in programs, and arranges schedules space and equipment for participants. Types memos, correspondence, travel vouchers, or other documents. Calculates and quotes rates for tours, stocks, insurance policies, and other products and services. Collects and distributes messages for employees of organization. Records, compiles, enters, and retrieves information, by hand or using computer. Provides information to public concerning available land leases, land classification, or mineral resources. Provides information to public regarding tours, classes, workshops, and other programs. Answers telephone to schedule future appointments, provide information, or forward call.

43-4181.01 Travel Clerks Entry – Mid level position assuming education and experience prerequisite

Provides customers with travel suggestions and information such as guides, directories, brochures, and maps. Confers with customers by telephone, writing, or in person to answer questions regarding services and determine travel preferences. Informs client of travel dates, times, connections, baggage limits, medical and visa requirements, and emergency information. Provides information concerning fares, availability of travel, and accommodations, either orally or by using guides, brochures, and maps. Contacts motel, hotel, resort, and travel operators by mail or telephone to obtain advertising literature. Studies maps, directories, routes, and rate tables to determine travel route and cost and availability of accommodations. Calculates estimated travel rates and expenses, using items such as rate tables and calculators. Assists client in preparing required documents and forms for travel, such as visas. Plans itinerary for travel and accommodations, using knowledge of routes, types of carriers, and regulations. Confirms travel arrangements and reservations. Obtains reservations for air, train, or car travel and hotel or other housing accommodations.

43-4181.02 Reservation and Transportation Ticket Agents Entry – Mid level position assuming education and experience prerequisite

Arranges reservations and routing for passengers at request of Ticket Agent. Telephones customer or Ticket Agent to advise of changes with travel conveyance or to confirm reservation. Reads coded data on tickets to ascertain destination, marks tickets, and assigns boarding pass. Sells and assembles tickets for transmittal or mailing to customers. Plans route and computes ticket cost, using schedules, rate books, and computer. Answers inquiries made to travel agencies or transportation firms, such as airlines, bus companies, railroad companies, and steamship lines. Examines passenger ticket or pass to direct passenger to specified area for loading. Checks baggage and directs passenger to designated location for loading. Determines whether space is available on travel dates requested by customer. Sells travel insurance. Informs travel agents in other locations of space reserved of available. Announces arrival and departure information, using public address system. Assists passengers requiring special assistance to board or depart conveyance. Assigns specified space to customers and maintains computerized inventory of passenger space available.

43-5011.00 Cargo and Freight Agents Entry – Mid – Senior level position assuming education and experience prerequisite

Prepares airway bill of lading on freight from consignors and routes freight on first available flight. Verifies passengers' tickets as they board plane. Positions ramp for loading of airplane. Unloads inbound freight and baggage and notifies consignees of arrival of shipments. Forces conditioned air into interior of plane for passenger comfort prior to departure, using mobile aircraft air conditioning unit. Removes ramp, and signals pilot that personnel and equipment are clear of plane. Arranges for delivery of freight and baggage to consignees. Oversees or participates in loading cargo to ensure

completeness of load and even distribution of weight. Prepares manifest showing baggage, mail, freight weights, and number of passengers on airplane and teletypes data to destination. Obtains flight number, airplane number, and names of crewmember from dispatcher and records data on flight papers of airplane.

43-5031.00 Police, Fire, and Ambulance Dispatchers Mid – Senior level position assuming education and experience prerequisite

Receives incoming calls by telephone or alarm system. Operate telecommunication equipment to relay information and messages to and from emergency site, and between law enforcement agencies. Monitors alarm system to detect fires, illegal entry into establishments, or other emergencies. Determines response needed to emergency. Provides instructions to caller, utilizing knowledge of emergency medical care. Questions caller, observes alarm register, and scans map, to determine if emergency is within service area. Tests and adjusts communication and alarm systems, and reports malfunctions to maintenance units. Records details of calls, dispatches, and messages and maintains logs and files, using computer. Scans status charts and computer screen to determine emergency units available for response. Questions caller to determine nature of problem and type and number of personnel and equipment needed. Contacts officers to verify assignment locations. Coordinates emergency requests, and dispatches response units to emergency, using radio or alarm system.

43-5032.00 Dispatchers, except Police, Fire, and Ambulance Entry – Mid – Senior level position assuming education and experience prerequisite

Routes or assigns workers or equipment to appropriate location, according to customer request, specifications, or needs. Confers with customer or supervising personnel regarding questions, problems, and request for service or equipment. Records and maintains files and records, regarding customer request, work or services performed, charges, expenses, inventory, and other dispatch information. Orders supplies and equipment, and issues to personnel. Determines types or amount of equipment, vehicles, materials or personnel required, according to work order or specifications. Receives or prepares work orders, according to customer request or specifications. Relays work orders, messages, and information to or from work crews, supervisors, and field inspectors, using telephone or two way radio.

43-5051.00 Postal Service Clerks Mid – Senior level position assuming education and experience prerequisite Collects payment for postage stamps, postal cards, stamped envelopes, metered postage, and money orders. Answers questions pertaining to mail regulations, procedures, postage rates, and mail delivery. Feeds mail into electric electronic postage canceling device or hand stamps to cancel postage. Transports mail from one workstation to another within same postal office. Registers and insures letters and parcels. Assists public in complying with federal regulations of Postal Service and other federal agencies, such as registration of aliens. Posts announcements on centrally located bulletin board to distribute government related information to general public. Receives, registers, and refers for investigation complaints regarding mail theft, delivery, lost mail, and damaged mail. Calibrates postage meters. Examines mail for correct postage. Weighs and computes mailing costs of letters and parcels based on type, weight, and destination. Sorts mail according to groups and destination by hand or by operating electronic mail sorting or scanning device.

43-5061.00 Production, Planning, and Expediting Clerks Mid – Senior level position assuming education and experience prerequisite

Reviews documents, such as production schedules, staffing tables, and specifications to obtain information, such as materials, priorities, and personnel requirements. Confers with establishment personnel, vendors, and customers to coordinate processing and shipping, and to resolve complaints. Completes status reports, such as production progress, customer information, and materials inventory. Compiles schedules and orders, such as personnel assignments, production, workflow, transportation, and maintenance and repair. Monitors work progress, provides services, such as furnishing permits, tickets, and union information, and directs workers to expedite workflow. Examines documents, materials, and products, and monitors work processes for completeness, accuracy, and conformance to standards and specifications. Calculates figures, such as labor and materials amounts, manufacturing costs, and wages, using pricing schedules, adding machine, or calculator. Maintains files, such as maintenance records, bills of lading, and cost reports. Requisitions and maintains inventory of materials and supplies to meet production demands. Arranges for delivery and distributes supplies and parts to expedite flow of materials to meet production schedules.

45-1011.01 First-Line Supervisors and Manager/Supervisors – Agricultural Crop Workers Senior level position assuming education and experience prerequisite

Assigns duties, such as tilling soil, planting, irrigating, storing crops, and maintaining machines, and assigns fields or rows to workers. Contracts with seasonal workers and farmers to provide employment, and arranges for transportation, equipment, and living guarters. Investigates grievances and settles disputes to maintain harmony among workers.

Opens gate to permit entry of water into ditches or pipes, and signals worker to start flow of water to irrigate fields. Drives and operates farm machinery, such as trucks, tractors, or self-propelled harvesters, to transport workers or cultivate and harvest fields. Requisitions and purchases farm supplies, such as insecticides, machine parts or lubricants, and tools. Confers with manager to evaluate weather and soil conditions and to develop and revise plans and procedures. Prepares time, payroll, and production reports, such as farm conditions, amount of yield, machinery breakdowns, and labor problems. Directs or assists in adjustment, repair, and maintenance of farm machinery and equipment. Trains workers in methods of fieldwork and safety regulations, and briefs them on identifying characteristic of insects and diseases. Determines number and kind of workers needed to perform required work, and schedules activities. Inspects crops and fields to determine maturity, yield, infestation, or work requirements, such as cultivating, spraying, weeding, or harvesting. Issues farm implements and machinery, ladders, or containers to workers and collects them at end of workday. Recruits, hires, and discharges workers. Observes workers to detect inefficient and unsafe work procedures or identify problems, and initiates actions to correct improper procedure or solve problem.

45-1011.02 First-Line Supervisors and Manager/Supervisors – Animal Husbandry Workers Senior level position assuming education and experience prerequisite

Assigns workers to tasks, such as feeding and treating animals, cleaning quarters, transferring animals, and maintaining facilities. Confers with manager to discuss and ascertain production requirements, condition of equipment and supplies, and work schedules. Observes animals, such as cattle, sheep, poultry, or game animals, for signs of illness, injury, nervousness, or unnatural behavior. Trains workers in animal care, artificial insemination techniques, egg candling and sorting, and transfer of animals. Notifies veterinarian and manager of serious illnesses or injuries to animals. Monitors eggs and adjusts incubator thermometer and gauges, to ascertain hatching progress and maintain specified conditions. Treats animal illness or injury, following experience or instructions of veterinarian. Inseminates livestock artificially to produce desired offspring and to demonstrate techniques to farmers. Transports or arranges for transport of animals, equipment, food, animal feed, and other supplies to and farm worksite. Requisitions equipment, materials, and supplies. Prepares animal condition, production, feed consumption, and worker attendance reports. Inspects buildings, fences, fields or range, supplies, and equipment to determine work to be done. Recruits, hires, and pays workers. Oversees animal care, maintenance, breeding, or packing and transfer activities to ensure work is done correctly, and to identify and solve problems. Plans and prepares work schedules. Studies feed, weight, health, genetic, or milk production records to determine feed formula and rations or breeding schedule.

45-1011.03 First-Line Supervisors and Manager/Supervisors – Animal Care Workers Except Livestock Senior level position assuming education and experience prerequisite

Assigns workers to tasks, such as feeding and treatment of animals, and cleaning and maintenance of animal quarters. Directs and assists workers in maintenance and repair of facilities. Observes and examines animals to detect signs of illness and determine need of services from veterinarian. Investigates complaints of animal neglect or cruelty, and follows up on complaints appearing to justify prosecution. Delivers lectures to public to stimulate interest in animals and communicate humane philosophy to public. Operates euthanasia equipment to destroy animals. Prepares reports concerning activity of facility, employees' time records, and animal treatment. Plans budget, and arranges for purchase of animals, feed, or supplies. Trains workers in animal care procedures, maintenance duties, and safety precautions. Establishes work schedule and procedures of animal care. Monitors animal care and inspects facilities to identify problems, and discusses solutions with workers.

45-1011.04 First-Line Supervisors and Manager/Supervisors – Horticultural Workers Senior level position assuming education and experience prerequisite

Assigns workers to duties, such as cultivation, harvesting, maintenance, grading and packing products, or altering greenhouse environmental conditions. Inspects facilities to determine maintenance needs, such as malfunctioning environmental control system, clogged sprinklers, or missing glass panes in greenhouse. Prepares and submits written or oral reports or personnel actions, such as performance evaluations, hires, promotions, and discipline. Trains employees in horticultural techniques, such as transplanting and weeding, shearing and harvesting trees, and grading and packing flowers. Drives and operates heavy machinery, such as dump truck, tractor, tractor, or growth media tiller, to transport materials and supplies. Maintains records of employees' hours worked, and work completed. Observes plants, flowers, shrubs, and trees in greenhouses, cold frames, or fields to ascertain condition. Reviews employees' work to ascertain quality and quantity of work performed. Estimates work hour requirements to plant, cultivate, or harvest, and prepares work schedule. Confers with management to report conditions, plan planting and harvesting schedules, and to discuss changes in fertilizer, herbicides, or cultivating techniques. Reads inventory records, customer orders, and shipping schedules to ascertain day's activities.



45-1011.05 First-Line Supervisors and Manager/Supervisors – Logging Workers Senior level position assuming education and experience prerequisite

Plans and schedules logging operations, such as felling and bucking trees, grading and sorting logs, and yarding and loading logs. Prepares production and personnel time records for management. Trains workers in felling and bucking trees, operating tractors and loading machines, yarding and loading techniques, and safety regulations. Confers with mill, company, and government forestry officials to determine safest and most efficient method of logging tract. Oversees logging operations to identify and solve problems, and ensure safety and company regulations are being followed. Coordinates dismantling, moving, and setting up equipment at new worksite. Determines methods for logging operations, size of crew, and equipment requirements. Changes logging operations or methods to eliminate unsafe conditions, and warns of disciplines workers disregarding safety regulations. Coordinates selection and movement of logs from storage areas, according to transportation schedules or production requirements of wood products plant. Assigns workers to duties, such as trees to be cut, cutting sequence and specifications, and loading of trucks, railcars, or rafts

45-1011.06 First-Line Supervisors and Manager/Supervisors - Fishery Workers Senior level position assuming education and experience prerequisite

Assigns workers to duties, such as fertilizing and incubating spawn, feeding and transferring fish, and planting, cultivating, and harvesting shellfish beds. Directs workers to correct deviations or problems, such as disease, quality of seed distribution, or adequacy of cultivation. Trains workers in spawning, rearing, cultivating, and harvesting methods, and use of equipment. Confers with manager to determine time and place of seed planting, and cultivating, feeding, or harvesting of fish or shellfish. Records number and type of fish or shellfish reared and harvested, and keeps workers' time records. Observes fish and beds or ponds to detect diseases, determine quality of fish, or determine completeness of harvesting. Plans work schedules according to availability of personnel and equipment, tidal levels, feeding schedules, or need for transfer or harvest. Oversees worker activities, such as treatment and rearing of fingerlings, maintenance of equipment, and harvesting of fish or shellfish.

45-2031.00 Farm Labor Contractors Entry – Mid level position assuming education and experience prerequisite Recruit, hire, furnish, and supervise seasonal or temporary agricultural laborers for a fee. May transport, house, and provide meals for workers.

45-3011.00 Fishers and Related Fishing Workers Entry – Mid level position assuming education and experience prerequisite

Cultivates and harvests or gathers marine life, such as sponges, abalone, or oysters, from sea bottom, using diving or dredging equipment or barge. Negotiates with buyers for sale of catch. Lubricates, adjusts, and makes minor repairs to engines and fishing equipment. Washes deck, conveyors, knives, and other equipment, using brush, detergent, and water. Records date, harvest area, and yield in logbook. Rows boats and dinghies and operates skiffs to transport fishers, divers, and sponge hookers and to tow and position fishing equipment. Steers vessel in fishing area. Places catch in containers and stows in hold with salt and ice. Signals other workers to move, hoist, and position loads. Sorts and cleans marine life, and returns undesirable or illegal catch to sea. Stands lookout for schools of fish and for steering and engine room watches. Pulls and guides nets, traps, and lines onto vessel, by hand or using hoisting equipment. Attaches nets, slings, hooks, blades, and lifting devices to cables, booms, hoists, and dredges. Hits fish with club or hooks fish with gaff to assist in hauling large fish from water. Loads and unloads equipment and supplies aboard vessel, by hand or using hoisting equipment. Removes catch from fishing equipment and uses measuring equipment to ensure compliance with legal size. Puts fishing equipment into water and anchors or tows equipment according to method of fishing. Connects accessories, such as floats, weights, flags, lights, or markers, to nets, lines, or traps.

45-4021.00 Fallers Entry - Mid level position assuming education and experience prerequisite

Scores cutting lines with ax, saws undercut along scored lines with chain saw, and knocks slabs from cuts with ax. Inserts jacks or drives wedge behind saw to prevent binding of saw and start tree falling. Cuts felled trees into log lengths, using chain saw and ax. Stops saw engine as tree falls, pulls cutting bar from cut, and runs to safe location to avoid injury. Splits logs, using ax, wedges, and maul, and stacks wood in rick or cord lots. Clears brush from work area and escape route, and cuts sapling and other trees from direction of fall, using ax and chain saw. Secures cables to logs, and drives tractor to drag logs to landing. Appraises tree for characteristics, such as twist, rot, and heavy limb growth, and gauges amount and direction of lean. Tags unsafe trees with high visibility ribbon. Loads logs or wood onto trucks, by hand or using winch. Places supporting limbs or poles under felled tree to avoid splitting underside and to prevent log from rolling. Measures and marks felled trees for cutting into log lengths. Determines position, direction, and depth of cuts to be made, and placement of wedges or jacks. Cuts limbs from felled trees, using chain saw or ax. Saws back-cuts, leaving sufficient sound wood to control direction of fall.



47-1011.01 First-Line Supervisors and Manager/Supervisors – Construction Trades Workers Senior level position assuming education and experience prerequisite

Supervises and coordinates activities of construction trades workers. Assigns work to employees, using material and worker requirements data. Suggests and initiates personnel actions, such as promotions, transfers, and hires. Examines and inspects work progress, equipment and construction sites to verify safety and ensure that specifications are met. Analyzes and resolves worker problems and recommends motivational plans. Assists workers engaged in construction activities, using hand tools and equipment. Recommends measures to improve production methods and equipment performance to increase efficiency and safety. Trains workers in construction methods and operation of equipment. Records information, such as personnel, production, and operational data, on specified forms and reports. Locates, measures, and marks location and placement of structures and equipment. Analyzes and plans installation and construction of equipment and structures. Reads specifications, such as blueprints and data, to determine construction requirements. Estimates material and worker requirements to complete job. Confers with staff and worker to endure production and personnel problems are resolved. Directs and lead workers engaged in construction activities.

47-1011.02 First-Line Supervisors and Manager/Supervisors- Extractive Workers Senior level position assuming education and experience prerequisite

Supervises and coordinates activities of workers engaged in the extraction of geological materials. Directs and leads workers engaged in extraction of geological materials. Assigns work to employees, using material and worker requirements data. Analyzes and resolves worker problems and recommends motivational plans. Trains workers in construction methods and operation of equipment. Recommends measures to improve production methods and equipment performance to increase efficiency and safety. Examines and inspects equipment, site, and materials, to verify specifications are met. Orders materials, supplies and repair of equipment and machinery. Locates, measures, and marks, materials and site location, using measuring and marking equipment. Assists workers engaged in extraction activities, using hand tools and equipment. Records information, such as personnel, production, and operational data on specified forms. Suggests and initiates personnel actions, such as promotions, transfers, and hires. Analyzes and plans extraction process of geological materials. Confers with staff and workers to ensure production personnel problems are resolved.

47-2021.00 Brick masons and Block masons Entry – Mid – Senior level position assuming education and experience prerequisite

Lays and aligns bricks, blocks, or tiles to build or repair structures or high temperature equipment, such as cupola, kilns, ovens, or furnaces. Applies and smooths mortar or other mixture over work surface and removes excess, using trowel and hand tools. Measures distance from reference points and marks guidelines to lay out work, using plumb bobs and levels. Examines brickwork or structure to determine need for repair. Fastens or fuses brick or other building material to structure with wire clamps, anchor holes, torch, or cement. Cleans working surface to remove scale, dust, soot, or chips of brick and mortar, using broom, wire brush, or scrapper. Sprays or spreads refractory material over brickwork to protect against deterioration. Removes burned or damaged brick or mortar, using sledgehammer, crowbar, chipping gun, or chisel. Breaks or cuts bricks, tiles, or blocks to size, using edge of trowel, hammer, or power saw. Mixes specified amount of sand, clay, dirt, or mortar powder with water to form refractory mixture. Calculates angles and courses and determines vertical and horizontal alignment of courses.

47-2022.00 Stonemasons Entry – Mid – Senior level position assuming education and experience prerequisite Shapes, trims, faces and cuts marble or stone preparatory to setting, using power saws, cutting equipment, and hand tools. Lays out wall pattern or foundation of monument, using straight edge, rule, or staked lines. Finishes joints between stones, using trowel. Smooths, polishes, and bevels surfaces, using hand tools and power tools. Positions mold along guidelines of wall, presses mold in place, and removes mold and paper from wall. Removes sections of monument from truck bed, and guides stone onto foundation, using skids, hoist, or truck crane. Repairs cracked or chipped areas of ornamental stone or marble surface, using blowtorch and mastic. Digs trench for foundation of monument, using pick and shovel. Drills holes in marble or ornamental stone and anchors bracket. Lines interiors of molds with treated paper and fills molds with composition-stone mixture. Cleans excess mortar or grout from surface of marble, stone, or monument, using sponge, brush, water, or acid. Mixes mortar or grout and pours or spreads mortar or grout on marble slabs, stone, or foundation. Aligns and levels stone or marble, using measuring devices, such as rule, square, and plumbline. Sets stone or marble in place, according to layout or pattern.



47-2031.01 Construction Carpenters Entry – Mid – Senior level position assuming education and experience prerequisite

Shapes or cuts materials to specified measurements, using hand tools, machines, or power saw. Assembles and fastens materials, using hand tools and wood screws, nails, dowel pins, or glue, to make framework or props. Installs structures and fixtures, such as windows, frames, floorings, and trim, or hardware, using carpenter's hand and power tools. Builds or repairs cabinets, doors, frameworks, floors, and other wooden fixtures used in buildings, using woodworking machines, carpenter's hand tools, and power tools. Fills cracks and other defects in plaster or plasterboard and sands patch, using patching plaster, trowel, and sanding tool. Removes damaged or defective parts or sections of structure and repairs or replaces, using hand tools. Verifies trueness of structure, using plumb bob and level. Prepares layout according to blueprint or oral instructions, using rule, framing square, and calipers. Estimates amount and kind of lumber or other materials required, and selects and orders them. Inspects ceiling or floor tile, wall coverings, siding, glass, or woodwork to detect broken or damaged structures. Studies specifications in blueprints, sketches, or building plans to determine materials required and dimensions of structure to be fabricated. Measures and marks cutting lines on materials, using ruler, pencil, chalk, and marking gauge. Finishes surfaces of woodworking or wallboard in houses and buildings, using paint, hand tools, and paneling.

47-2031.02 Rough Carpenters Entry – Mid – Senior level position assuming education and experience prerequisite

Assembles and fastens material together to construct wood or metal framework of structure, using bolts, nails, or screws. Measures materials or distances, using square, measuring tape, or rule to lay out work. Bores bolt holes in timber with masonry or concrete walls, using power drill. Installs rough door and window frames, sub flooring, fixtures, or temporary supports in structures undergoing construction or repair. Examines structural timbers and supports to detect decay, and replaces timber, using hand tools, nuts, and bolts. Anchors and braces forms and other structures in place, using nails, bolts, anchor rods, steel cables, planks, wedges, and timbers. Digs or directs digging of postholes and sets pole to support structure. Fabricates parts, using woodworking and metalworking machines. Erects forms of prefabricated forms, framework, scaffolds, hoists, roof supports, or chutes, using hand tools, plumb rule, and level. Cuts or saws boards, timbers, or plywood to required size, using handsaw, power saw, or woodworking machine. Studies blueprints and diagrams to determine dimensions of structure or form to be constructed, or erected.

47-2031.03 Carpenter Assemblers and Repairers Entry – Mid – Senior level position assuming education and experience prerequisite

Measures and marks location of studs, leaders, and receptacle openings, using tape measure, template, and marker. Installs prefabricated windows and doors, insulation, wall, ceiling and floor panels or siding, using adhesives, hoists, hand tools, and power tools. Removes surface defects, using knife, scraper, wet sponge, electric iron, and sanding tools. Trims overlapping edges of wood, weatherboard, using portable router or power saw, and hand tools. Applies stain, paint or crayons to defects and filter to touch up the repaired area. Directs crane operator in positioning floor, wall, ceiling, and roof panel on house foundation. Moves panel or roof section to other workstations or to storage or shipping area, using electric hoist. Studies blueprints, specification sheets, and drawings to determine style and type of window or wall panel required. Fills cracks, seams, depressions, and nail holes with filler. Examines wood surfaces for defects, such as nicks, cracks, or blisters. Measures cut materials to determine conformance to specifications, using tape measure. Realigns windows and screens to fit casements and oils moving parts. Repairs or replaces defective locks, hinges, cranks, and pieces of wood, using glue, hand tools, and power tools. Lays out and aligns materials on worktable or in assembly jig according to specified instructions. Cuts sidings and moldings, sections of weatherboard, openings in sheetrock, and lumber, using hand tools and power tools. Aligns and fastens materials together, using hand tools and power tools, to form building or bracing.

47-2031.04 Ship Carpenters and Joiners Entry – Mid – Senior level position assuming education and experience prerequisite

Reads blueprints to determine dimensions of furnishings in ships or boats. Assembles and installs hardware, gaskets, floors, furnishings, or insulation, using adhesive, hand tools, and power tools. Cuts wood or glass to specified dimensions, using hand tools and power tools. Shapes irregular parts and trims excess material from bulkhead and furnishings to ensure fit meets specifications. Constructs floors, doors, and partitions, using woodworking machines, hand tools, and power tools. Greases gears and other moving parts of machines on ship. Transfers dimensions or measurements of wood parts or bulkhead on plywood, using measuring instruments and marking devices. Repairs structural woodwork and replaces defective parts and equipment, using hand tools and power tools. Shapes and laminates wood to form parts of ship, using steam chambers, clamps, glue, and jigs.



47-2031.05 Boat Builders and Shipwrights Entry – Mid – Senior level position assuming education and experience prerequisite

Cuts and forms parts, such as keel, ribs, sidings, and support structures and blocks, using woodworking hand tools and power tools. Attaches metal parts, such as fittings, plates, and bulkheads, to ship, using brace and bits, augers, and wrenches. Smooths and finishes ship surfaces, using power sander, broadax, adz, and paint, and waxes and buffs surface to specified finish. Measures and marks dimensional lines on lumber, following template and using scriber. Establishes dimensional reference points on layout and hull to make template of parts and locate machinery and equipment. Consults with customer or supervisor and reads blueprint to determine necessary repairs. Attaches hoist to sections of hull, and directs hoist operator to align parts over blocks, according to layout of boat. Marks outline of boat on building dock, shipway, or mold loft according to blueprint specifications, using measuring instruments and crayon. Inspects boat to determine location and extent of defect. Positions and secures support structures on construction area. Cuts out defect, using power tools and hand tools, and fits and secures replacement part, using caulking gun, adhesive, or hand tools. Assembles and installs hull timbers and other structures in ship, using adhesive, measuring instruments, and hand tools or power tools. Constructs and shapes wooden frames, structures, and other parts according to blueprint specifications, using hand tools, power tools, and measuring instruments.

47-2031.06 Brattice Builders Entry – Mid – Senior level position assuming education and experience prerequisite Installs rigid and flexible air ducts to transport air to work areas. Erects partitions to support roof in areas unsuited to timbering or bolting. Drills and blasts obstructing boulders to reopen ventilation shafts.

47-2041.00 Carpet Installers Entry – Mid – Senior level position assuming education and experience prerequisite Stretches carpet to ensure smooth surface and presses carpet in place over tack strips. Installs carpet on some floors using adhesive, following prescribed method. Cuts carpet padding to size and installs padding, following prescribed method. Cuts and trims carpet to fit along wall edges, openings, and projections. Studies floor sketches to determine area to be carpeted and amount of material needed to complete job. Joins edges of carpet that meet at openings, using tape with glue and heated carpet iron. Moves furniture from area to be carpeted and removes old carpet and padding. Fastens metal treads across door openings or where carpet meets flooring to hold carpet in place. Nails tack strips around area to be carpeted or uses old strips to attach edges of new carpet. Sews sections of carpeting together by hand, when necessary. Measures and cuts carpeting to size according to floor sketches, using carpet knife.

47-2042.00 Floor Layers, Except Carpet, Wood, and Hard Tiles Entry – Mid – Senior level position assuming education and experience prerequisite

Lays out, positions, and applies tile and other decorative material to floors, walls, and cabinets. Rolls and presses sheet wall and floor covering into cement base to smooth and finish surface, using hand roller. Brushes waterproof compound onto surface and fills cracks with plaster, putty, or grout to seal pores and form smooth foundation. Trims excess covering materials, tacks edges, and joins sections of covering material to form tight joint. Disconnects and removes appliances, light fixtures, and worn floor and wall covering from floors, walls, and cabinets. Sweeps, scrapes, sands, or chips dirt and irregularities to clean base surfaces. Removes excess cement to clean finished surface and applies grout to seal joints of tile. Measures and marks guidelines on surfaces or foundations, using chalk lines and dividers. Heats and softens floor covering materials to patch cracks and form floor coverings around irregular surfaces, using blow torch. Applies adhesive cement onto floor or wall material to join and adhere foundation material. Cuts covering and foundation materials, according to blueprints and sketches, and cuts pattern around floor obstructions.

47-2043.00 Floor Sanders and Finishers Entry – Mid – Senior level position assuming education and experience prerequisite

Guides machine over surface of floor until surface is smooth. Applies filler compound to floor to seal wood. Scrapes and sands floor edges and areas inaccessible to floor sander, using scraper and disk-type sander. Attaches sandpaper to roller of sanding machine.

47-2044.00 Tile and Marble Setters Entry – Mid – Senior level position assuming education and experience prerequisite

Positions and presses or taps tile with trowel handle to affix tile to plaster or adhesive base. Cuts and shapes tile, using tile cutters and biters. Measures and cuts metal lath to size for walls and ceilings, using tin snips. Wipes grout between tiles and removes excess, using wet sponge. Brushes glue onto manila paper on which design has been drawn and positions tile's finished side down onto paper. Mixes and applies mortar or cement to edges and ends of drain tiles to seal halves and joints. Installs and anchors fixtures in designated position, using hand tools. Tacks lath to wall and ceiling surfaces, using staple gun or hammer. Selects tile and other items to be installed, such as bathroom accessories, walls, panels, and cabinets, according to specifications .Measures and marks surfaces to be tiled and lays out work, following



blueprints. Spreads plaster or concrete over surface to form tile base and levels to specified thickness, using brush, trowel and screed. Cuts tile backing to required size, using shears. Spreads mastic or other adhesive base on roof deck to form base for promenade tile, using serrated spreader.

47-2051.00 Cement Masons and Concrete Finishers Entry – Mid – Senior level position assuming education and experience prerequisite

Chips, scrapes, and grinds high spots, ridges, and rough projections to finish concrete, using pneumatic chisel, hand chisel, or hand tools. Polishes surface, using polishing or surfacing machine. Pushes roller over surface to imbed chips in surface. Builds wooden molds, and clamps molds around area to be repaired, using hand tools. Cuts out damaged areas, drills holes for reinforcing rods, and positions reinforcing rods to repair concrete, using power saw and drill. Mixes cement, sand, and water to produce concrete, grout, or slurry, using hoe, trowel, tamper, scraper, or concrete-mixing machine. Molds expansion joints and edges, using edging tools, jointers, and straightedge. Applies muriatic acid to clean surface, and rinses with water. Cuts metal division strips, and presses them into terrazzo base so that top edges form desired design or pattern. Spreads roofing paper on surface of foundation, and spreads concrete onto roofing paper with trowel to form terrazzo base. Produces rough concrete surface, using broom. Signals truck driver to position truck to facilitate pouring concrete, and moves chute to direct concrete on forms. Spreads, levels, and smooths concrete, using rake, shovel, hand or power trowel, hand or power screed, and float. Cleans chipped area, using wire brush, and feels and observes surface to detect rough or uneven surface. Wets surface to prepare for bonding, fills holes and cracks with grout or slurry, and smoothes, using trowel. Wets concrete surface, and rubs with stone to smooth surface and obtain specified finish. Sprinkles colored marble or stone chips, powdered steel, or coloring powder over surface to produce prescribed finish.

47-2053.00 Terrazzo Workers and Finishers Entry – Mid – Senior level position assuming education and experience prerequisite

Chips, scrapes, and grinds high spots, ridges, and rough projections to finish concrete, using pneumatic chisel, hand chisel, or hand tools. Polishes surface, using polishing or surfacing machine. Pushes roller over surface to imbed chips in surface. Spreads roofing paper on surface of foundation, and spreads concrete onto roofing paper with trowel to form terrazzo base. Produces rough concrete surface, using broom. Spreads, levels, and smoothes concrete, using rake, shovel, hand or power trowel, hand or power screed, and float. Cleans chipped area, using wire brush, and feels and observes surface to detect rough or uneven surface. Wets surface to prepare for bonding, fills holes and cracks with grout or slurry, and smooths, using trowel. Wets concrete surface, and rubs with stone to smooth surface and obtain specified finish. Sprinkles colored marble or stone chips, powdered steel, or coloring powder over surface to produce prescribed finish. Cuts metal division strips, and presses them into terrazzo base so that top edges form desired design or pattern. Applies muriatic acid to clean surface, and rinses with water. Mixes cement, sand, and water to produce concrete, grout, or slurry, using hoe, trowel, tamper, scraper, or concrete-mixing machine. Signals truck driver to position truck to facilitate pouring concrete, and moves chute to direct concrete on forms. Builds wooden molds, and clamps molds around area to be repaired, using hand tools. Cuts out damaged areas, drills holes for reinforcing rods, and positions reinforcing rods to repair concrete, using power saw and drill. Molds expansion joints and edges, using edging tools, jointers, and straightedge.

47-2061.00 Construction Laborers Entry – Mid level position assuming education and experience prerequisite

Tends pumps, compressors, and generators to provide power for tools, machinery, and equipment or to heat and move materials such as asphalt. Positions, joins, aligns, and seals structural components, such as concrete wall sections and pipes. Digs ditches and levels earth to grade specifications, using pick and shovel. Signals equipment operators to facilitate alignment, movement, and adjustment of machinery, equipment, and materials. Builds and positions forms for pouring concrete and dismantles forms after use, using saws, hammers, nails, or bolts. Grinds, scrapes, sands, or polishes surfaces, such as concrete, marble, terrazzo, or wood flooring, using abrasive tools or machines. Erects and disassembles scaffolding, shoring, braces, and other temporary structures. Mixes concrete, using portable mixer. Loads and unloads trucks and hauls and hoists materials. Measures, marks, and records openings and distances to lay out area to be graded or to erect building structures. Smooth and finishes freshly poured cement or concrete, using float, trowel, screed, or powered cement finishing tool. Applies caulking compounds by hand or with caulking gun to seal crevices. Tends machine that pumps concrete, grout, cement, sand, plaster or stucco through spray gun for application to ceilings and walls. Lubricates, cleans, and repairs machinery, equipment, and tools. Sprays materials such as water, sand, steam, vinyl, paint, or stucco through hose to clean, coat, or seal surfaces. Razes buildings and salvages useful materials. Mixes ingredients to create compounds, used to cover or clean surfaces. Cleans construction site to eliminate possible hazards. Mops, brushes, or spreads paints, cleaning solutions or other compounds over surfaces to clean or provide protection.



47-2071.00 Paving, Surfacing, and Tamping Equipment Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Operates machine or manually rolls surfaces to compact earth fills, foundation forms, and finished road materials, according to grade specifications. Sets up forms and lays out guidelines for curbs, according to written specifications, using string, spray paint, and concrete/water mix. Cleans, maintains, and repairs equipment, according to specifications, using mechanics' hand tools, or reports malfunction to supervisor. Fill tank, hopper, or machine with paving materials. Installs dies, cutters, and extensions to screed onto machine, using hand tools. Drives machine onto truck trailer and drives truck to transport machine to and from job site. Lights burner or starts heating unit of machine and regulates temperature. Monitors machine operation and observes distribution of paving material to adjust machine settings or material flow. Operate machine to spread, smooth, or steel-reinforce stone, concrete, or asphalt. Operate machine to mix and spray binding, waterproofing, and curing compounds. Operates machine to clean or cut expansion joints in concrete or asphalt and to rout out cracks in pavement. Starts machine, engages clutch, pushes and moves levers, and turns wheels to control and guide machine along forms or guidelines. Drives and operates curbing machine to extrude concrete or asphalt curbing.

47-2072.00 Pile-Driver Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Moves hand and foot levers to control hoisting equipment to position piling leads, hoist piling into leads, and position hammer over piling. Moves levers and turns valves to activate power hammer or raise and lower drop hammer, which drives piles to required depth.

47-2073.01 Grader, Bulldozer, and Scraper Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Starts engine, moves throttle, switches, and levers, and depresses pedals to operate machines, equipment, and attachments. Drives equipment in successive passes over working area to achieve specified result, such as grade terrain or remove, dump, or spread earth and rock. Fastens bulldozer blade or other attachment to tractor, using hitches. Greases, oils, and performs minor repairs on tractor, using grease gun, oilcans, and hand tools. Signals operator to guide movement of tractor-drawn machine. Connects hydraulic hoses, belts, mechanical linkage, or power takeoff shaft to tractor. Aligns machine, cutterhead, or depth gauge marker with reference stakes and guidelines on ground or positions equipment following hand signals of assistant.

47-2111.00 Electricians Entry – Mid – Senior level position assuming education and experience prerequisite Installs electrical wiring, equipment, apparatus, and fixtures, using hand tools and power tools. Diagnoses malfunctioning systems, apparatus, and components, using test equipment and hand tools. Tests electrical systems and continuity of circuits in electrical wiring, equipment, and fixtures, using testing devices, such as ohmmeter, voltmeter, and oscilloscope. Drives vehicle, operates floodlights, and places flares during power failure or emergency. Directs and trains workers to install, maintain, or repair electrical wiring, equipment, and fixtures. Possesses electrician's license or identification card to meet governmental regulations. Constructs and fabricates parts, using hand tools and specifications. Climbs ladder to install, maintain or repair electrical wiring, equipment and fixtures. Prepares sketches of location of wiring and equipment or follows blueprints to determine location of equipment and conformance to safety codes. Readies and assembles electrical wiring, equipment and fixtures, using specifications and hand tools. Maintains and repairs or replaces wiring, equipment and fixtures, using hand tools. Inspects systems and electrical parts to detect hazards, defects, and need for adjustments or repair. Plans layout and installation of electrical wiring, equipment and fixtures consistent with specifications and local codes.

47-2121.00 Glaziers Entry – Mid – Senior level position assuming education and experience prerequisite

Fastens glass panes into wood sash and spreads and smoothes putty around edge of pane with knife to seal joints.

Marks outline or pattern on glass, cuts glass, and breaks off excess glass by hand or with notched tool. Installs preassembled framework for windows or doors designed to be fitted with glass panels, including stained glass windows, using hand tools. Attaches backing and leveling devices to wall surface, using nails and screws, and cuts mounting strips and moldings to required lengths. Sets glass doors into frame and bolts metal hinges, handles, locks, and other hardware onto glass doors. Measures mirror and dimensions or area to be covered and determines plumb of walls or ceilings, using plumb line and level. Assembles, fits, and attaches metal framed glass enclosures for showers or bathtubs to framing around bath enclosure. Moves furniture to clear work site and covers floors and furnishings with drop clothes. Drives truck to installation site and unloads mirrors, equipment, and tools. Loads and arranges mirrors on truck, following sequence of deliveries. Covers mirrors with protective material to prevent damage. Measures, cuts, fits, and presses anti glare adhesive film to glass or sprays glass with tinting solution to prevent light glare. Attaches mounting strips and moldings to surface and applies mastic cement, putty, or screws to secure mirrors into position.



47-2131.00 Insulation Workers, Floor, Ceiling, and Wall Entry – Mid – Senior level position assuming education and experience prerequisite

Fits, wraps, or attaches insulating materials to structures of surfaces, using hand tools or wires, following blueprint specifications. Prepare surfaces for insulation application by brushing or spreading on adhesives, cement, or asphalt or attaching metal pins to surfaces. Evenly distributes insulating materials into small spaces within floors, ceilings, or walls, using blower and hose attachments or cement mortar. Covers, seals or finishes insulated surfaces or access holes with plastic covers, canvas ships, sealant, tape, cement or asphalt mastic. Reads blueprints and selects appropriate insulation, based on the heat retaining or excluding characteristics of the material. Moves controls, buttons, or levers to start blower and regulate flow of materials through nozzle. Measures and cuts insulation for covering surfaces, using tape measure, handsaw, knife or scissors. Fills blower hopper with insulating materials.

47-2132.00 Insulation Workers, Mechanical Entry – Mid – Senior level position assuming education and experience prerequisite

Fits, wraps, or attaches insulating materials to structures of surfaces, using hand tools or wires, following blueprint specifications. Prepare surfaces for insulation application by brushing or spreading on adhesives, cement, or asphalt or attaching metal pins to surfaces. Reads blueprints and selects appropriate insulation, based on the heat retaining or excluding characteristics of the material. Covers, seals or finishes insulated surfaces or access holes with plastic covers, canvas ships, sealant, tape, cement or asphalt mastic. Evenly distributes insulating materials into small spaces within floors, ceilings, or walls, using blower and hose attachments or cement mortar. Measures and cuts insulation for covering surfaces, using tape measure, handsaw, knife or scissors. Fills blower hopper with insulating materials. Moves controls, buttons, or levers to start blower and regulate flow of materials through nozzle.

47-2141.00 Painters, Construction and Maintenance Entry – Mid – Senior level position assuming education and experience prerequisite

Paints surfaces, using brushes, spray gun, or rollers. Cuts stencils, and brushes and sprays lettering and decorations on surfaces. Smooths surfaces, using sandpaper, scrapers, brushes, steel wool, or sanding machine. Sprays or brushes hot plastics or pitch onto surfaces. Removes fixtures, such as pictures and electric switch covers, from walls prior to painting. Covers surfaces with drop cloths or masking tape and paper to protect surface during painting. Burns off old paint, using blowtorch. Reads work order or receives instructions from supervisor or homeowner. Erects scaffolding or sets up ladders to work above ground level. Fills cracks, holes, and joints with caulk putty, plaster, or other filler, using caulking gun or putty knife. Mixes and matches colors of paint, stain, or varnish. Washes and treats surfaces with oil, turpentine, mildew remover, or other preparations. Sands surfaces between coats and polishes final coat to specified finish. Bakes finish on painted and enameled articles in baking oven. Applies paint to simulate wood grain, marble, brick, or stonework.

47-2142.01 Paperhangers Entry – Mid – Senior level position assuming education and experience prerequisite Applies thinned glue to waterproof porous surfaces, using brush, roller, or pasting machine. Trims rough edges from strips, using straightedge and trimming knife. Aligns and places strips or poster sections of billboard on surface to match adjacent edges. Trims excess material at ceiling or baseboard, using knife. Applies acetic acid to damp plaster to prevent lime from bleeding through paper. Measures walls and ceiling to compute number and length of strips required to cover surface. Fills holes and cracks with plaster, using trowel. Removes paint, varnish, and grease from surfaces, using paint remover and water soda solution. Removes old paper, using water, steam machine, or chemical remover and scraper. Erects and works from scaffold. Smooths rough spots on walls and ceilings, using sandpaper. Staples or tacks advertising posters onto fences, walls, or poles. Marks vertical guideline on wall to align first strip, using plumb bob and chalkline. Smooths strips or poster sections with brush or roller to remove wrinkles and bubbles and to smooth joints. Measures and cuts strips from roll of wallpaper or fabric, using shears or razor. Mixes paste, using paste powder and water, and brushes paste onto surface.

47-2151.00 Pipe layers Entry – Mid – Senior level position assuming education and experience prerequisite Grades and levels base of trench, using tamping machine and hand tools. Checks slope, using carpenter's level or lasers. Digs trenches to desired or required depth by hand or using trenching tool. Taps and drills holes into pipe to introduce auxiliary lines or devices. Covers pipe with earth or other materials. Lays out route of pipe, following written instructions or blueprints.

47-2152.02 Plumbers Mid – Senior level position assuming education and experience prerequisite

Repairs and maintains plumbing by replacing defective washers, replacing or mending broken pipes, and opening clogged drains. Fills pipes or plumbing fixtures with water or air and observes pressure gauges to detect and locate leaks. Directs workers engaged in pipe cutting and pre-assembly and installation of plumbing systems and components. Cuts, threads,

and bends pipe to required angle, using pipe cutters, pipe threading machine, and pipe bending machine. Installs pipe assemblies, fittings, valves, and fixtures, such as sinks, toilets, and tubs, using hand and power tools. Studies building plans and inspects structure to determine required materials and equipment and sequence of pipe installations. Locates and marks position of pipe installations and passage holes in structures, using measuring instruments, such as ruler and level. Cuts opening in structures to accommodate pipe and pipefittings, using hand and power tools. Assembles pipe sections, tubing and fittings, using screws, bolts, solder, plastic solvent, and caulking.

47-2171.00 Reinforcing Iron and Rebar Workers Entry – Mid – Senior level position assuming education and experience prerequisite

Determines number, sizes, shapes, and locations of reinforcing rods from blueprints, sketches, or oral instructions. Selects and places rods in forms, spacing and fastening them together, using wire and pliers. Bends steel rods with hand tools and rod bending machine. Cuts rods to required lengths, using hacksaw, bar cutters, or acetylene torch. Reinforces concrete with wire mesh. Welds reinforcing bars together, using arch-welding equipment.

47-4051.00 Highway Maintenance Workers Entry – Mid – Senior level position assuming education and experience prerequisite

Erects, installs, and repairs guardrails, highway markers, button-type lane markers, and snow fences, using hand tools and power tools. Drives truck to transport crew and equipment to work site. Drives truck or tractor equipped with adjustable snowplow and blower unit. Drives tractor with mower attachment to cut grass. Sets signs and cones around work area to divert traffic. Verifies alignment of markers by sight. Blends compounds to form adhesive mixture, using spoon. Measures and marks locations for installation of markers, using tape, string, or chalk. Dumps, spreads, and tamps asphalt, using pneumatic tamper to patch broken pavement.

47-4061.00 Rail-Track Laying and Maintenance Equipment Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Drives vehicle that automatically moves and lays track or rails over section of track to be constructed, repaired, or maintained. Adjusts controls of machines that spread, shape, raise, level, and align track, according to specifications. Turns wheels of machine, using lever controls, to adjust guidelines for track alignments and grades, following specifications. Drives graders, tamping machines, brooms, and ballast-cleaning-spreading machines to redistribute gravel and ballast between rails. Lubricates machines, changes oil, and fills hydraulic reservoirs to specified levels. Observes leveling indicator arms to verify levelness and alignment of track. Strings and attaches wire-guidelines machine to rails to level or align track or rails. Pushes control to close grasping device on track or rail section to raise or move section to specified location. Engages mechanism that lays track or rail to specified gauge.

47-5013.00 Service Unit Operators, Oil, Gas, and Mining Entry – Mid – Senior level position assuming education and experience prerequisite

Operates equipment to increase oil flow from producing wells. Assembles and lowers detection instruments into wells having drill pipe, drilling tools, or other obstructions wedged in well. Assembles and operates sound wave generating and detecting mechanisms for determining fluid level in wells. Interprets instrument readings to ascertain depth of obstruction. Prepares reports of services rendered, tools used, and time required. Directs activities of preparing for and drilling around lodged obstacles or specified earth formations with specialized tools and whip stocks. Directs other worker to assemble and connect pipe and hydraulic lines of flushing equipment to wellhead. Directs drilling crew in installation of well-bottom equipment. Directs lowering of specialized equipment to point of obstruction. Observes variations on gauges, mud pumps, and pressure indicators, and listens to equipment to detect faulty operations or unusual conditions. Perforates well casing or sidewall of borehole with explosive charge. Confers with other personnel to gather information regarding size of pipes and tools and borehole conditions in wells. Plans fishing methods and selects tools for removing obstacles, such as liners, broken casing, screens, and drill pipe from wells. Starts pumps, which circulate water, oil, or other fluid through well, removing sand and other materials obstructing free flow of oil. Moves controls to back off pipe or to sever pipe at point of obstruction. Analyzes conditions of unserviceable oil or gas wells and directs recovery of lost equipment and other obstructions from drilling wells, using specialized subsurface tools and instruments.

47-5021.02 Well and Core Drill Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Starts and controls drilling action and lowering of well casing into well bore. Couples additional lengths of drill rod as bit advances. Assembles non-truck-mounted drilling equipment, using hand tools and power tools. Inspects core samples to determine nature of strata, or takes samples to laboratory for analysis. Drives or guides truck-mounted equipment into

position, levels and stabilizes rig, and extends telescoping derrick. Lubricates machine, splices worn or broken cables, replaces parts, and builds up and repairs drill bits. Fabricates well casings. Records drilling progress and geological data. Retrieves lost equipment from bore holes, using retrieval tools and equipment. Pours water into well or pumps water or slush into well to cool drill bit and remove drillings. Changes drill bits as needed. Monitors operation of drilling equipment to determine changes in strata or variations in drilling. Withdraws drill rod from hole and extracts core sample.

47-5031.00 Explosives Workers, Ordnance Handling Experts, and Blasters Mid – Senior level position assuming education and experience prerequisite

Assembles equipment, primer, explosives, and blasting cap or loads perforating gun with explosives. Fills and tamps blasting hole. Examines blast area to determine amount and kind of explosive needed and to ensure safety prior to detonation. Observes control panel to verify detonation of charge or listens for sound of blast. Repairs and services blasting and automotive equipment and electrical instruments, using hand tools. Moves, stores, and maintains inventories of high explosives. Drives truck to transport explosives and blasting equipment to blasting site. Places safety cones around blast area to alert other workers. Signals workers to clear area and hoist operator to raise equipment and sample from blast hole after detonation. Sets up and operates radio or telephone equipment to receive blast information. Operates equipment, such as hoist, jackhammer, or drill to bore charge holes. Sets up and operates pneumatic drilling equipment to drill blast holes. Marks location and depth of charge holes fro drilling, and measures depth of drilled blast holes. Ties specified lengths of delaying fuses into pattern to time sequence of explosions. Lights fuse, drops detonating device into well, or connects wires to firing device and activates device to set off blast. Plants explosive charge in structures or outside, using rope and safety harness for climbing. Lays primacord between rows of charged blast holes and ties cord into main line to form blast pattern. Cuts specified lengths of primacord and attaches primer to end of cord. Loads specified amounts of explosives into blast holes, manually, or using rope or hoist.

47-5051.00 Rock Splitters, Quarry Entry – Mid – Senior level position assuming education and experience prerequisite

Inserts wedges and feathers into holes and drives wedges with sledgehammer to split stone from mass. Drills holes along outline with jackhammer. Cuts groove along outline, using chisel. Marks desired dimensions on stone, using rule and chalk line.

47-5071.00 Roustabouts, Oil and Gas Entry – Mid – Senior level position assuming education and experience prerequisite

Bolts or nails together wood or steel framework to erect derrick. Digs holes, sets forms, and mixes and pours concrete into forms to make foundations for wood or steel derricks. Unscrews or tightens pipe, casing, tubing, and pump rods, using hand and power wrenches and tongs. Dismantles and assembles boilers and steam engine parts, using hand tools and power tools. Bolts together pump and engine parts. Connects tanks and flow lines, using wrenches.

47-5081.00 Helpers--Extraction Workers Entry level position assuming education and experience prerequisite Assists workers to extract geological materials, using hand tools and equipment. Unloads materials, devices and machine parts, using hand tools. Drives moving equipment to transport materials and parts to excavation site. Sets-up and adjusts equipment used to excavate geological materials. Organizes materials and prepares site for excavation or boring, using hand tools. Observes and monitors equipment operation during extraction process. Signals workers to start extraction or boring process of geological materials. Repairs and maintains automotive and drilling equipment, using hand tools. Examines and collects geological matter, using hand tools and testing devices. Dismantles extracting and boring equipment used for excavation, using hand tools. Loads materials into gas or well hole, or equipment, using hand tools.

49-1011.00 First-Line Supervisors/Managers of Mechanics, Installers, and Repairers Senior level position assuming education and experience prerequisite

Assigns workers to perform activities, such as service appliances, repair and maintain vehicles, and install machinery and equipment. Interprets specifications, blueprints, and job orders, and constructs templates and lays out reference points for workers. Establishes or adjusts work methods and procedures to meet production schedules, using knowledge of capacities or machines, equipment, and personnel. Requisitions materials and supplies, such as tools, equipment, and replacement parts for work activities. Computes estimates and actual costs of factors, such as materials, labor, and outside contractors, and prepares budgets. Patrols work area and examines tools and equipment to detect unsafe conditions or violations of safety rules .Recommends measures, such as procedural changes, service manuals revisions, and equipment purchases, to improve work performance and minimize operating costs.



49-9041.00 Industrial Machinery Mechanics Entry – Mid – Senior level position assuming education and experience prerequisite

Confers with operators and observes, tests, and evaluates operation of machinery and equipment to diagnose cause of malfunction. Disassembles machinery and equipment to remove parts and make repairs. Repairs, replaces, adjusts, and aligns components of machinery and equipment. Examines parts for defects, such as breakage or excessive wear. Fabricates replacement parts. Orders or requisitions parts and materials. Enters codes and instructions to program computer-controlled machinery. Records repairs and maintenance performed. Repairs and replaces electrical wiring and components of machinery. Welds to repair broken metal parts, fabricate new parts, and assemble new equipment. Test-runs repaired machinery and equipment to verify adequacy of repairs. Cleans and lubricates parts, equipment, and machinery.

49-9042.00 Maintenance and Repair Workers, General Entry – Mid – Senior level position assuming education and experience prerequisite

Inspects and tests machinery and equipment to diagnose machine malfunctions. Dismantles and reassembles defective machines and equipment. Installs new or repaired parts. Installs and/or repairs wiring and electrical and electronic components. Installs machinery and equipment. Assembles, installs, and/or repairs pipe systems and hydraulic and pneumatic equipment. Estimates costs of repairs. Records repairs made and costs. Fabricates and repairs counters, benches, partitions, and other wooden structures, such as sheds and outbuildings. Operates cutting torch or welding equipment to cut or join metal parts. Sets up and operates machine tools to repair or fabricate machine parts, jigs and fixtures, and tools. Lays brick to repair and maintain physical structure of establishment. Paints and repairs woodwork and plaster. Assembles, installs, and/or repairs plumbing. Cleans and lubricates shafts, bearings, gears, and other parts of machinery.

49-9043.00 Maintenance Workers, Machinery Entry – Mid – Senior level position assuming education and experience prerequisite

Sets up and operates machine and adjusts controls that regulate operational functions to ensure conformance to specifications. Installs, replaces, or changes machine parts and attachments, according to production specifications. Lubricates, oils, or applies adhesive, or other material to machines, machine parts, or other equipment, according to specified procedures. Replaces or repairs metal, wood, leather, glass, or other lining in machine or equipment compartments or containers. Dismantles machine, removes machine parts, and reassembles machine, using hand tools, chain falls, jack, crane, or hoist. Inspects or tests damaged machine parts and marks defective area or advises supervisor of need for repair. Records and maintains production, repair, and machine maintenance information. Marks, separates, ties, aligns, threads, attaches, or inserts material or product preparatory to machine operation or to identify machine process. Measures, mixes, prepares and tests chemical solutions used to clean or repair machinery and equipment, according to product specifications. Communicates with or assists other workers to repair or move machines, machine parts or equipment. Replaces, empties, or replenishes empty machine and equipment containers, such as gas tanks or boxes. Removes hardened material from machine or machine parts, using abrasives, power and hand tools, jackhammer, sledgehammer, or other equipment. Reads work orders and specifications to determine machines and equipment requiring repair or maintenance. Cleans machine and machine parts, using cleaning solvent, cloth, air gun, hose, vacuum, or other equipment. Collects and discards worn machine parts and other garbage to maintain machinery and work areas. Transports machine parts, tools, equipment and other material between work areas and storage, using crane, hoist, or dolly. Inventories and requisitions machine parts, equipment, and other supplies to replenish and maintain stock. Cuts, shapes, smoothes, attaches or assembles pieces of metal, wood, rubber, or other material repair and maintenance machines and equipment. Starts machine and observes mechanical operation to determine efficiency and to detect defects, malfunctions, or other machine damage.

49-9092.00 Commercial Divers Entry – Mid – Senior level position assuming education and experience prerequisite

Descends into water with aid of diver helper, using scuba gear or diving suit. Cuts and welds steel using underwater welding equipment. Repairs ships and other structures below the waterline, using caulk, bolts, and hand tools. Levels rails, using wedges and maul or sledgehammer. Photographs underwater structures or marine life. Drills holes in rock and rigs explosives for underwater demolitions. Sets or guides placement of pilings and sandbags to provide support for structures, such as docks, bridges, cofferdams, and platforms. Removes obstructions from strainers and marine railway or launching ways, using pneumatic and power hand tools. Communicates with surface while underwater by signal line or telephone. Searches for lost or sunken objects, such as bodies, torpedoes, equipment, and ships. Recovers objects by placing rigging around sunken objects and hooking rigging to crane lines. Inspects docks, hulls and propellers of ships, and underwater pipelines, cables, and sewers.



49-9095.00 Manufactured Building and Mobile Home Installers Entry – Mid – Senior level position assuming education and experience prerequisite

Locates and repairs frayed wiring, broken connections, or incorrect wiring, using ohmmeter, soldering iron, tape, and hand tools. Repairs plumbing and propane gas lines, using caulking compounds and plastic or copper pipe. Removes damaged exterior panels, repairs and replaces structural frame members, and seals leaks, using hand tools. Connects electrical system to outside power source and activates switches to test operation of appliances and light fixtures. Confers with customer or reads work order to determine nature and extent of damage to unit. Connects water hose to inlet pipe of plumbing system and tests operation of toilets and sinks. Seals open side of modular units to prepare them for shipment, using polyethylene sheets, nails, and hammer. Resets hardware, using chisel, mallet, and screwdriver. Refinishes wood surfaces on cabinets, doors, moldings, and floors, using power sander, putty, spray equipment, brush, paints, or varnishes. Opens and closes doors, windows, and drawers to test their operation and trims edges to fit, using jack- plane or drawknife. Lists parts needed, estimates costs, and plans work procedure, using parts list, technical manuals, and diagrams. Repairs leaks with caulking compound or replaces pipes, using pipe wrench. Inspects, examines, and tests operation of parts or systems to be repaired and to verify completeness of work performed.

49-9098.00 Helpers--Installation, Maintenance, and Repair Workers Entry level position assuming education and experience prerequisite

Helps mechanics and repairers maintain and repair vehicles, industrial machinery, and electrical and electronic equipment. Transfers equipment, tools, parts, and other objects to and from workstations and other areas, using hand tools, power tools, and moving equipment. Installs or replaces machinery, equipment, and new or replacement parts and instruments, using hand tools or power tools. Applies protective materials to equipment, components, and parts to prevent defects and corrosion. Positions vehicles, machinery, equipment, physical structures, and other objects, for assembly or installation, using hand tools, power tools, and moving equipment. Builds or erects and maintains physical structures, using hand tools or power tools. Examines and tests machinery, equipment, components, and parts for defects and to ensure proper functioning. Tends and observes equipment and machinery to verify efficient and safe operation. Adjusts and connects or disconnects wiring, piping, tubing, and other parts, using hand tools or power tools. Assembles and disassembles machinery, equipment, components, and other parts, using hand tools and power tools. Furnishes tools, parts, equipment, and supplies to other workers. Cleans or lubricates vehicles, machinery, equipment, instruments, tools, work areas, and other objects, using hand tools, power tools, and cleaning equipment.

51-1011.00 First-Line Supervisors/Managers of Production and Operating Workers Senior level position assuming education and experience prerequisite

Direct and coordinate the activities of employees engaged in production or processing of goods. Plans and establishes work schedules, assignments, and production sequences, to meet production goals. Determines standards, production and rates based on company policy, equipment and labor availability, and workload. Confers with management or subordinates to resolve worker problems, complaints, or grievances. Reads and analyzes charts, work orders, or production schedules to determine production requirements. Confers with other supervisors to coordinate operations and activities within departments or between departments. Sets up and adjusts machines and equipment. Monitor gauges, dials, and other indicators to ensure operators conform to production or processing standards. Monitors or patrols work area and enforces safety or sanitation regulations. Demonstrates equipment operations or work procedures to new employees or assigns employees to experienced workers for training. Inspects materials, products, or equipment to detect defects or malfunctions. Interprets specifications, blueprints, job orders, and company policies and procedures for workers. Requisitions materials, supplies, equipment parts, or repair services. Recommends or implements measures to motivate employees and improve production methods, equipment performance, product quality, or efficiency. Maintains operations data, such as time, production, and cost records and prepares management reports. Reviews operations and accounting records or reports to determine the feasibility of production estimates and evaluate current production. Calculates labor and equipment requirements and production specifications, using standard formulas.

51-2092.00 Team Assemblers Entry – Mid – Senior level position assuming education and experience prerequisite Work as part of a team having responsibility for assembling an entire product or component of a product. Team assemblers can perform all tasks conducted by the team in the assembly process and rotate through all or most of them rather than being assigned to a specific task on a permanent basis. May participate in making management decisions affecting the work. Team leaders who work as part of the team should be included.



51-3011.01 Bakers, Bread and Pastry Entry – Mid – Senior level position assuming education and experience prerequisite

Weighs and measures ingredients, using measuring cups and spoons. Mixes and cooks pie fillings, and pours fillings into pie shells and tops filling with meringue or cream. Spreads or sprinkles toppings on loaves or specialties and places dough in oven, using long-handled paddle (peel). Mixes ingredients to make icings, decorates cakes and pastries, and blends colors for icings, shaped ornaments, and statuaries. Cuts, peels, and prepares fruit for pie fillings. Covers filling with top crust; places pies in oven; and adjust drafts or thermostatic controls to regulate oven temperatures. Checks production schedule to determine variety and quantity of goods to bake. Molds dough in desired shapes, places dough in greased or floured pans, and trims overlapping edges with knife. Mixes ingredients to form dough or batter by hand or using electric mixer. Rolls and shapes dough, using rolling pin and cuts dough in uniform portions with knife, divider, cookie cutter.

51-3011.02 Bakers, Manufacturing Entry – Mid – Senior level position assuming education and experience prerequisite

Measures flour and other ingredients to prepare batters, dough, fillings, and icings, using scale and graduated containers. Observes color of products being baked and adjusts oven temperature. Applies glace, icing, or other topping to baked goods, using spatula or brush. Develops new recipes for cakes and icings. Rolls, cuts, and shapes dough to form sweet rolls, pie crusts, tarts, cookies, and related products prior to baking. Dumps ingredients into mixing-machine bowl or steam kettle to mix or cook ingredients according to specific instructions. Places dough in pans, molds, or on sheets, and bakes dough in oven or on grill. Decorates cakes.

51-3091.00 Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Observes temperature, humidity, and pressure gauges, or product, and adjusts controls and turns valves to maintain prescribed operating conditions. Cleans equipment, with steam, hot water, and hose. Takes sample of product during or after process for laboratory analysis. Installs equipment, such as spray unit, cutting blades, or screens, using hand tools. Pushes racks or carts to transfer product to storage or for further processing. Clears or dislodges blockages in bins, screens, or other equipment, using pole, brush, or mallet. Observes and listens for machine malfunctions, and notifies supervisor when corrective actions fail. Records production data, such as weight and amount of product processed, type of product, and time and temperature of processing. Reads work order to determine quantity and type of product to be baked, dried, or roasted. Fills or removes product from trays, carts, hoppers, or equipment, using scoop, peel, or shovel, or by hand. Weighs product, using scale hopper or scale conveyor. Observes, feels, or tastes products after processing to ensure products conform to standards. Smooths out product in bin, tray, or conveyor, using rake or shovel. Tests product for moisture content, using moisture meter. Opens valve, discharge gates, or hopper chutes, to load or remove product from oven or equipment. Sets temperature and time controls, lights ovens or gas burners, and starts equipment, such as conveyors, blowers, driers, or pumps.

51-3092.00 Food Batch makers Entry – Mid level position assuming education and experience prerequisite Calculates ingredient amounts to formulate or modify recipes to produce food product of specific flavor, texture, clarity, bouquet, and color. Homogenizes or pasteurizes material to prevent separation of substances or to obtain prescribed butterfat content. Separates, spreads, kneads, spins, casts, cuts, or rolls food product by hand or using machine. Gives directions to other workers who are assisting in batchmaking process. Records amounts of ingredients used, test results, and time cycles. Grades food product according to government regulations or according to type, color, bouquet, and moisture content. Cools food product batch on slabs or in water-cooled kettle. Tests food product sample for moisture content, acidity level, or butterfat content. Examines, feels, and tastes product to evaluate color, texture, flavor, and bouquet. Mixes or blends ingredients, according to recipe, using paddle or agitator. Stirs and cooks ingredients at specified temperatures. Operates refining machine to reduce size of cooked batch. Measures and weighs ingredients, using English or metric measures and balance scales. Determines mixing sequence, based on knowledge of temperature effects and solubility and miscibility properties of specific ingredients. Fills processing or cooking container, such as water-cooled kettle, steam-jacketed rotating cooker, pressure cooker, or vat, with ingredients, following recipe.

51-3093.00 Food Cooking Machine Operators and Tenders Entry – Mid level position assuming education and experience prerequisite

Starts conveyers, machines or pumps and sets temperature, pressures and time controls. Records production and test data, such as processing steps, temperature and steam readings, cooking time, batches processed, and test results. Cleans and washes equipment, using water hoses, cleaning or sterilizing solutions or rinses. Removes cooked material or products from equipment. Notifies or signals other workers to operate equipment or when processing complete. Examines sample of product, tests color, content, consistency, viscosity, acidity, or specific gravity, and removes impurities from

product. Pours, adds or loads prescribed quantities of ingredients or products into cooking equipment, manually or using hoist. Measures or weighs prescribed ingredients, using scales or measuring containers. Listens for malfunction alarms, shuts down equipment, and notifies supervisor. Places products on conveyor or cart and monitors flow. Observes gauges, dials and product texture or color and adjusts controls to maintain appropriate temperature, pressure and flow of ingredients. Admits required amounts of water, steam, cooking oils or compressed air into equipment. Turns valves or starts pumps to drain product from equipment and transfer to storage, cooling or further processing areas. Reads recipes or formulae to determine ingredients or quantities of ingredients needed. Operates auxiliary machines and equipment such as grinders, canners and molding presses, to prepare or further process products. Operates and controls equipment such as, kettles, cookers, vats and tanks, to cook ingredients or prepare products for further processing. Activates agitators and paddles to mix or stir ingredients and stops machine when ingredients are thoroughly mixed.

51-4023.00 Rolling Machine Setters, Operators, and Tenders, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Starts operation of rolling and milling machines to flatten, temper, form, and reduce sheet metal sections and produce steel strips. Installs equipment, such as guides, guards, gears, cooling equipment and rolls, using hand tools. Examines, inspects, measures, and feels raw materials and finished product to verify conformance to specifications, visually or using measurement instruments. Fills oil cups, adjusts valves, and observes gauges to control flow of metal coolant and lubricants onto work piece. Signals and assists other workers to remove and position equipment, fill hoppers, and feed materials into machine. Directs and trains other workers to change rolls, operate mill equipment, remove coils and cobbles, and band and load material. Records mill production on schedule sheet. Removes scratches and polishes roll surface, using polishing stone and electric buffer. Disassembles sizing mills removed from rolling line, and sorts and stores parts. Activates shear and grinder to trim work piece, cut steel strips, and monitor forming of gears to specified length and diameter. Threads or feeds sheets or rods through rolling mechanism, or starts and controls mechanism that automatically feeds steel into rollers. Calculates draft space and roll speed for each mill stand to plan rolling sequence and specified dimensions and temper. Reads rolling order and mill schedules to determine setup specifications, work sequence, product dimensions, and installation procedures. Positions, aligns, and secures arbor, spindle, coils, mandrel, dies, and slitting knives onto machine. Resets, adjusts, and corrects machine set-up to reduce thickness, reshape products, and eliminate product defects. Monitors machine cycles and mill operation to detect jamming and to ensure fabricated products conform to specifications. Sets distance points between rolls, guides, meters, and stops, according to specifications. Selects rolls, dies, roll stands, and chucks from data charts to form specified contours and to fabricate products. Manipulates controls and observes dial indicators to monitor, adjust, and regulate speed of machine mechanisms.

51-4031.01 Sawing Machine Tool Setters and Set-Up Operators, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Turns controls to set cutting speed, feed rate, and table angle for specified operation. Scribes reference lines on work piece as guide for sawing operations, according to blueprints, templates, sample parts, or specifications. Replaces defective blades or wheels, using hand tools. Places work piece on cutting table, manually or using hoist, and clamps work piece into position. Measures completed work piece to verify conformance to specifications, using micrometers, gauges, calipers, templates, or rulers. Marks identifying data on work pieces. Examines completed work pieces for defects, such as chipped edges and marred surfaces, and sorts defective pieces according to defect. Removes housings, feed tubes, tool holders, and other accessories to replace worn or broken parts, such as springs and bushings. Sharpens dulled blades, using bench grinder, abrasive wheel, or lathe. Reads work order for specifications, such as materials to be used, location of cutting lines, and dimensions and tolerances. Positions guides, stops, holding blocks, or other fixtures to secure and direct work piece, using hand tools and measuring devices. Sets blade tension, height, and angle to perform prescribed cut, using wrench. Turns valves to start flow of coolant against cutting area and to start airflow, which blows cuttings away from kerf. Selects blade according to specifications and installs on machine, using hand tools. Starts machine and feeds work piece against blade, guiding along layout lines, to cut work piece to specified dimensions.

51-4031.02 Punching Machine Setters and Set-Up Operators, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Activates machine and observes operation to detect misalignment or machine malfunctions. Installs, aligns and locks specified punches, dies and cutting blades in ram or bed of machine, using gauges and hand tools. Sets stops or guides or installs jigs or fixtures for positioning successive work pieces. Measures work piece with rule or tape, or traces from template and marks location with scribe, soapstone, or center punch. Inspects work pieces for conformance to specifications, visually or using gauges or templates, scale, compass and adjusts machine to correct errors. Cleans and lubricates machines. Reads job order to determine location of holes or cutting lines. Sets controls or installs gears to



synchronize action of feed bar or rollers. Adjusts ram stroke of press to specified length, using hand tools. Positions, aligns, and secures work piece against fixtures or stops on machine bed or on die.

51-4031.03 Press and Press Brake Machine Setters and Set-Up Operators, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Sets stops on machine bed, changes dies, and adjusts components, such as ram or power press, when making multiple or successive passes. Measures work piece and verifies dimensions and weight, using micrometer, template, straightedge, and scale. Plans sequence of operations, applying knowledge of physical properties of metal. Lifts, positions, and secures work piece between dies of machine, using crane and sledge. Grinds out burrs and sharp edges, using portable grinder, speed lathe, and polishing jack. Hand forms, cuts, or finishes work piece, using tools, such as table saw, hand sledge and anvil, flaring tool, and gauge. Lubricates work piece with oil. Preheats work piece, using heating furnace or hand torch. Inspects work piece for defects. Installs, aligns, and secures gears, holding fixtures, dies to machine bed, using gauges, templates, feelers, shims, and hand tools. Operates power press, power brake, apron brake, swaging machine, foot-powered press, hydraulic press, or arbor press according to specifications. Selects and positions flat, block, radius, or special purpose die sets into ram and bed of machine, using hoist, crane, measuring instruments and hand tools.

51-4031.04 Shear and Slitter Machine Setters and Set-Up Operators, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Installs and aligns knives, disk cutters or fixtures to shear, bevel, or trim fabricated items. Hones cutters with oilstone to remove nicks. Observes machine operation and examines cut strips for flatness, holes, burrs, and surface defects. Lubricates and cleans machine. Lifts work piece manually or by hoist, and positions and secures against guides and stops. Lays out cutting lines on metal stock to obtain maximum number of pieces from stock. Measures dimensions of work piece, using tape, gauge, template, or rule and square, for conformance to specifications. Tests and adjusts cutting speed and action, according to specified length of product, using gauges and hand tools. Operates shear or slitter that cuts or shears metal, such as plates, sheets, slabs, billets, or bars, to size. Reads production schedule to determine setup or adjustment of equipment. Threads end of metal coil from reel through slitter and secures ends on recoiler. Selects, cleans, and installs spacers, rubber sleeves, and cutter on arbors. Starts machine, adjusts blade and controls, using wrenches, rule, gauge, or template, and monitors operation.

51-4032.00 Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Operates single- or multiple-spindle drill press to bore holes to perform machining operations on metal, nonmetallic, or plastic work pieces. Studies machining instructions to determine dimensional and finish specifications, sequence of operation, setup, and tooling requirements. Installs tool in spindle. Selects cutting tool according to instructions and knowledge of metal properties. Operates tracing attachment to duplicate contours from templates or models. Lifts work piece either manually or with hoist onto machine table, or directs crane operator to lift and position work piece. Verifies conformance of machined work to specifications, using measuring instruments, such as calipers, micrometers, and fixed and telescoping gauges. Positions and secures work piece on table with bolts, jigs, clamps, shims, or other holding devices, using machining hand tools. Lays out reference lines and machining locations on work, applying knowledge of shop math and layout techniques, using layout tools.

51-4033.01 Grinding, Honing, Lapping, and Deburring Machine Set-Up Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Moves machine controls to index work piece and adjust machine for pre-selected operational settings. Activates machine start-up switches to grind, lap, hone, debar, shear, or cut work piece, according to specifications. Computes machine indexing and settings for specified dimension and base reference points. Observes and adjusts machine operation. Mounts and positions tools in machine chuck, spindle, or other tool holding device to specifications, using hand tools. Grinds, sharpens, or hones tools, dies, and products to prescribed dimensions, using power tools, hand tools, and precision measuring instruments. Lifts and positions work piece manually or with hoist, and secures in hopper, on machine table, faceplate or chuck, using clamps. Inspects or measures work piece, using measuring instruments, such as gauges or micrometers for conformance to specifications. Maintains stock of machine parts and machining tools. Repairs or replaces machine parts, using hand tools or notifies engineering personnel when corrective action is required. Brushes or sprays lubricating compound on work piece or turns valve handle and directs flow of coolant against tool and work piece. Measures work pieces and lays out work, using precision measuring devices. Studies blueprints, work order, or machining instructions to determine product dimensions, tooling, and to plan operational sequence. Selects machine tooling to be used in machine operation, utilizing knowledge of machine and production requirements. Threads and hand feeds materials through machine cutters or abraders.



51-4033.02 Buffing and Polishing Set-Up Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Sets and adjusts machine controls according to product specifications, utilizing knowledge of machine operation. Repairs or replaces machine parts to maintain machine in operational condition. Removes work piece and examines finish or luster to ensure surface meets specifications. Starts and observes machine operation for conformance to specifications. Selects buffing or polishing tools and positions and mounts tools to machine tool, chuck, or jig, using hand tools. Reads work order to determine parts to be buffed or polished. Holds stick of buffing compound or turns valve and depresses pedal to administer coolant to work piece surface. Selects and attaches work piece-holding fixture to drive mechanism, and positions or clamps work piece to fixture.

51-4034.00 Lathe and Turning Machine Tool Setters, Operators, and Tenders Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Installs holding fixtures, cams, gears, and stops to control stock and tool movement, using hand tools, power tools, and measuring instruments. Moves tool holder manually or by turning hand wheel, or engages automatic feeding mechanism, to feed tools to and along work piece. Selects cutting tools and tooling instructions, according to knowledge of metal properties and shop mathematics, or written specifications. Positions, secures, and aligns cutting tools in tool holders on machine, using hand tools, and verifies their position with measuring instruments. Observes operation and stops machine to inspect finished work piece and verify conformance with specifications of first-run, using measuring instruments Mounts attachments, such as relieving or tracing attachments, to perform operations, such as duplicating contours of template or trimming work piece. Studies blueprint, layout, or chart, to visualize work and determine materials needed, sequence of operations, dimensions, and tooling instructions. Computes unspecified dimensions and machine settings, using knowledge of metal properties and shop mathematics. Lifts metal stock or work piece manually or using hoist, and positions and secures it in machine, using fasteners and hand tools. Replaces worn tools and sharpens dull cutting tools and dies. Moves controls to set cutting speeds and depths, and feed rates and to position tool in relation to workplace. Cranks machine through cycle, stopping to adjust tool positions and machine controls, to ensure specified timing, clearance, and tolerances. Starts machine, and turns valve handle to direct flow of coolant on work area or coats disk with spinning compound.

51-4051.00 Metal-Refining Furnace Operators and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Manipulates controls to ignite burners, adjust fuel mixtures, open and close furnace doors, or to load and discharge materials into or from furnace. Regulates supply of fuel and air or controls flow of electric current and water coolant to heat furnaces. Observes color and fluidity of molten metal and obtains test sample of metal from furnace or kettle for analysis. Sprinkles chemicals over molten metal to bring impurities to surface and removes impurities, using strainers. Inspects furnace and equipment for defects and wear and directs work-crew in cleaning and repairing furnace walls and flooring. Draws smelted metal samples from furnace for analysis and calculates type and amount of material required to correct smelting process. Scrapes accumulations of metal oxides from floors, molds, and crucibles and sifts and stores for reclamation. Weighs materials to be charged into furnace or to maintain prescribed weight, using scales. Records data and maintains production logs. Examines and prepares material to load into furnace, including cleaning, crushing, or applying chemicals, using crushing machine, shovel, rake, or sprayer. Analyzes metal test sample, according to specific instructions and for specific and for specific element content. Drains, transfers, or removes molten metal from furnace or into molds by hoist or pumps or ladles. Observes inside of furnace operations by television screen and operates controls to move or discharge metal work piece. Observes air and temperature gauges or metal color and turns fuel valves or adjusts controls to maintain required temperature. Kindles fire and shovels fuels and other materials into furnaces or onto conveyors by hand, with hoists, or by directing crane operator.

51-4052.00 Pourers and Casters, Metal Entry – Mid – Senior level position assuming education and experience prerequisite

Pours molten metal into molds and forms, using ladle. Turns valves to circulate water through core or sprays water on filled molds to cool and solidify metal. Assembles and imbeds cores in casting frames, using hand tools and equipment. Collects samples or signals workers to sample metal for analysis. Removes metal ingots or cores from molds, using hand tools, cranes, and chain hoists. Transports metal ingots to storage areas, using forklift. Repairs and maintains metal forms and equipment, using hand tools, sledges, and bars. Stencils identifying information on ingots and pigs, using special hand tools. Examines molds to ensure they are clean, smooth, and properly coated. Loads specified amount of metal and flux into furnace or clay crucible. Skims slag or removes excess metal from ingots or equipment, using hand tools, strainers, rakes, or burners, and recycles scrap. Positions equipment or signals workers to position equipment such as



ladles, grinding wheels, or crucibles. Reads temperature gauges, observes color changes, and adjusts furnace flame, torch, or electrical heating unit to melt metal. Adds metal to molds to compensate for shrinkage.

51-4071.00 Foundry Mold and Core makers Entry – Mid – Senior level position assuming education and experience prerequisite

Forms and assembles slab cores around pattern and positions wire in mold sections to reinforce mold, using hand tools and glue. Cuts spouts, runner holes, and sprue holes into mold. Positions patterns inside mold sections and clamps sections together. Lifts upper mold section from lower and removes molded patterns. Cleans and smooths molds, cores, and core boxes, and repairs surface imperfections. Moves and positions work pieces, such as mold sections, patterns, and bottom boards, using cranes, or signals others to move work pieces. Pours molten metal into mold, manually or using crane ladle. Rotates sweep board around spindle to make symmetrical molds for convex impressions. Operates ovens to bake cores or furnaces to melt, skim, and flux metal. Sprinkles or sprays parting agent onto pattern and mold sections, to facilitate removal of pattern from mold. Sifts sand and packs sand into mold sections, core box, and pattern contours, using hand or pneumatic ramming tools. Positions cores into lower section of mold and reassembles mold for pouring.

51-4072.01 Plastic Molding and Casting Machine Setters and Set-Up Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Positions, aligns, and secures assembled mold, mold components, and machine accessories onto machine press bed, and attaches connecting lines. Presses button or pulls lever to activate machine to inject dies and compress compounds to form and cure specified products. Sets machine controls to regulate molding temperature, volume, pressure, and time, according to knowledge of plastics and molding procedures. Installs dies onto machine or press and coats dies with parting agent, according to work order specifications. Reads specifications to determine setup and prescribed temperature and time settings to mold, form, or cast plastic materials. Observes and adjusts machine set up and operations to eliminate production of defective parts and products. Measures and visually inspects products for surface and dimension defects, using precision measuring instruments, to ensure conformance to specifications. Mixes catalysts, thermoplastic materials, and coloring pigments according to formula, using paddle and mixing machine. Repairs and maintains machines and auxiliary equipment, using hand tools and power tools. Trims excess material from part, using knife, and grinds scrap plastic into powder for reuse. Removes finished or cured product from dies or mold, using hand tools and air hose. Weighs premixed compounds and dumps compound into die well or fills hoppers of machines that automatically supply compound to die.

51-4072.02 Plastic Molding and Casting Machine Operators and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Starts machine that automatically liquefies plastic material in heating chamber, injects liquefied material into mold, and ejects molded product. Turns valves and dials of machines to regulate pressure and temperature, to set press-cycle time, and to close press. Observes continuous operation of automatic machine and width and alignment of plastic sheeting to ensure side flanges. Pulls level and toggle latches to fill mold and regulate tension on sheeting and to release mold covers. Dumps plastic powder, preformed plastic pellets, or preformed rubber slugs into hopper of molding machine. Feels stiffness and consistency of molded sheeting to detect machinery malfunction. Breaks seals that hold plastic product in molds, using hand tool, and removes product from mold. Heats plastic material prior to forming product or cools product after processing to prevent distortion. Weighs prescribed amounts of material for molded part and finished product to ensure specifications are maintained. Removes product from mold or conveyor, and cleans and reloads mold. Positions mold frame to correct alignment and tubs containing mixture on top of mold to facilitate loading of molds. Examines molded product for surface defects, such as dents, bubbles, thin areas, and cracks. Fills tubs, molds, or cavities of machine with plastic material in solid or liquid form prior to activating machine. Trims flashing from product. Signals coworker to synchronize feed of materials into molding process. Throws flash and rejected parts into grinder machine to be recycled. Reports defect in molds to supervisor. Stacks molded parts in boxes or on conveyor for subsequent processing or leaves parts in mold to cool. Mixes and pours liquid plastic into rotating drum of machine that spreads, hardens, and shapes mixture. Observes meters and gauges to verify specified temperatures, pressures, and press-cycle

51-4072.03 Metal Molding, Coremaking, and Casting Machine Setters and Set-Up Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Moves controls to start, set, or adjust casting, molding, or pressing machines. Repairs or replaces worn or defective machine parts and dies. Obtains and moves specified pattern to work station, manually or using hoist, and secures pattern to machine, using wrenches. Removes castings from dies and dips castings in water to cool, using pliers or tongs. Preheats die sections with torch or electric heater. Stacks and mounts rotor core laminations over keyed mandrel of casting machine, and removes and stamps rotor with identifying data. Lines cylinder pot with asbestos strips and disk to

prevent chilling. Loads metal ingots or aluminum bars into melting furnace, and transfers molten metal to reservoir of die casting machine. Connects water hose to cooling system of die, using hand tools. Cleans and lubricates casting machine and dies, using air hose and brushes. Inspects castings and core slots for defects, using fixed gauges. Loads die sections into machine, using equipment such as chain fall or hoist, and secures in position, using hand tools. Pours molten metal into cold-chamber machine or cylinders, using hand ladle.

51-4072.04 Metal Molding, Coremaking, and Casting Machine Operators and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Starts and operates furnace, oven, die casting, coremaking, metal molding, or rotating machines to pour metal or create molds and casts. Positions ladles or pourers and adjusts controls to regulate the flow of metal, sand, or coolant into mold. Removes casting from mold, mold from press, or core from core box, using tongs, pliers, hydraulic ram, or by inversion. Pours or loads metal or sand into melting pot, furnace, mold, core box or hopper, using shovel, ladle, or machine. Observes and records data from pyrometers, lights, and gauges to monitor molding process and adjust furnace temperature. Signals or directs other workers to load conveyor, spray molds, or remove ingots. Requisitions molds and supplies and inventories and records finished products. Weighs metals and powders and computes amounts of materials necessary to produce mixture of specified content. Smooths and cleans inner surface of mold, using brush, scraper, air hose, or grinding wheel, and fills imperfections with refractory material. Sprays, smokes, or coats molds with compounds to lubricate or insulate mold, using acetylene torches or sprayers. Skims or pours dross, slag, or impurities from molten metal, using ladle, rake, hoe, spatula, or spoon. Assembles shell halves, patterns, and foundry flasks, and reinforces core boxes, using glue, clamps, wire, bolts, rams, or machines. Inspects metal casts, and molds for cracks, bubbles, or other defects and measures castings to ensure specifications met. Repairs or replaces damaged molds, pipes, belts, chains, or other equipment, using hand tools, hand-powered press, or jib crane. Cleans, glues, and racks cores, ingots, or finished products for storage. Cuts spouts and pouring holes in molds and sizes hardened cores, using saws. Fills core boxes and mold patterns with sand or powders, using ramming tools or pneumatic hammers, and removes excess. Positions, aligns, and secures molds or core boxes in holding devices or under pouring spouts and tubes, using hand tools.

51-4072.05 Casting Machine Set-Up Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Sets up matrices in assembly stick by hand according to specifications. Stops machine when galley is full or when strip is completed. Inserts and locks galley or matrix case into place on machine. Positions composing stick to length of line specified in casting instructions. Forwards galley to appropriate personnel for proofing. Removes and stores assembly stick, controller reel, and matrix case. Places reel of controller paper on holder, threads around reels, and attaches to winding roll. Starts machine and monitors operation for proper functioning.

51-4191.01 Heating Equipment Setters and Set-Up Operators, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Mounts fixtures and industrial coil on machine and work pieces in fixture, using hand tools. Replaces worn dial-feed, burner and conveyor parts, using hand tools. Crushes random samples between fingers to determine hardness. Instruct new workers in machine operation. Sets frequency of current and automatic timer. Estimates flame temperature and heating cycle based on degree of hardness required and metal to be treated. Reads work order to determine processing specifications. Visually examines or tests objects, using hardness testing equipment, to determine flame temperature and degree of hardness. Starts conveyors and dial feeder plates, and turns setscrews in nozzles to direct flames, which anneal specific area of object. Lights gas burners and adjusts flow of gas and coolant water.

51-4191.02 Heat Treating, Annealing, and Tempering Machine Operators and Tenders, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Sets automatic controls, observes gauges, and operates gas or electric furnace used to harden temper, or anneal metal parts. Covers parts with charcoal before inserting in furnace to prevent discoloration caused by rapid heating. Cleans oxides and scale from parts or fittings, using steam spray or immersing parts in chemical and water baths. Signals forklift operator to deposit or extract containers of parts into and from furnaces and quenching rinse tanks. Tests parts' for hardness, using hardness testing equipment, and stamps heat treatment identification mark on part, using hammer and punch. Examines parts to ensure metal shade and color conform to specifications, utilizing knowledge of metal heat-treating. Removes parts from furnace after specified time and air dries or cools parts in water or oil brine or other baths. Adjusts speed and operates continuous furnace through which parts are passed by means of reels and conveyors. Sets up and operates die-quenching machine to prevent parts from warping. Reads production schedule to determine processing sequence and furnace temperature requirements for objects to be heat-treated. Loads parts into containers, closes furnace door, and inserts parts into furnace when specified temperature is reached. Reduces heat and allows parts to cool in furnace. Activates and tends electric furnace that anneals base sections of hardened parts for subsequent

machining. Positions part in fixture, presses buttons to light burners and tends flame hardening machine, according to procedures, to case harden metal.

51-4191.03 Heaters, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Ignites furnace with torch, and turns valve to regulate flow of fuel and air to burners. Positions plastic sheet and mold in plastic bag, heats material under lamps, and forces confrontation of sheet to mold by vacuum pressure. Removes material from furnace, using crane, or signal crane operator to transfer to next station. Positions stock in furnace, using tongs, chain hoist, or pry bar. Assists workers in repairing, replacing, cleaning, lubricating, or adjusting furnace equipment, using hand tools. Records time and production data. Signals coworker to charge steel into furnace. Impregnates fabric with plastic resins and cuts fabric into strips. Pushes cart to curing oven or places part in autoclave. Removes part and cuts away plastic bag. Positions part in plastic bag and seals bag with iron. Removes stock from furnace, using cold rod, tongs or chain hoist, and places stock on conveyor for transport to work area. Places part on cart, connects vacuum line to tube, and smoothes bag around part to ensure vacuum. Adjusts controls to maintain temperature and heating time, using thermal instruments and charts, dials and gauges of furnace, and color of stock. Sets oven controls or turns air-pressure valve or autoclave. Inserts vacuum tube into bag and seals bag around tube with tape. Adjusts controls to synchronize speed of feed and take-off conveyors of furnace. Starts conveyors and opens furnace doors to load stock, or signals crane operator to uncover soaking pits and lower ingots into them.

51-4193.01 Electrolytic Plating and Coating Machine Setters and Set-Up Operators, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Moves controls to permit electro deposition of metal on object or to regulate movement of wire strand to obtain specified thickness. Adjusts voltage and amperage, based on observations. Determines size and composition of object to be plated and amount of electrical current and time required, following work order. Suspends object, such as part or mold, from cathode rod (negative terminal) and immerses object in plating solution. Suspends stick or piece of plating metal from anode (positive terminal) and immerses metal in plating solution. Mixes chemical solutions, fills tanks and charges furnaces. Removes plated object from solution at periodic intervals and observes object to ensure conformance to specifications. Plates small objects, such as nuts or bolts, using motor-driven barrel. Immerses object in cleaning and rinsing baths to complete plating process. Examines object at end of process to determine thickness of metal deposit or measures thickness, using instruments, such as micrometers. Measures, marks, and masks areas excluded from plating. Grinds, polishes, or rinses object in water and dries object to maintain clean even surface.

51-4193.02 Electrolytic Plating and Coating Machine Operators and Tenders, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Measures or estimates amounts of electric current needed and time required to coat objects. Adjusts dials to regulate flow of current and voltage supplied to terminals to control plating process. Positions objects to be plated in frame or suspends them from positive or negative terminals of power supply. Removes object from plating solution after specified time or when desired thickness of metal is deposited on them. Mixes and tests plating solution to specified formula and turns valves to fill tank with solution. Monitors and measures thickness of electroplating on component part to verify conformance to specifications, using micrometer. Mixes forming acid solution, treats battery plates, and removes and rinses formed plates. Immerses objects to be coated or plated into cleaning solutions or sprays with conductive solution to prepare object for plating. Rinses coated object in cleansing liquids and dries with cloth, centrifugal driers, or by tumbling in sawdust filled barrels. Lubricates moving parts of plating conveyor and cleans plating and cleaning solution tanks.

51-4193.03 Non-Electrolytic Plating and Coating Machine Setters and Set-Up Operators, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Measures and sets stops, rolls, brushes, and guides on automatic feeder and conveying equipment or coating machines, using micrometer. Adjusts controls to set temperatures of coating substance, and adjusts speeds of machines and equipment. Attaches nozzle, positions gun, connects hoses, and threads wire to set up metal-spraying machine. Ignites gun and adjusts controls to regulate wire feed, air pressure, and flow of oxygen and fuel to operate metal-spraying machine. Installs gears and holding devices on conveyor equipment. Reads production schedule to determine setup of equipment and machines. Mixes anodize solution in tank of machine, according to formula, and verifies solution concentration, using gauge. Positions work pieces, starts operation of machines and conveyors, and feeds work pieces into machines to be coated. Adjusts controls to synchronize equipment speed with speed of coating or spraying machine. Operates hoist to place work pieces onto machine feed carriage or spindle. Inspects coated products for defects and specified color and coverage. Operates sandblasting equipment to roughen and clean surface of work pieces. Preheats work pieces in oven.



51-4193.04 Non-Electrolytic Plating and Coating Machine Operators and Tenders, Metal and Plastic Entry – Mid – Senior level position assuming education and experience prerequisite

Observes gauges and adjusts controls of machine to regulate functions, such as speed and temperature, according to specifications. Sprays coating in specified pattern according to instructions and inspects area for defects, such as air bubbles or uneven coverage. Presses or turns controls to activate and set equipment operation according to specifications. Positions and feeds materials on plate into machine, manually or automatically, for processing. Fills machine receptacle with coating material or solution. Immerses work pieces in coating solution for specified time. Mixes coating material or solution according to formula, or uses premixed solutions. Places materials on racks and transfers to oven to dry for a specified period of time. Removes excess material or impurities from objects, using air hose or grinding machine. Cuts metal or other materials, using shears or band saw. Measures or weighs materials, using ruler, calculator, and scale. Positions containers to receive parts, and loads or unloads materials in containers, using dolly or hand truck. Cleans and maintains equipment, using water hose and scraper. Solders equipment and visually examines for completeness. Cleans work pieces, using wire brush. Maintains production records. Replaces worn parts and adjusts equipment components, using hand tools.

51-5011.01 Bindery Machine Setters and Set-Up Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Installs bindery machine devices, such as knives, guides, and clamps to accommodate sheets, signatures or books of specified sizes. Starts machines and makes trial runs to verify accuracy of machine setup. Fills glue pot and adjusts flow of glue and speed of conveyors.

Observes and monitors machine operations to detect malfunctions and makes required adjustments. Manually stocks supplies such as signatures, books, or paper. Records time spent on specific tasks and number of items produced, for daily production sheet. Trains workers to set up, operate, and use automatic bindery machines. Removes books or products from machine and stacks them. Cleans and lubricates machinery parts and makes minor repairs. Examines product samples for defects. Reads work order to determine work instructions. Threads wire into machine to load stitcher head for stapling. Positions and clamps stitching heads on crossarms to space stitches to specified lengths. Sets machine controls to adjust length and thickness of folds, stitches or cuts, and to adjust speed and pressure. Mounts and secures rolls or reels of wire, cloth, paper or other material onto machine spindles and fills paper feed.

51-5011.02 Bindery Machine Operators and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Operates or tends machines that perform binding operations, such as pressing, folding, and trimming on books and related articles. Moves controls to adjust and activate bindery machine to meet specifications. Feeds books and related articles, such as periodicals and pamphlets, into binding machines, following specifications. Stitches or fastens endpapers or bindings, stitches signatures, and applies glue along binding edge of first and last signatures of books. Threads spirals in perforated holes of items to be bound, using spindle or rollers. Opens machine and removes and replaces damaged covers and book, using hand tools. Cleans work area and maintains equipment and workstations, using hand tools. Maintains records of daily production, using specified forms. Wraps product in plastic, using machine, and packs products in boxes. Rolls, bends, smooths, and folds sheets, using hands, and stacks sheets to be returned to binding machines. Removes printed material or finished products from machines or conveyor belts, and stacks material on pallets or skids. Applies materials on books or related articles, using machine. Creases or compresses signatures before affixing covers, and places paper jackets on finished books. Examines printed material and related products for defects and to ensure conformance to specifications.

Punches holes in paper sheets and fastens sheets, signatures, or other material, using hand or machine punch or stapler. Removes broken wire pieces from machine and loads machine with spool of wire.

Inserts illustrated pages, extra sheets, and collated sets into catalogs, periodicals, directories, and other printed products, and applies labels to envelopes, using hands or machine.

Selects, loads, and adjusts work pieces and machine parts, using hand tools.

51-5012.00 Bookbinders Entry – Mid – Senior level position assuming education and experience prerequisite Applies glue to back of book, using brush or glue machine, and attaches cloth backing and headband.

Attaches endpapers to top and bottom of book body, using sewing machine, or glues endpapers and signatures together along spine, using brush or glue machine. Inserts book body in device that forms back edge of book into convex shape and produces grooves to facilitate attachment of cover. Trims edges of book to size, using cutting or book trimming machine or hand cutter. Packs, weighs, and stacks books on pallet for shipment. Places bound book in press that exerts pressure on cover until glue dries. Folds printed sheets to form signatures (pages) and assembles signatures in numerical order to form book body. Compresses sewed or glued signatures to reduce book to required thickness, using hand press or smashing machine. Imprints and embosses lettering, designs, or numbers on cover, using gold, silver, or colored foil

and stamping machine. Applies color to edges of signatures, using brush, pad, or atomizer. Glues outside endpapers to cover. Cuts binder board to specified dimension, using board shears, hand cutter, or cutting machine. Cuts cover material to specified dimensions and fits and glues material to binder board manually or by machine.

51-5021.00 Job Printers Entry – Mid – Senior level position assuming education and experience prerequisite Selects type from type case and inserts type in printer's stick to reproduce material in copy. Lays form on proof press, inks type, fastens paper to press roller, and pulls roller over form to make proof copy. Pushes button to start press, examines printed sheets, and adjusts press when printing is defective. Corrects errors by resetting type and improves impression by tapping face of type with hammer. Cleans ink rollers at end of run. Sets feed guides according to size and thickness of paper. Fills ink fountain and moves lever to adjust flow of ink. Positions form (type in locked chase) on bed of press and tightens clamps, using wrench. Removes assembled type from galley and places type on composing stone. Places chase over type, inserts quoins, and locks chase to hold type. Slides type from stick into galley. Inserts spacers between words and leads between lines. Reads proof for errors and clarity of impression. Runs proof sheet through press and examines sheet for clarity of impression.

51-6011.03 Laundry and Dry Cleaning Machine Operators and Tenders, Except Pressing Entry – Mid level position assuming education and experience prerequisite

Starts washer, dry cleaner, drier, or extractor, and turns valves or levers to regulate and monitor cleaning or drying operations. Tends variety of automatic machines that comb and polish furs; clean, sterilize, and fluff feathers and blankets; and roll and package towels. Removes or directs other workers to remove items from washer or dry cleaning machine and into extractor or tumbler. Adjusts switches to tend and regulate equipment that fumigates and removes foreign matter from furs. Mends and sews articles, using hand stitching, adhesive patch, or power sewing machine. Hangs curtains, drapes, blankets, pants, and other garments on stretch frames to dry, and transports items between specified locations. Irons or presses articles, fabrics, and furs, using hand iron or pressing machine. Receives and marks articles for laundry or dry cleaning with identifying code number or name, using hand or machine marker. Sorts and counts articles removed from dryer and folds, wraps, or hangs items for airing out, pickup, or delivery. Examines and sorts articles to be cleaned into lots, according to color, fabric, dirt content, and cleaning technique required. Pre-soaks, sterilizes, scrubs, spot-cleans, and dries contaminated or stained articles, using neutralizer solutions and portable machines. Washes, dry-cleans, or glazes delicate articles or fur garment linings by hand, using mild detergent or dry cleaning solutions. Cleans machine filters and lubricates equipment. Starts pumps to operate distilling system that drains and reclaims dry cleaning solvents.

Loads or directs other workers to load articles into washer or dry cleaning machine. Mixes and adds detergents, dyes, bleach, starch, and other solutions and chemicals to clean, color, dry, or stiffen articles.

51-6021.02 Pressing Machine Operators and Tenders – Textile, Garment, and Related Materials Entry – Mid – Senior level position assuming education and experience prerequisite

Activates pressing machine to remove wrinkles from garments and flatwork items, or shape, form, or patch articles. Selects, installs, and adjusts machine components, including pressing forms, rollers, and guides, according to pressing instructions, using hoist and hand tools. Removes finished pieces from pressing machine and hangs or stacks for cooling, or forwards for additional processing. Moistens materials to soften and smoothes and straightens materials with hands, to prepare for machine pressing. Presses materials, such as garments, drapes, and slipcovers, using hand iron. Cleans and maintains pressing machines, using cleaning solutions and lubricants. Hangs, folds, packages, and tags finished articles for delivery to customer. Applies cleaning solvents, and brushes materials made of suede, leather, and felt, to remove spots, and raise and smooth nap. Shrinks, stretches, or blocks articles by hand, to conform to original measurements, using forms, blocks, and steam. Sews end of new material to leader or to end of material impressing machine, using sewing machine. Examines and measures finished articles to verify conformance to standards, using measuring devices, including tape measure and micrometer. Positions materials, such as cloth garments, felt, or straw on table, die, or feeding mechanism of pressing machine. Lowers iron, ram, or pressing head of machine into position over material to be pressed. Activates and adjusts machine controls to regulate temperature and pressure of rollers, ironing shoe, or plates, according to specifications.

51-6021.03 Pressers, Hand Entry – Mid – Senior level position assuming education and experience prerequisite Pushes and pulls iron over surface of article, according to type of fabric.

Adjusts temperature of iron, according to fabric type, and uses covering cloths to prevent scorching or sheen on delicate fabrics. Fits odd-shaped pieces, which cannot be pressed flat over puff iron. Places article in position on ironing board or worktable. Sprays water over fabric to soften fibers when not using steam iron. Pins, folds, and hangs article after pressing. Measures fabric to specifications, cuts uneven edges with shears, folds material, and presses with iron to form heading. Smoothes and shapes fabric prior to pressing.



51-7041.01 Sawing Machine Setters and Set-up Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Selects knives to achieve specified diameter of cuts, or installs bit and dado saw according to work ticket. Aligns and bolts knives in cutterhead and screws it on spindle, using wrenches. Adjusts angle of table by turning handwheel, and bolts or clamps holding jigs to table. Places stock in jig and pushes table containing stock into saw or lays stock on conveyor that carries it into machine. Pulls table back against stops and depresses pedal to advance cutterhead that shapes end of stock.

51-7041.02 Sawing Machine Operators and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Operates and tends saws and machines to cut stock and to adjust machine speed and tension, moving levers and hand wheels. Guides workpiece against saw or saw over workpiece or operates automatic feeding device to guide cuts. Operates panelboard of saw and conveyor system to cut stock to specified dimensions and to move stock through process. Trims defects from stock or workpiece to straighten rough edges of lumber, using circular power saw. Turns knobs, handwheels, setscrews, and panel controls, or uses hand tools to position and adjust cutting stops and guides. Adjusts saw blades by turning handwheels, pressing pedals, levers, and panel buttons, or using wrenches and rulers. Observes approaching lumber on conveyor to determine cut that will produce highest grade. Determines sawing blade, type and grade of stock needed, and cutting procedures, according to work order or supervisor's instructions. Mounts and bolts sawing blade or attachments to machine shaft and turns handwheels to set blade tension. Positions and clamps stock on table, conveyor, or carriage, using hoists, guides, stops, dogs, wedges, and wrench. Moves machine table to specified angle and height by turning hand wheels, cranks, or knobs. Measures workpiece to mark for cuts and to verify accuracy of cuts, using ruler, square, or caliper rule. Clears machine jams, using hand tools. Unclamps and removes finished workpiece from table. Sharpens blades or replaces defective or worn blades and bands, using hand tools. Inspects stock for imperfections and estimates grade or quality of stock or workpiece. Lubricates and cleans machines, using wrench, grease gun, and solvents. Unloads and rolls logs from truck to sawmill deck or to carriage or moves logs in pond, using pike pole. Counts, sorts, and stacks finished workpieces and disposes of waste material.

51-7042.01 Woodworking Machine Setters and Set-up Operators, Except Sawing Entry – Mid – Senior level position assuming education and experience prerequisite

Installs knives, sanding apparatus, cams, cutting heads, bits, chisels, and blades using hand tools. Attaches and adjusts guides, stops, clamps, chucks, and feed mechanisms, using hand tools. Starts machine and feeds stock into machine through feed mechanisms or conveyors. Monitors operation of automatic machines and make adjustments as needed to correct problems and ensure conformance to specifications. Examines blueprints, drawings, and work orders, to determine characteristics of finished item, materials to be used, and machine setup requirements. Adjusts machine table or cutting devices to produce specified cut or operation. Pushes or holds workpiece against, under, or through cutting, boring or shaping mechanism. Selects knives, sanding apparatus, cams cutting heads, bits, chisels and blades. Mounts or clamps stock onto machine. Removes and replaces worn machine parts, knives, bits, belts, and sandpaper. Examines workpiece visually by touch, or using tape rule, calipers, or gauges to ensure product meets desired standards. Unclamps and removes workpiece from machine, and stacks workpiece on pallet or in box. Sharpens knives, bits, and other cutting and shaping tools. Cleans product, machine, or work area, using rags and air hose.

51-7042.02 Woodworking Machine Operators and Tenders, Except Sawing Entry – Mid – Senior level position assuming education and experience prerequisite

Starts machine, adjusts controls, and moves lever or depresses pedal to bore, shape, smooth, shave, chip, slice or cut wood stock. Starts machine and moves lever to engage hydraulic life to press woodstock into desired form, allows for drying time, and removes. Re-adjusts and re-aligns guides of sanding, cutting, or boring machines to correct defects in finished product, using hand tools. Installs and adjusts blades, cutterheads, boring bits, or sanding belts in machines, according to workpiece, machine function, and specifications. Selects knives, blades, cutterheads, boring bits, or sanding belts, according to workpiece, machine function, and specifications. Places or secures woodstock against guide or into holding device prior to feeding into machine. Examines blueprints, drawings, or samples to determine size, type, and setting of machine tools, stops, jigs, and guides to use. Places water soaked woodstock into form under hydraulic lift to shape for use in making such items as musical instruments. Examines finished workpiece for smoothness, shape, angle, depth of cut and conformity to specifications, visually and using hands, rule, or other gauges. Examines raw woodstock for defects and to ensure conformity to size and other specification standards. Examines rollers, sanding belts, knives, cutting or boring devices, and conveyor mechanisms and sharpens or replaces worn parts, using hand tools.



Cleans machines, workstation, or conveyor, using air hose, was, solvents, brushes and rags. Marks or otherwise identifies completed and inspected workpiece. Hand stacks on pallet or conveyor or controls hoist to remove part or product from workstation.

51-8012.00 Power Distributors and Dispatchers Entry – Mid – Senior level position assuming education and experience prerequisite

Controls and operate equipment to regulate or distribute electricity or steam, according to data provided by recording or indicating instruments or computers. Monitors switchboard and control board to ensure equipment operation and electrical and steam distribution. Compiles and records operational data, such as chart and meter readings, power demands, and usage and operating time. Notifies workers or utilities of electrical and steam distribution process changes. Tends auxiliary equipment used in the power distribution process. Repairs, maintains, and cleans equipment and machines, using hand tools. Inspects equipment to ensure specifications are met and to detect defects. Directs activities of personnel engaged in the controlling and operating of electrical distribution equipment and machinery. Calculates and determines load estimates or equipment requirements to control electrical distribution equipment or stations. Adjusts controls to regulate the flow of power between generating stations, substations, and distribution lines. Turns and moves controls to adjust and activate power distribution equipment and machines.

51-9011.02 Chemical Equipment Tenders Entry – Mid level position assuming education and experience prerequisite

Starts pumps and agitators, turns valves, or moves controls of processing equipment to admit, transfer, filter, or mix chemicals. Loads specified amounts of chemicals into processing equipment. Weighs, measures, or mixes prescribed quantities of materials. Draws sample of products for analysis to aid in process adjustments and maintain production standards. Drains equipment and pumps water or other solution through to flush and clean tanks or equipment. Inventories supplies received and consumed. Assists other workers in preparing and maintaining equipment. Observes safety precautions to prevent fires and explosions. Notifies maintenance engineer of equipment malfunction. Records data in log from instruments and gauges concerning temperature, pressure, materials used, treating time, and shift production. Tests samples to determine specific gravity, composition, or acidity, using chemical test equipment such as hydrometer or pH meter. Replaces filtering media or makes minor repairs to equipment, using hand tools. Patrols work area to detect leaks and equipment malfunctions, and monitor operating conditions.

Observes gauges, meters, and panel lights to monitor operating conditions, such as temperature or pressure. Adjusts valves or controls to maintain system within specified operating conditions.

51-9012.00 Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Starts agitators, shakers, conveyors, pumps, or centrifuge machines, turns valves, or moves controls to admit, drain, filter, mix, or transfer materials. Dumps, pours, or loads specified amounts of refined or unrefined materials into equipment or containers for further processing or storage. Sets or adjusts machine controls to regulate conditions, such as material flow, temperature, and pressure, according to specified operating procedures. Monitors material flow and control instruments, such as gauges, indicators, and meters to ensure optimal processing conditions and results. Removes clogs, defects, and impurities from machines, tanks, conveyors, screen, or other processing equipment. Examines samples visually or by hand to verify quality, such as clarity, cleanliness, consistency, dryness, and texture. Measures or weighs materials to be refined, mixed, transferred, stored, or otherwise processed. Communicates or signals processing instructions to other workers. Maintains log of instrument readings, test results, and shift production. Removes full bags or containers from discharge outlets and replaces them with empty ones. Tests samples to determine viscosity, acidity, specific gravity, or degree of concentration, using test equipment, such as viscometer, pH meter, and hydrometer. Collects samples of material or product for laboratory analysis. Cleans tanks, screens, inflow pipes, and other processing equipment, using hoses, brushes, scrappers, or chemical solutions. Lubricates, connects, installs, replaces, or makes minor adjustments or repairs to hoses, pumps, filters, or screens to maintain processing equipment, using hand tools. Inspects machines and equipment for hazards, operating efficiency, mechanical malfunctions, wear, and leaks.

51-9021.00 Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Operates or tends machines and equipment that crush, grind, polish, or blend materials. Moves controls to start, stop, or adjust machinery and equipment that crush, grind, polish, or blend materials. Adds or mixes chemicals and ingredients for processing, using hand tools or other devices. Dislodges and clears jammed materials, or other items, from machinery and equipment, using hand tools. Loads materials into machinery and equipment, using hand tools. Observes production monitoring equipment to ensure safety and efficient operation. Tends accessory equipment, such as pumps and conveyors, to move materials or ingredients through production process. Reads work orders to ascertain production specifications and information. Weighs or measures materials, ingredients, and products to ensure conformance to

requirements. Records operational and production data on specified forms. Transfers materials, supplies, and products between work areas, using moving equipment and hand tools. Tests samples of materials or products to ensure compliance with specifications, using test equipment. Cleans and maintains machinery, equipment, materials, and products, using hand tools. Collects samples of materials or products for laboratory testing. Examines or feels materials, ingredients, or products to ensure conformance to established standards.

51-9023.00 Mixing and Blending Machine Setters, Operators, and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Operates or tends machines and equipment that crush, grind, polish, or blend materials. Records operational and production data on specified forms. Transfers materials, supplies, and products between work areas, using moving equipment and hand tools. Tests samples of materials or products to ensure compliance with specifications, using test equipment. Cleans and maintains machinery, equipment, materials, and products, using hand tools. Collects samples of materials or products for laboratory testing. Examines or feels materials, ingredients, or products to ensure conformance to established standards. Reads work orders to ascertain production specifications and information. Loads materials into machinery and equipment, using hand tools. Adds or mixes chemicals and ingredients for processing, using hand tools or other devices. Dislodges and clears jammed materials, or other items, from machinery and equipment, using hand tools. Weighs or measures materials, ingredients, and products to ensure conformance to requirements. Tends accessory equipment, such as pumps and conveyors, to move materials or ingredients through production process. Observes production monitoring equipment to ensure safety and efficient operation. Moves controls to start, stop, or adjust machinery and equipment that crush, grind, polish, or blend materials.

51-9032.01 Fiber Product Cutting Machine Setters and Set-Up Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Adjusts machine controls to position and align, and to regulate speed and pressure of components. Activates machine to cut, slice, slit, perforate, or score fiber products, such as paperboard sheets, rubber shoe soles, or plaster wallboard. Monitors operation of cutting or slicing machine to detect malfunctions, removes defective or substandard materials, and readjusts machine components to conform to standards. Positions materials, such as rubber, paper, or leather on feeding mechanism of cutting or slicing machine. Replaces worn or broken parts, and cleans and lubricates cutting or slicing machine to maintain equipment in working order. Maintains production records, such as quantity, type, and dimensions of materials produced. Removes completed materials or products from cutting or slicing machine and stacks or stores for additional processing. Examines, measures, and weighs materials or products to verify conformance to specifications, using measuring devices, such as ruler, micrometer, or scale. Reviews work order, blueprints, specifications, or job sample to determine components, settings, and adjustments for cutting and slicing machines. Selects and installs machine components, such as cutting blades, rollers, and templates, according to specifications, using hand tools.

51-9032.02 Stone Sawyers Entry – Mid – Senior level position assuming education and experience prerequisite Starts saw and moves blade across surface of material, such as stone, concrete slabs, and asbestos-cement sheets and pipes, to saw. Starts pump to circulate water and abrasive onto blade or cable during cutting. Turns crank or presses button to move car under sawing cable or saw frame.

Observes operation to detect uneven sawing and exhausted abrasive supply and tightens pulleys or adds abrasive to maintain cutting speed. Builds bed of timbers on car, and aligns and levels stone on bed, using crowbar, sledgehammer, wedges, blocks, rule, and spirit level. Marks dimensions or traces on stone according to diagram, using chisel and hammer, straightedge, rule, and chalked string. Operates crane or signals crane operator to position or remove stone from car or saw bed. Washes stone, using water hose, and verifies width or thickness of cut stone, using rule. Aligns cable or blades with marks on stone, and presses button or turns lever to lower sawing cable or blades to stone. Changes or replaces saw blades, cables, and grinding wheels, using wrench. Adjusts blade pressure against stone, using ammeter, and lowers blade in stone as cut depth increases.

51-9032.03 Glass Cutting Machine Setters and Set-Up Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Operates single cut machine to cut glass. Removes and replaces worn cutter heads, using hand tools. Measures glass with tape to verify dimensions and observes glass to detect defects.

Starts vacuum-cupped crane, to lift and transfer glass. Directs workers on cutting team. Reviews work order and maintains record of production, using counter. Adjusts timing mechanism, to synchronize breaker bar to snap glass at score. Starts machine to verify setup. Adjusts position, height, and stroke of cutting bridges, manually or by turning controls, to score glass to specific dimensions.



51-9032.04 Cutting and Slicing Machine Operators and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Starts cutting machine by pressing button, pulling lever, or depressing pedal to cut stock, following markings or specifications. Reads work order, or receives oral instructions, regarding specifications, for stock to be cut. Positions stock along cutting lines, or against stops, on bed of scoring or cutting machine. Feeds stock into cutting machine, conveyor, or under cutting blades, by threading, guiding, pushing, or turning hand wheel tacks and sorts cut material according to type and size, for packaging, further processing, or shipping.

Moves stock or scrap to and from machine transporting either manually or using cart, hand truck, or lift truck. Records data concerning amount and type of stock cut from duties performed, including weight, length, and width. Cleans and lubricates cutting machine, conveyors, blades, saws, or knives, using steam hose, scrapers, brush, or oil cans. Cuts stock manually, to prepare for machine cutting, using tools such as knife, cleaver, handsaw, or hammer and chisel. Sharpens cutting blades, knives, or saws, using file, bench grinder, or honing stone. Examines and measures stock to ensure conformance to specifications, using ruler, gauge, micrometer or scale, and removes defects. Installs or replaces cutting knives, blades, or wheels, in cutting machine, using hand tools. Marks cutting lines, or identifying information on stock, using marking pencil, ruler, or scribe. Observes cutting machine in operation, to ensure even flow of stock and to detect jamming, improper feeding, or foreign materials. Stops cutting machine when necessary, by pulling lever, pressing button, or depressing pedal, and removes debris. Adjusts feeding guides, blades, settings, or speed, to regulate specified depth, length, or width of material, using hand tools or hands.

51-9041.01 Extruding, Forming, Pressing, and Compacting Machine Setters and Set-Up Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Installs dies or molds in machines to produce products from variety of materials, according to work order and specifications. Observes operation of machine and product to detect and diagnose cause of faulty operation and monitors gauges and recorders. Synchronizes speed of sections of machine when producing products involving several steps or processes. Installs, aligns, and adjusts neck rings, press plungers, and feeder tubes to molds to deliver material and form product. Selects and measures arbors and dies to verify size specified on work ticket. Collects, examines, measures, weighs, and tests product to verify machine setup and conformance of product to specifications. Cleans dies, arbors, compression chambers, and molds, using swabs, sponge, or air hose and swabs molds with solution to prevent sticking. Removes products from discharge belts and molds, mold components, and feeder tubes from machines. Ignites burner to preheat product or applies heat, using torch. Feeds product into machine by hand or conveyor. Pours, scoops, or dumps specified ingredients, metal assemblies, or mixtures into sections of machine prior to starting machine. Threads extruded strip through water tank and holddown bars or attaches strands to wire and draws through tube. Adjusts timer drum to set size of product material and rollers, cutoff knives, and stops to regulate thickness and length. Disassembles and repairs machinery and equipment. Routes sample to lab for analysis, according to procedure. Records product information, such as scrap quantity, machine number, and ingredients, to complete work ticket and places tickets with product. Couples air and gas lines to machine to maintain plasticity of material and to regulate solidification of final product. Presses control button to activate machinery and equipment. Operates machines and notifies supervisor or setup personnel of needed adjustments to machines. Turns controls to control machine functions, such as regulate air pressure, create vacuum, and coolant flow.

51-9041.02 Extruding, Forming, Pressing, and Compacting Machine Operators and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Activates machine to shape or form products, such as candy bars, light bulbs, silver spoons, balloons, or insulation panels. Records and maintains production data, such as meter readings, and quantity, type, and dimensions of materials produced. Replaces worn or broken parts, such as nozzles, punches, and filters, and cleans and lubricates machine components to maintain in working order. Moves materials, supplies, components, and finished products between storage and work areas, using work aids, such as racks, hoists, and hand trucks, Examines, measures, and weighs materials or products to verify conformance to standards, using measuring devices, such as templates, micrometers, or scales. Selects and installs machine components, such as dies, molds, and cutters, according to specifications, using hand tools and measuring devices. Measures, mixes, cuts, shapes, softens, and joins materials and ingredients, such as powder. cornmeal, or rubber to prepare for machine processing. Reviews work orders, specifications, or instructions to determine materials, ingredients, procedures, components, settings, and adjustments for extruding, form Removes materials or products from mold, or from extruding, forming, pressing, or compacting machine, and stacks or stores for additional processing. Adjusts machine components to regulate speed, pressure, and temperature of machine, and amount, dimensions, and flow of materials or ingredients. Fills molds or positions ingredients or materials, such as glass rods, candy, or rolls of paper, on machine feeding mechanism. Monitors machine operations and observes indicator lights and gauges, such as thermometers, voltage meters, and timers to detect malfunctions. Clears jams, removes defective or substandard materials or products, and readjusts machine components to conform to specifications.



51-9051.00 Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Loads equipment receptacle or conveyor with material to be processed, manually or using hoist. Weighs or measures specified amount of material or substance to be processed, using devices such as scales and calipers. Removes product from equipment, manually or using hoist, and prepares for storage, shipment, or additional processing. Reads and interprets work orders and instructions to determine work assignment, process specifications, and production schedule. Transports materials and products to and from work area, manually or using cart, hand truck, or hoist. Confers with supervisor or other equipment operators to report equipment malfunction or resolve problems resulting from process changes. Records gauge readings, test results, and shift production in logbook. Cleans, lubricates, and adjusts equipment, using items such as scrapers, solvents, air hose, oil, and hand tools. Replaces worn or defective equipment parts, using hand tools. Examines or tests sample of processed substance, or collects sample for laboratory testing, to ensure conformance to specifications. Stops equipment and clears blockages or jams, using fingers, wire, or hand tools. Presses and adjusts controls to activate, set, and regulate equipment operation according to specifications. Monitors equipment operation, gauges, and panel lights to detect deviation from standards.

51-9111.00 Packaging and Filling Machine Operators and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Tends or operates machine that packages product. Starts machine, by engaging controls. Stops or resets machine when malfunction occurs and clears machine jams.

Regulates machine flow, speed, or temperature. Operates mechanism to cut filler product or packaging material. Adjusts machine tension and pressure and machine components according to size or processing angle of product. Removes finished packaged items from machine and separates rejected items. Observes machine operations to ensure quality and conformity of filled or packaged products to standards. Attaches identification labels to finished packaged items. Stacks finished packaged items or packs items in cartons or containers. Counts and records finished and rejected packaged items. Cleans, oils, and makes minor repairs to machinery and equipment. Secures finished packaged items by hand tying, sewing, or attaching fastener. Tests and evaluates product and verifies product weight or measurement to ensure quality standards. Stocks packaging material for machine processing. Stocks product for packaging or filling machine operation. Inspects and removes defective product and packaging material.

51-9132.00 Photographic Processing Machine Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Loads circuit boards, racks or rolls of film, negatives, or printing paper into processing or printing machines. Removes completed work from equipment and examines circuit boards, plates, film, and prints for conformance to quality standards. Places film in labeled containers or numbers film for identification, using numbering machine or by hand. Reads work orders and examines negatives and film to determine machine settings and processing requirements. Maintains records, such as number and types of processing completed, rate of materials usage, and customer charges. Cleans and maintains photo processing equipment, using cleaning and rinsing solutions and ultrasonic equipment. Discards or cleans and repairs defective film or circuit patterns on photographic plates, using cleaning solutions and hand tools. Measures and mixes chemicals according to formula to prepare solutions for processing. Sets and adjusts machine controls, according to specifications, type of operation, and material requirements. Starts and operates machines to prepare circuit boards and expose, develop, etch, fix, wash, dry, and print film or plates. Monitors equipment operation to detect malfunctions. Fills tanks of processing machines with solutions, such as developer, dyes, stop-baths, fixers, bleaches, and washes.

51-9141.00 Semiconductor Processors Entry – Mid – Senior level position assuming education and experience prerequisite

Measures and weighs amounts of crystal growing materials, mixes and grinds materials, and loads materials into container, following procedures. Forms seed crystal for crystal growing or locates crystal axis of ingot, using x-ray equipment, drill, and sanding machine. Aligns photo mask pattern on photoresist layer, exposes pattern to ultraviolet light, and develops pattern, using specialized equipment. Attaches ampoule to diffusion pump to remove air from ampoule, and seals ampoule, using blowtorch. Places semiconductor wafers in processing containers or equipment holders, using vacuum wand or tweezers. Monitors operation, and adjusts controls of processing machines and equipment, to produce compositions with specific electronic properties. Manipulates valves, switches, and buttons, or keys commands into control panels to start semiconductor processing cycles. Etches, laps, polishes, or grinds wafers or ingots, using etching, lapping, polishing, or grinding equipment. Operates saw to cut re-melt into sections of specified size or to cut ingots into wafers. Cleans and dries materials and equipment using solvent, etching or sandblasting equipment, and drying equipment to remove contaminants or photoresist. Studies work order, instructions, formulas, and processing charts to

determine specifications and sequence of operations. Loads and unloads equipment chambers and transports finished product to storage or to area for further processing. Inspects materials, components, or products for surface defects and measures circuitry, using electronic test equipment, precision measuring instruments, and standard procedures. Counts, sorts, and weighs processed items. Stamps or etches identifying information on finished component. Maintains processing, production, and inspection information and reports.

51-9191.00 Cementing and Gluing Machine Operators and Tenders Entry – Mid level position assuming education and experience prerequisite

Adjusts machine to apply specified amount of glue, cement, or adhesive. Reads work orders and communicates with coworkers to determine machine and equipment settings and adjustments, and supply and product specifications. Monitors and fills machine with glue, cement, or adhesive as needed. Transports materials, supplies, and finished products between storage and work areas, using forklift. Maintains production records, such as number, dimensions, and thickness of materials processed. Cleans and maintains gluing and cementing machines, using cleaning solutions, lubricants, brushes, and scrapers. Removes completed materials or products and restocks materials to be joined. Examines and measures completed materials or products to verify conformance to specifications, using measuring devices, such as tape measure, gauge, or calipers. Measures and mixes ingredients according to specifications to prepare glue. Mounts or loads material, such as paper, plastic, wood, or rubber in feeding mechanism of cementing or gluing machine. Positions materials being joined to ensure accurate application of adhesive. Starts machine and turns valves or moves controls to feed, admit, or transfer materials and adhesive. Adjusts machine components according to specifications, such as width, length, and thickness of materials to be joined. Observes gauges, meters, and control panels to regulate temperature, pressure, or speed of feeder or conveyor. Monitors machine operation to detect malfunctions, remove jammed materials, and readjust machine components to conform to specifications.

51-9192.00 Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Observes machine operation, gauges, or thermometer and adjusts controls to maintain operation, according to specifications. Loads and unloads objects to and from machine, conveyor or rack. Draws sample for laboratory analysis or tests solutions for conformance to specifications, such as acidity or specific gravity.

Adjusts, cleans, and lubricates mechanical parts of machine, using hand tools and grease gun. Measures, weighs, or mixes specified quantity of cleaning solutions, using measuring tank, calibrated rod or suction tube. Records gauge readings, materials used, processing time, or test results in production log. Examines and inspects machine for malfunctions, and product for conformance to processing specifications. Drains, cleans, and refills machine or tank at designated intervals with cleaning solution or water. Sets controls to regulate temperature and length of cycle and starts conveyors, pumps, agitators, and machines. Adds specified amounts of chemicals into equipment at required time to maintain level and concentration of solution.

51-9193.00 Cooling and Freezing Equipment Operators and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Starts pumps, agitators, and conveyors, and turns valves to admit or transfer product, refrigerant, or mix. Measures or weighs specified amounts of ingredients or material, and adds into tanks, vats, or equipment. Places or positions containers into equipment and removes container after cooling or freezing process. Records temperatures, amount of materials processed, or test results on report form. Loads and positions wrapping paper, sticks, bags, or cartons into dispensing machines, and removes jammed sticks, using pliers or picks. Cleans, maintains, and repairs machines. Scrapes, dislodges, or breaks excess frost or ice from equipment. Flushes lines with solutions or steam to clean and sterilize equipment. Draws sample of product and tests for specific gravity, acidity, or sugar content, using hydrometer, pH meter, or refractometer. Stirs material with spoon or paddle to mix ingredients or allow even cooling and prevent coagulation. Inserts forming fixture, and starts machine that cuts frozen product into measured portions or specified shapes. Assembles or attaches pipes, fittings, or valves, using hand tools. Adjusts machine or freezer speed and air intake to obtain Monitors pressure gauges, flow meters, thermometers, or product, and adjusts controls to maintain specified conditions. Positions molds on conveyor, and measures and adjusts level of fill, using depth gauge.

51-9195.07 Molding and Casting Workers Entry – Mid – Senior level position assuming education and experience prerequisite

Fills mold with mixed material or applies material to mold to specified thickness. Operates and adjusts controls of heating equipment to melt material or to cure, dry or bake filled molds according to specifications. Measures ingredients and mixes molding or casting material or sealing compound, to prescribed consistency according to formula. Removes excess material and levels and smoothes wet mold mixture. Reads work order or examines part to determine part or section of product to be produced. Installs and secures mold or mold parts together. Selects size and type of mold according to

instructions. Engraves or stamps identifying symbols, letters or numbers on product. Cleans and lubricates mold and mold parts. Cleans, trims, smoothes, and polishes products or parts. Fastens metal inserts, such as drainage tubes, bolts, or electrical connections to product, using hand tools and power tools. Inspects and tests parts or products for defects and to verify accuracy and adherence to standards. Aligns and assembles parts to produce completed product, using gauges and hand tools. Measures and cuts product to specified dimensions, using measuring and cutting instruments. Brushes or sprays surface of mold with parting agent or inserts paper to ensure smoothness and prevent sticking or seepage. Loads or stacks filled molds in oven, drier, or curing box, or on storage racks or carts. Assembles, inserts and adjusts wires, tubes, cores, fittings, rods, or patterns into mold, using hand tools and depth gauge. Opens mold and removes finished products. Molds parts or products using vibrator, hand press, or casting equipment and taps or tilts mold to ensure uniformity.

51-9196.00 Paper Goods Machine Setters, Operators, and Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Adjusts guide assembly and folding mechanism according to specifications, using hand tools. Removes finished cores and stacks or places them on conveyor for transfer to other work areas. Examines completed work to detect defects and verify conformance to work orders. Cuts products to specified dimensions using hand or power cutters. Disassembles machines to repair or replace broken or worn parts using hand or power tools. Starts machine and regulates tension on pressure rolls, synchronizes speed of machine components and temperature of glue or paraffin. Places roll of paper or cardboard on machine feedtrack and threads paper through gluing, coating, and slitting rollers. Fills glue and paraffin reservoirs and loads automatic stapling mechanism. Observes operation of various machines to detect machine malfunctions and makes corrections for product to meet specifications. Installs attachments to machines for gluing, folding, printing, or cutting. Measures, spaces, and sets saw blades, cutters, and perforators, according to product specifications.

51-9197.00 Tire Builders Entry – Mid – Senior level position assuming education and experience prerequisite Depresses pedal to rotate drum and winds specified number of plies around drum to form tire body. Starts rollers that bond tread and plies as drum revolves. Activates bead setters that press prefabricated beads onto plies and position rollers that turn ply edges under and over beads. Depresses pedal to collapse drum and lifts tire onto conveyor. Aligns tread with guide, starts drum to wind tread onto plies, and slices ends. Turns ends of plies under and over beads with steel rod. Positions ply stitcher rollers and drum according to width of stock, using hand tools and gauges. Brushes solvent onto ply to ensure adhesion and repeats process as specified, alternating direction of each ply to strengthen tire. Winds chafers and breaker onto plies. Rubs cement stick on drum edge to provide adhesive surface for plies.

Pulls ply from supply rack and aligns ply with edge of drum. Cuts ply at splice point and presses ends together to form continuous band.

51-9198.01 Production Laborers Entry - Mid level position assuming education and experience prerequisite

Carries or hand trucks supplies to work stations. Loads and unloads items from machines, conveyors, and conveyance. Lifts raw materials, final products, and items packed for shipment, manually, or using hoist. Attaches slings, ropes, cables, or identification tags to objects, such as pipes, hoses, and bundles. Ties product in bundles for further processing or shipment, following prescribed procedure. Weighs raw materials for distribution. Records information, such as number of product tested, meter readings, and date and time product placed in oven. Examines product to verify conformance to company standards. Mixes ingredients, according to formula. Feeds item into processing machine. Inserts parts into partial assembly, during various stages of assembly to complete product.

Counts finished product to determine completion of production order. Washes machines, equipment, vehicles and products, such as prints, rugs, and table linens. Folds parts of product and final product during processing. Separates product according to weight, grade, size, and composition of material used to produce product. Cuts or breaks flashing from materials or products. Places product in equipment or on work surface for further processing, inspecting, or wrapping. Positions spout or chute of storage bin to fill containers, during processing. Threads ends of items, such as thread, cloth, and lace through needles, rollers, and around take-up tube. Breaks up defective products for reprocessing.

51-9198.02 Production Helpers Entry level position assuming education and experience prerequisite

Cleans and lubricates equipment. Dumps materials into machine hopper prior to mixing. Loads and unloads processing equipment or conveyance used to receive raw materials or to ship finished products.

Marks or tags identification on parts. Places or positions equipment or partially assembled product for further processing, manually, or using hoist. Removes product, machine attachments, and waste material from machine. Reads gauges and charts and records data. Signals coworkers to facilitate moving product, during processing. Measures amount of ingredients, length of extruded article, or work to ensure conformance to specifications. Replaces damaged or worm

equipment parts. Tends equipment to facilitate process. Mixes ingredients, according to procedure. Turns valves to regulate flow of liquids or air, to reverse machine, to start pump, and to regulate equipment. Starts machines or equipment to begin process. Observes operation and notifies equipment operator of malfunctions.

53-1011.00 Aircraft Cargo Handling Supervisors Mid – Senior level position assuming education and experience prerequisite

Direct ground crew in the loading, unloading, securing, and staging of aircraft cargo or baggage. Determine the quantity and orientation of cargo and computer aircraft center of gravity. May accompany aircraft as member of flight crew and monitor and handle cargo in flight, and assist and brief passengers on safety and emergency procedures.

53-1021.00 First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand Mid – Senior level position assuming education and experience prerequisite

Supervises and coordinates activities of workers performing assigned tasks. Determines work sequence and equipment needed, according to work order, shipping records, and experience. Trains and instructs workers. Verifies materials loaded or unloaded against work order and schedules times of shipment and mode of transportation. Records information, such as daily receipts, employee time and wage data, description of freight, and inspection results. Resolves customer complaints. Quotes prices to customers. Informs designated employee or department of items loaded, or reports loading deficiencies. Inventories and orders supplies. Inspects equipment for wear and completed work for conformance to standards. Examines freight to determine sequence of loading and equipment to determine compliance with specifications. Observes work procedures to ensure quality of work. Assigns duties and work schedules.

53-1031.00 First-Line Supervisors/Managers of Transportation and Material Moving Machine and Vehicle Operators Senior level position assuming education and experience prerequisite

Reviews orders, production schedules, and shipping/receiving notices to determine work sequence and material shipping dates, type, volume, and destinations. Computes and estimates cash, payroll, transportation, personnel, and storage requirements, using calculator. Recommends and implements measures to improve worker motivation, equipment performance, work methods, and customer services. Inspects or tests materials, stock, vehicles, equipment, and facilities to locate defects, meet maintenance or production specifications, and verify safety standards. Prepares, compiles, and submits reports on work activities, operations, production, and work related accidents. Drives vehicles or operates machines or equipment. Examines, measures, and weighs cargo or materials to determine specific handling requirements. Repairs or schedules repair and preventive maintenance of vehicles and other equipment. Assists workers in performing tasks, such as coupling railroad cars or loading vehicles. Confers with customers, supervisors, contractors, and other personnel to exchange information and resolve problems. Receives telephone or radio reports of emergencies and dispatches personnel and vehicle in response to request. Recommends or implements personnel actions, such as hiring, firing, and performance evaluations. Interprets transportation and tariff regulations, shipping orders, safety regulations, and company policies and procedures for workers. Reguisitions needed personnel, supplies, equipment, parts, or repair services. Resolves worker problems or assists workers in solving problems. Directs workers in transportation or related services, such as pumping, moving, storing, and loading/unloading of materials or people. Plans and establishes transportation routes, work schedules, and assignments and allocates equipment to meet transportation, operations, or production goals. Explains and demonstrates work tasks to new workers or assigns workers to experienced workers for further training. Maintains or verifies time, transportation, financial, inventory and personnel records.

53-2021.00 Air Traffic Controllers Entry – Mid – Senior level position assuming education and experience prerequisite

Communicates with, relays flight plans to, and coordinates movement of air traffic between control centers. Issues landing and take-off authorizations and instructions, and communicates other information to aircraft. Recommends flight path changes to planes traveling in storms or fog or in emergency situations. Transfers control of departing flights to traffic control center and accepts control of arriving flights from air traffic control center. Directs radio searches for aircraft, and alerts control centers emergency facilities of flight difficulties. Completes daily activity repot and keeps record of messages from aircraft. Reviews records and reports for clarity and completeness and maintains records and reports. Inspects, adjusts, and controls radio equipment and airport lights. Analyzes factors, such as weather reports, fuel requirements, and maps to determine flights and air routes. Relays air traffic information, such as altitude, expected time of arrival, and course of aircraft to control centers. Controls air traffic at and within vicinity of airport. Determines timing of and procedure for flight vector changes in sector.



53-2022.00 Airfield Operations Specialists Entry – Mid – Senior level position assuming education and experience prerequisite

Ensure the safe takeoff and landing of commercial and military aircraft. Duties include coordination between air traffic control and maintenance personnel; dispatching; using airfield landing and navigational aids; implementing airfield safety procedures; monitoring and maintaining flight records; and applying knowledge of weather information.

53-3021.00 Bus Drivers, Transit and Intercity Entry – Mid level position assuming education and experience prerequisite

Drives vehicle over specified route or to specified destination according to time schedule to transport passengers, complying with traffic regulations. Parks vehicle at loading area for passengers to board. Regulates heating, lighting, and ventilating systems for passenger comfort.

Records cash receipts and ticket fares. Reports delays or accidents. Inspects vehicle, and checks gas, oil, and water before departure.

Makes minor repairs to vehicle and changes tires. Advises passengers to be seated and orderly while on vehicle. Loads and unloads baggage in baggage compartment. Assists passengers with baggage and collects tickets or cash fares.

53-3022.00 Bus Drivers, School Entry – Mid – Senior level position assuming education and experience prerequisite

Drives bus to transport pupils over specified routes. Reports delays or accidents. Inspects bus and checks gas, oil, and water levels.

Makes minor repairs to bus. Regulates heating, lighting, and ventilating systems for passenger comfort. Complies with local traffic regulations.

Maintains order among pupils during trip.

53-4013.00 Rail Yard Engineers, Dinkey Operators, and Hostlers Entry – Mid – Senior level position assuming education and experience prerequisite

Drives switching locomotive within railroad yard or other establishment to switch railroad cars. Inspects engine at start and end of shift, and refuels and lubricates engine as needed. Reads daily car schedule to determine number of cars needed for next day's run. Inspects track for defects, and assists in installation or repair of rails and ties. Records number of cars available or number of cars sent to repair station and type of service needed. Observes oil, air, and steam pressure gauges, and water level, to ensure operating efficiency. Operates switching diesel engine to switch railroad cars, using remote control. Operates and controls dinkey engine to transport and shunt cars at industrial or mine site. Operates flatcar equipped with derrick, or railcar to transport personnel or equipment. Receives switching orders from yard conductor, and talks with conductor and other workers via radio- telephone, to exchange switching information. Drives locomotives to and from various stations in roundhouse, to have locomotives cleaned, serviced, repaired, or supplied.

53-4021.02 Railroad Yard Workers Entry – Mid – Senior level position assuming education and experience prerequisite

Throws track switches to route cars to different sections of yard. Rides atop cars that have been shunted and turns hand wheel to control speed or stop car at specified position. Connects air hose to car, using wrench. Attaches cable to cars being hoisted by cable or chain in mines, quarries or industrial plants. Opens and closes ventilation doors. Signals engineer to start and stop engine. Receives oral or written instructions indicating which cars are to be switched and track assignments. Raises lever to couple and uncouple cars for makeup and breakup of trains. Watches for and relays traffic signals to start and stop cars during shunting, using arm or lantern. Opens and closes chute gates to load and unload cars.

53-4031.00 Railroad Conductors and Yardmasters Entry – Mid – Senior level position assuming education and experience prerequisite

Directs and instructs workers engaged in yard activities, such as switching track, coupling/uncoupling cars, and routing inbound/outbound traffic. Coordinates crew activities to transport and provide boarding, porter, maid, and meal services to passengers. Signals engineer to begin train run, stop train, or change speed, using radiotelephone, lantern, teletypewriter, or hand movement. Reviews schedules, switching orders, waybills, and shipping records to obtain cargo loading and unloading information. Observes yard traffic to determine tracks available to accommodate inbound and outbound traffic. Instructs workers to set warning signals in front and rear of train during emergency stops to warn oncoming trains. Confers with traffic control personnel, engineer, and other workers engaged in transporting freight to receive and convey instructions. Observes and communicates with passengers and instructs workers to regulate air conditioning, lighting, and heating to ensure passenger safety and comfort. Observes lights on panelboard to monitor location of trains.

Operates controls to electrically activate track switches and traffic signals. Inspects or supervises workers in inspection and maintenance of mechanical equipment to ensure efficient and safe train operation. Collects tickets, fares, or passes from passengers, answers questions concerning train rules, regulations, and schedules, and provides destination information. Inspects freight cars for compliance with sealing procedures, records car and corresponding seal number, and confirms route and destination information. Verifies accuracy of timekeeping instruments with engineer to assure station departure time complies with timetable schedules. Records departure and arrival times, messages, tickets and revenue collected, and passenger accommodations and destinations. Documents and prepares reports of accidents, unscheduled stops, or delays at completion of train run. Charts train movements to estimate arrival times.

53-4041.00 Subway and Streetcar Operators Entry – Mid level position assuming education and experience prerequisite

Drives rail guided public transportation, such as subways, elevated suburban train, or electric powered streetcar to transport passengers. Opens and closes doors of train or streetcar to allow passengers to enter or leave vehicle. Answers questions from passengers concerning fares, schedules, and routings. Collects fares from passengers and issues change and transfers. Records readings of coin receptor at beginning and end of shift to verify amount of money received during shift.

53-5011.01 Able Seamen Entry – Mid – Senior level position assuming education and experience prerequisite Measures depth of water in shallow or unfamiliar waters, using lead line, and telephones or shouts information to bridge. Steers ship and maintains visual communication with other ships. Relays specified signals to ships in vicinity, using visual signaling devices, such as blinker light and semaphore. Stands by wheel when ship is on automatic pilot and verifies accuracy of course by comparing with magnetic compass. Gives directions to crew engaged in cleaning wheelhouse and quarterdeck. Maintains ship's log while in port, and stands gangway watch to prevent unauthorized persons from boarding ship. Stows or removes cargo from ship's hold. Steers ship under direction of ship's commander or navigating officer, or directs helmsman to steer, following designated course. Breaks out, rigs, overhauls, and stows cargo-handling gear, stationary rigging, and running gear. Paints and chips rust on deck or superstructure of ship. Overhauls lifeboats and lifeboat gear, and lowers or raises lifeboats with winch or falls. Stands watch from bow of ship or wing of bridge to look for obstruction in path of ship.

53-5011.02 Ordinary Seamen and Marine Oilers Entry – Mid – Senior level position assuming education and experience prerequisite

Cleans and polishes wood trim, brass, and other metal parts. Paints or varnishes decks, superstructures, lifeboats, or sides of ship. Lubricates machinery, equipment, and engine parts, such as gears, shafts, and bearings. Splices and repairs cables and ropes, using marlinespike, wire cutters, twine, and hand tools. Stands watch from bow of ship or wing of bridge to look for obstructions in path of ship. Loads or unloads materials from vessel. Lowers and mans lifeboat in case of emergency. Records data in ship's log such as weather conditions and distance traveled. Assists engineer in overhauling and adjusting machinery. Turns wheel while observing compass to maintain ship on course. Reads pressure and temperature gauges or displays, and records data in engineering log. Examines machinery for specified pressure and flow of lubricants. Handles lines to moor vessel to wharf, tie up vessel to another vessel, or rig towing lines. Sweeps and washes deck, using broom, mops, brushes, and hose. Chips and cleans rust spots on deck, superstructure, and sides of ship, using wire brush and hand or air chipping machine.

53-5021.01 Ship and Boat Captains Senior level position assuming education and experience prerequisite Commands water vessels, such as passenger and freight vessels, fishing vessels, yachts, tugboats, barges, deep submergence vehicles, and ferryboats. Directs and coordinates activities of crew or workers, such as loading and unloading, operating signal devices, fishing, and repairing defective equipment. Steers and operates vessel or orders helmsperson to steer vessel, using radio, depth finder, radar, lights, buoys, and lighthouses. Computes position, sets course, and determines speed, using charts, area plotting sheets, compass, sextant, and knowledge of local conditions. Inspects vessel to ensure safety of crew and passengers, efficient and safe operation of vessel and equipment, and conformance to regulations. Signals crew or deckhands to rig towlines, open or close gates and ramps, and pull guard chains across entry. Monitors sonar and navigational aids and reads gauges to verify sufficient levels of hydraulic fluid, air pressure, and oxygen. Calculates sighting of land, using electronic sounding devices and following contour lines on chart. Maintains records of daily activities, movements, and ports-of-call, and prepares progress and personnel reports. Interviews, hires, and instructs crew, and assigns watches and living quarters. Tows and maneuvers barge or signals tugboat to tow barge to destination. Signals passing vessels, using whistle, flashing lights, flags, and radio. Purchases supplies and equipment, contacts buyers to sell fish, and resolves questions or problems with customs officials. Collects fares from customers or signals ferryboat helper to collect fares.



53-5021.02 Mates – Ship, Boat, and Barge Entry – Mid level position assuming education and experience prerequisite

Supervises crew in repair or replacement of defective vessel gear and equipment. Supervises crew in cleaning and maintaining decks, superstructure, and bridge. Observes loading and unloading of cargo and equipment to ensure that handling and storage are according to specifications. Supervises activities of crew engaged in ship's activity, such as barging, towing, dredging, or fishing. Stands watch on vessel during specified periods while vessel is underway. Inspects equipment, such as cargo handling gear, lifesaving equipment, fishing, towing, or dredging gear, and visual signaling equipment, for defects. Assumes command of vessel in event shipmaster becomes incapacitated. Observes water from masthead and advises navigational direction. Determines geographical position of ship, using loran and azimuths of celestial bodies. Steers vessel, utilizing navigation devices, such as compass and sexton, and navigational aids, such as lighthouses and buoys.

53-5021.03 Pilots, Ship Mid – Senior level position assuming education and experience prerequisiteDirects course and speed of ship on basis of specialized knowledge of local winds, weather, tides, and current.
Orders worker at helm to steer ship. Navigates ship to avoid reefs, outlying shoals, and other hazards, utilizing aids to navigation, such as lighthouses and buoys. Signals tugboat captain to berth and unberth ship.

53-5022.00 Motorboat Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Operates engine throttle and steering mechanism to guide boat on desired course. Secures boat to dock with mooring lines and casts off lines to depart. Gives directions for loading and seating in boat. Cleans and repairs boat hull and superstructure. Performs routine maintenance on boat engine and equipment. Maintains desired course, using compass or electronic navigational aides.

53-5031.00 Ship Engineers Entry – Mid – Senior level position assuming education and experience prerequisite Orders crew to repair or replace defective parts of engines and other equipment. Inspects engines and other equipment. Stands engine room watch, observing that lubricants and water levels are maintained in machinery and load on generators is within limits. Starts engines to propel ship and regulates engines and power transmission to control speed of ship. Maintains engineering log and bellbook (orders of changes in speed and direction of ship). Repairs machinery, using hand tools and power tools.

53-6011.00 Bridge and Lock Tenders Entry – Mid – Senior level position assuming education and experience prerequisite

Controls machinery to open and close canal locks and dams, railroad or highway drawbridges, or horizontally or vertically adjustable bridges. Moves levers to activate traffic signals, navigation lights, and alarms. Operates gas, steam, and hydroelectric generating units to control mechanisms to open locks or bridge. Observes approaching vessels to determine size and speed, and listens for whistle signal indicating desire to pass. Signals vessels to proceed. Observes positions of vessels to ensure optimum utilization of lock space or bridge opening space. Attaches rope or cable lines to bitt on lock deck or wharf to secure vessel. Relays messages to vessels in waterway. Inspects bridge and bridge or canal auxiliary equipment. Logs data, such as water levels and weather conditions. Prepares accident reports. Cleans, oils, greases, and makes minor repairs and adjustments to equipment. Records names, type and destinations of vessels passing through bridge opening or locks, and number of trains or vehicles crossing bridge. Writes and submits maintenance work requisitions. Turns valves to increase or decrease water level in lock.

53-6021.00 Parking Lot Attendants Entry level position assuming education and experience prerequisite
Parks automobiles in parking lot, storage garage, or new car lot. Places numbered tag on windshield of automobile to be
parked, and hands customer similar tag to be used in locating parked automobile. Patrols area to prevent thefts of parked
automobiles or items in automobiles. Takes numbered tag from customer, locates car, and delivers it to customer, or
directs customer to parked car. Collects parking fee from customer, based on charges for time automobile is parked.
Signals or directs vehicle drivers with hands or flashlight to parking area. Lifts, positions, and removes barricades to open
or close parking areas. Services vehicles with gas, oil, and water. Inspects vehicles to detect damage. Services cars in
storage to protect tires, battery, and finish against deterioration.
Keeps new car lot in order and maximizes use of space.

53-6031.00 Service Station Attendants Entry – Mid level position assuming education and experience prerequisite

Fills or allows customer to fill fuel tank of vehicle with gasoline or diesel fuel to specified level. Installs accessories, such as air or oil filter, battery, windshield wiper blades, fan belt, or lights. Collects cash from customer and makes change, or charges purchases to customer's credit card. Greases and lubricates vehicles or specified units, such as springs, universal joints, and steering knuckles, using grease gun or spray lubricant. Changes, tests, and repairs or replaces tires. Checks air pressure in tires, levels of fuel, motor oil, and other fluids, and adds air, oil, water, and required fluids. Adjusts brakes, replaces spark plugs, and makes other minor repairs. Cleans windshield or washes and waxes vehicle. Sells accessories and services, such as batteries, tires, lubrication services, and safety inspections. Assists in arranging merchandise displays and taking inventories. Prepares daily report of fuel, oil, and accessories sold in service station. Maintains customer records and follows up periodically with telephone, mail, or personal reminders of service due. Cleans parking area, offices, and equipment, and removes trash.

53-6051.03 Marine Cargo Inspectors Mid – Senior level position assuming education and experience prerequisite Inspects loaded cargo in holds and cargo handling devices to determine compliance with regulations and need for maintenance. Reads vessel documents to ascertain cargo capabilities according to design and cargo regulations. Calculates gross and net tonnage, hold capacities, volume of stored fuel and water, cargo weight, and ship stability factors, using mathematical formulas. Determines type of license and safety equipment required, and computes applicable tolls and wharfage fees. Examines blueprints of ship and takes physical measurements to determine capacity and depth of vessel in water, using measuring instruments. Writes certificates of admeasurement, listing details, such as design, length, depth, and breadth of vessel, and method of propulsion. Issues certificate of compliance when violations are not detected or recommends remedial procedures to correct deficiencies. Times rolls of ship, using stopwatch. Analyzes data, formulates recommendations, and writes reports of findings. Advises crew in techniques of stowing dangerous and heavy cargo, according to knowledge of hazardous cargo.

53-6051.04 Railroad Inspectors Mid – Senior level position assuming education and experience prerequisite Inspects signals and track wiring to determine continuity of electrical connections. Examines roadbed, switches, fishplates, rails, and ties to detect damage or wear. Examines locomotives and cars to detect damage or structural defects. Inspects and test completed work. Operates switches to determine working conditions. Tests and synchronizes rail flaw detection machine, using circuit tester and hand tools, and reloads machine with paper and ink. Starts machine and signals worker to operate rail detector car. Prepares reports on repairs made and equipment, railcars, or roadbed needing repairs. Tags rail cars needing immediate repair. Fills paint container on rail detector car used to mark section of defective rail with paint. Directs crews to repair or replace defective equipment or to re-ballast roadbed. Places lanterns or flags in front and rear of train to signal that inspection is being performed. Seals leaks found during inspection that can be sealed with caulking compound. Replaces defective brake rod pins and tightens safety appliances. Notifies train dispatcher of railcar to be moved to shop for repair. Makes minor repairs. Packs brake bearings with grease.

53-6051.05 Motor Vehicle Inspectors Mid – Senior level position assuming education and experience prerequisite Inspects truck accessories, airlines and electric circuits, and reports needed repairs. Examines vehicles for damage, and drives vehicle to detect malfunctions. Tests vehicle components for wear, damage, or improper adjustment, using mechanical or electrical devices. Applies inspection sticker to vehicles that pass inspection, and rejection sticker to vehicles that fail. Prepares report on each vehicle for follow-up action by owner or police. Prepares and keeps record of vehicles delivered. Positions trailer and drives car onto truck trailer. Notifies authorities of owners having illegal equipment installed on vehicle. Services vehicles with fuel and water.

53-6051.06 Freight Inspectors Mid – Senior level position assuming education and experience prerequisite Inspects shipment to ascertain that freight is securely braced and blocked. Observes loading of freight to ensure that crews comply with procedures. Monitors temperature and humidity of freight storage area. Records freight condition and handling, and notifies crews to reload freight or inser5t additional bracing or packing. Measures height and width of loads that will pass over bridges or through tunnels. Notifies workers of special treatment required for shipments. Prepares and submits report after trip. Posts warning signs on vehicles containing explosives or inflammatory or radioactive materials.

53-7011.00 Conveyor Operators and Tenders Entry – Mid level position assuming education and experience prerequisite

Manipulates controls, levers, and valves to start pumps, auxiliary equipment, or conveyors and adjust equipment positions, speed, timing, and material flow. Distributes materials, supplies, and equipment to work stations, using lifts and trucks. Records production data, such as weight, type, quantity, and storage locations of materials, and documents equipment downtime. Affixes identifying information to materials or products, using hand tools. Collects samples of materials or products for laboratory analysis and ensure conformance to specifications.

Weighs or measures materials and products, using scales or other measuring instruments, to verify specified tonnage and

prevent overloads. Cleans, sterilizes, and maintains equipment, machinery, and work stations, using hand tools, shovels, brooms, chemicals, hoses, and lubricants. Repairs or replaces equipment components or parts such as blades, rolls, and pumps. Reads production and delivery schedules, and confers with supervisor to determine processing procedures. Loads, unloads, or adjusts materials or products on conveyors by hand or using lifts and hoists. Inspects equipment and machinery to prevent loss of materials or products during transit. Moves, assembles, and connects hoses or nozzles to material hoppers, storage tanks, conveyor sections or chutes, and pumps. Signals workers in other departments to move materials, products, or machinery, or notifies workstations of shipments en route and estimated delivery times. Stops equipment or machinery and clears jams, using poles, bars, and hand tools, or removes damaged materials from conveyors. Observes conveyor operations and monitors lights, dials, and gauges to maintain specified operating levels and detect equipment malfunctions.

53-7031.00 Dredge Operators Entry – Mid – Senior level position assuming education and experience prerequisite Starts and stops engines to operate equipment. Lowers anchor pole to verify depth of excavation, using winch, or scans depth gauge to determine depth of excavation. Directs workers placing shore anchors and cables, laying additional pipes from dredge to shore, and pumping water from pontoons. Starts power winch that draws in or lets out cable to change position of dredge, or pulls in and lets out cable manually. Moves levers to position dredge for excavation, engage hydraulic pump, raise and lower suction boom, and control rotation of cutter head.

53-7032.01 Excavating and Loading Machine Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Operates power machinery, such as powered-shovel, stripping-shovel, scraper loader (mucking machine), or back-hoe (trench excavating machine) to excavate and load material. Measures and verifies levels of rock or gravel, base, and other excavated material. Lubricates and repairs machinery and replaces parts, such as gears, bearings, and bucket teeth. Directs ground workers engaged in activities, such as moving stakes or markers. Receives written or oral instructions to move or excavate material. Observes hand signals, grade stakes, and other markings when operating machines.

53-7033.00 Loading Machine Operators, Underground Mining Entry – Mid – Senior level position assuming education and experience prerequisite

Operates levers to move conveyor boom or shovel to move mine contents into car or onto conveyor. Drives machine into pile of material blasted from working face. Pries off loose material from roof and moves it into path of machine with crowbar. Starts conveyor boom and gathering-arm motors. Moves trailing electrical cable clear of obstructions, using rubber safety gloves. Advances machine to gather material and convey it into car at rear. Stops gathering arms when car is full.

53-7041.00 Hoist and Winch Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Operates equipment, such as hoist, winch, or hydraulic boom, to lift and pull loads and materials. Repairs, maintains, and adjusts equipment, using hand tools. Moves or repositions hoists, winches, loads, and materials, manually or using equipment and machines such as trucks, cars, and hand trucks. Tends auxiliary equipment, such as jacks, slings, cables, or stop blocks, to facilitate moving items or materials for further processing. Attaches, fastens, and disconnects cables or lines to loads and materials, using hand tools. Climbs ladder to facilitate positioning and setup of vehicle-mounted derrick. Selects loads or materials according to weight and size specifications. Observes equipment gauges and indicators and hand signals to verify depth of materials, instruments, or position of load. Starts engine of hoist or winch to move loads or materials, using controls such as levers, pedals, and buttons.

53-7051.00 Industrial Truck and Tractor Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Moves controls to drive gasoline- or electric-powered trucks, cars, or tractors and transport materials between loading, processing, and storage areas. Hooks tow trucks to trailer hitches and fastens attachments, such as graders, plows, rollers, and winch cables, to tractor, using hitchpins. Turns valves and opens chutes to dump, spray, or release materials from dump cars or storage bins into hoppers. Manually load or unload materials onto or off pallets, skids, platforms, cars, or lifting devices. Weighs materials or products and records weight and other production data on tags or labels. Signals workers to discharge, dump, or level materials. Operates or tends automatic stacking, loading, packaging, or cutting machines. Performs routine maintenance on vehicles and auxiliary equipment, such as cleaning, lubricating, recharging batteries, fueling, or replacing liquefied-gas tank. Moves levers and controls to operate lifting devices, such as forklifts, lift beams and swivel-hooks, hoists, and elevating platforms, to load, unload, transport, and stack material. Positions lifting device under, over, or around loaded pallets, skids, and boxes, and secures material or products for

transport to designated areas.

53-7061.00 Cleaners of Vehicles and Equipment Entry – Mid – Senior level position assuming education and experience prerequisite

Scrubs, scrapes, or sprays machine parts, equipment, or vehicles, using scrapers, brushes, cleaners, disinfectants, insecticides, acid, and abrasives. Pre-soaks or rinses machine parts, equipment, or vehicles by immersing objects in cleaning solutions or water, manually or using hoists. Presses buttons to activate cleaning equipment or machines. Turns valves or handles on equipment to regulate pressure and flow of water, air, steam, or abrasives from sprayer nozzles. Sweeps, shovels, or vacuums loose debris and salvageable scrap into containers and removes from work area. Monitors operation of cleaning machines and stops machine or notifies supervisor when malfunctions occur. Mixes cleaning solutions and abrasive compositions and other compounds according to formula. Records production and operational data on specified forms. Collects and tests samples of cleaning solutions and vapors. Transports materials, equipment, or supplies to and from work area, using carts or hoists. Lubricates machinery, vehicles, and equipment, and performs minor repairs and adjustments, using hand tools. Applies paints, dyes, polishes, reconditioners, and masking materials to vehicles to preserve, protect, or restore color and condition. Examines and inspects parts, equipment, and vehicles for cleanliness, damage, and compliance with standards or regulations. Places objects on drying racks or dyes surfaces, using cloth, squeegees, or air compressors. Disassembles and reassembles machines or equipment, or removes and reattaches vehicle parts and trim, using hand tools. Maintains inventories of supplies. Connects hoses and lines to pumps and other equipment.

Turns valves or disconnects hoses to eliminate water, cleaning solutions, or vapors from machinery or tanks.

53-7062.01 Stevedores, Except Equipment Operators Entry – Mid level position assuming education and experience prerequisite

Carries or moves cargo by hand truck to wharf and stacks cargo on pallets to facilitate transfer to and from ship. Guides load being lifted to prevent swinging. Stacks cargo in transit shed or in hold of ship as directed. Attaches and moves slings used to lift cargo. Shores cargo in ship's hold to prevent shifting during voyage.

53-7062.02 Grips and Set-Up Workers, Motion Picture Sets, Studios, and Stages Entry – Mid – Senior level position assuming education and experience prerequisite

Arranges equipment preparatory to sessions and performances following work order specifications and handles props during performances. Produces special lighting and sound effects during performances, using various machines and devices. Sews and repairs items using materials and hand tools such as canvas and sewing machines. Orders equipment and maintains equipment storage areas. Connects electrical equipment to power source and tests equipment before performance. Reads work orders and follows oral instructions to determine specified material and equipment to be moved and its relocation. Erects canvas covers to protect equipment from weather. Adjusts controls to guide, position and move equipment, such as cranes, booms, and cameras.

Adjusts controls to raise and lower scenery and stage curtain during performance, following cues. Rigs and dismantles stage or set equipment such as, frames, scaffolding, platforms, or backdrops, using carpenter's hand tools.

53-7062.03 Freight, Stock, and Material Movers, Hand Entry – Mid level position assuming education and experience prerequisite

Loads and unloads materials to and from designated storage areas, such as racks and shelves, or vehicles, such as trucks. Directs spouts and positions receptacles, such as bins, carts, and containers, to receive loads. Stacks or piles materials, such as lumber, boards, or pallets. Secures lifting attachments to materials and conveys load to destination, using crane or hoist. Transports receptacles to and from designated areas, by hand or using dollies, hand trucks, and wheelbarrows. Shovels materials, such as gravel, ice or spilled concrete, into containers, bins or onto conveyors. Reads work orders or receives and listens to oral instructions to determine work assignment. Bundles and bands material, such as fodder and tobacco leaves, using banding machines. Assembles product containers and crates, using hand tools and precut lumber. Adjusts or replaces equipment parts, such as rollers, belts, plugs and caps, using hand tools. Records number of units handled and moved, using daily production sheet or work tickets. Attaches identifying tags or marks information on containers. Cleans work area, using brooms, rags, and cleaning compounds. Installs protective devices, such as bracing, padding or strapping, to prevent shifting or damage to items being transported. Sorts and stores items according to specifications.

53-7063.00 Machine Feeders and Off bearers Entry – Mid level position assuming education and experience prerequisite

Feeds materials into machines and equipment to process and manufacture products. Shovels or scoops materials into containers, machines, or equipment for processing, storage or transport. Transfers materials and products between

storage areas and machinery and equipment. Fastens, packages, or stacks materials and products, using hand tools and fastening equipment. Weighs or measures materials or products to ensure conformance to specifications. Records production and operational information and data on specified forms. Identifies and marks materials, products, and samples, following instructions. Cleans and maintains machinery, equipment, and work areas to ensure proper functioning and safe working conditions. Moves controls to start, stop, or adjust machinery and equipment. Modifies materials and products during manufacturing process to meet requirements. Inspects materials and products for defects and to ensure conformance to specifications. Sorts and selects materials and products and rejects defective pieces, following specified instructions and standards. Adds chemicals, solutions, or ingredients to machines or equipment to ensure manufacturing process meets specifications. Off bears materials and products from machines and equipment, using hand tools and moving devices. Removes materials and products from machines and equipment, using hand tools and moving devices.

53-7071.01 Gas Pumping Station Operators Entry – Mid level position assuming education and experience prerequisite

Opens valve to allow gas to flow into and out of compressors. Cleans, lubricates, and adjusts compressors, using hand tools. Observes pressure gauges to determine consumption rate variations and turns knobs or switches to regulate pressures. Reads gas meters and records amount of gas received and dispensed from holders.

53-7071.02 Gas Compressor Operators Entry – Mid level position assuming education and experience prerequisite

Moves controls and turns valves to start compressor engines, pumps, and auxiliary equipment. Operates equipment to control transmission of natural gas through pipelines. Observes operation of equipment to detect malfunctions. Conducts chemical tests to evaluate quality of gas. Performs minor repairs on equipment, using hand tools. Records instrument readings and operational changes in operating log. Operates or tends equipment to purify gases. Monitors meters, gauges, and recording instrument charts to ensure specified temperature, pressure, and flow of gas through system.

53-7072.00 Pump Operators, Except Wellhead Pumpers Entry – Mid – Senior level position assuming education and experience prerequisite

Turns valves and starts pump to commence or regulate flow of substances, such as gases, liquids, slurries, or powdered materials. Connects hoses and pipes to pumps and vessels, using hand tools. Adds chemicals and solutions to tank to ensure specifications are met. Communicates with workers to start flow of materials or substance. Collects and delivers sample solutions for laboratory analysis. Transfers materials to and from vessels, using moving equipment. Tests materials and solutions, using testing equipment. Records information such as type and quantity of material, and operating data. Inspects and reports vessel and pump abnormalities such as leaks, pressure, and temperature fluctuations. Cleans and maintains pumps and vessels, using hand tools and equipment. Tends auxiliary equipment such as water treatment and refrigeration units and heat exchanges. Observes gauges and flow meter to ascertain specifications are met, such as tank level, chemical amounts, and pressure. Tends vessels that store substances such as gases, liquids, slurries, or powdered materials.

53-7073.00 Wellhead Pumpers Entry – Mid level position assuming education and experience prerequisiteStarts compressor engines and diverts oil from storage tanks into compressor units and auxiliary equipment to recover natural gas from oil. Opens valves to return compressed gas to bottoms of specified wells to re-pressurize them and force oil to surface. Reads tank gauges and pump meters, and keeps production records. Starts pumps and opens valves to pump oil from wells into storage tanks. Operates engines and pumps from central power plant to shut off wells and to switch flow of oil into storage tanks.

53-7081.00 Refuse and Recyclable Material Collectors Entry – Mid – Senior level position assuming education and experience prerequisite

Drives truck. Starts hoisting device that raises refuse bin attached to rear of truck and dumps contents into opening in enclosed truck body.

53-7111.00 Shuttle Car Operators Entry – Mid – Senior level position assuming education and experience prerequisite

Positions shuttle car under discharge conveyor of loading machine and observes that materials are loaded according to specifications. Maneuvers shuttle car to keep its nose under discharge conveyor. Moves mine cars into position to be loaded from shuttle car.

Drives loaded shuttle car to ramp and moves controls to discharge load into mine car or onto conveyor. Controls conveyor, which runs entire length of shuttle car to apportion load as loading progresses.



53-7121.00 Tank Car, Truck, and Ship Loaders Entry – Mid – Senior level position assuming education and experience prerequisite

Starts pumps and adjusts valves to regulate flow of product to vessel, utilizing knowledge of loading procedures. Monitors product movement to and from storage tanks and coordinates with other workers to ensure constant product flow. Unloads cars by connecting hose to outlet plugs and pumping compressed air into car forcing liquid into storage tank. Verifies tank car, barge, or truckload number to ensure car placement accuracy based on written or verbal instructions. Weighs and inspects vessels to prevent contamination and to ensure cleanliness and compliance to loading procedures. Tests vessels for leaks, damage, and defects, and repairs or replaces defective parts. Reads meter to verify content, temperature, and volume of liquid load. Copies and tacks load specifications onto tank, and seals outlet valves on tank car, barge, or truck. Records operating data, such as products and quantities pumped, gauge readings, and operating time, manually or using computer. Retrieves liquid sample and performs tests on contents or delivers sample to laboratory for testing. Operates blenders and heaters to mix, blend and heat products.