



WEST VIRGINIA

WorkForce
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WEST VIRGINIA

**OCCUPATION CODE ALMANAC:
A COMPREHENSIVE GUIDE FOR
EMPLOYERS**

*WorkForce West Virginia
Research, Information and Analysis*

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GUIDE TO CODING

Occupational Codes

Use the six-digit code that *best* describes the activities of the employee.

Select a code based on the work *actually performed*--not the code for jobs for which employees might be trained. For example, an employee trained as a Computer Scientist, but working as a Manager, should be coded as a Manager.

Read the detailed descriptions of codes you select to insure you have matched to the employee's duties. Occupations that are similar are often distinguished by key words like *routine*, *non-routine*, *mechanical*, or *hand*.

Supervisors of professional and technical workers are classified with the workers they supervise. Similarly, supervisors, team leaders, and lead workers of sales, service, and production workers who spend at least 20 percent of their time *performing work similar to the workers they supervise* are classified with those workers. Supervisors and first-line managers of sales, service, and production workers who spend more than 80 percent of their time in supervisory activities are coded separately from the people they supervise. If no separate category is indicated, code the supervisor with the workers they oversee.

An occupation that combines two different activities is reported with the code for the activity that requires the highest skill or educational level. If these levels are the same, report the code for the occupation in which the employee spends the most time.

Employees who changed jobs during a quarter should be reported in their last occupation. Do not list the employee more than once on the same Quarterly Contribution Report.

Code apprentices, student teachers, and trainees in the occupation for which they are training.

Identify aides, helpers, and laborers separately if they are not training for the occupation in which they are helping, or if their work is truly different.

If the duties of an occupation are not described in the detailed occupations, code the occupation in the appropriate "*All other*" residual category.

Online West Virginia Quarterly Contribution Reporting

WorkForce West Virginia has a website for employers to report their employee wage information.

Employers can submit Quarterly Contribution Reports and have them received by the state in a 72-hour period. This makes it easier for employers to comply with West Virginia State regulations, thereby avoiding penalty and interest payments due to late reporting.

To file your West Virginia Quarterly Contribution Report online visit <https://apps.wv.gov/Workforce/EUCC/>. You must have a valid West Virginia Employer Account Number and a valid Federal Employer Identification Number (FEIN) in order to file.

FREQUENTLY ASKED QUESTIONS

How do I find occupation codes?

- **Search online.** Occupation coding help is available at: <https://www.onetcodeconnector.org/>.
- **Search for a job title.** In the “Alphabetical Index of Occupation Titles” beginning on page 6, locate a job title that you believe best describes the *highest skilled job* an employee performs. To the left of the job title is the six-digit occupational code. Using this number, refer to the “Detailed Descriptions of Occupations” beginning on page 20 and find the description of the job duties associated with this code. If the description matches your employee’s duties, enter the code on your form.
- **Search for a job code.** In the “Numeric List of Occupational Codes” beginning on page 21 you can locate an occupational code and read the description to see if the corresponding occupational title matches the *highest skilled job* an employee performs.

How do I use the Occupational Manual?

Find the appropriate occupational codes for each of your employees following the “Guide to Coding” on page 2. Record the codes on your contribution report form.

Can I enter the information online?

Yes. WorkForce West Virginia has a website for employers to provide wage information to the State of West Virginia. For more information, go to <https://workforcewv.org/employers/>. Scroll down to Unemployment Resources and click on Quarterly Reporting.

Why can't I use my NAICS code?

The North American Industry Classification System (NAICS) identifies the primary activity of your *business*. The occupational code identifies the primary duties of the *workers* employed in your business. A single occupation, for example an accountant, is found in many different industries.

I use a payroll tax service. Will they report my firm's occupational codes and county names?

Some payroll tax services will report this information. You will need to contact your tax service directly to arrange for them to report your occupational data and county names when they file your quarterly unemployment contribution report.

Why can't I find my employee's job title in your alphabetical list?

Workers within an occupation may have many different job titles. WorkForce West Virginia follows the *Standard Occupational Classification 2018* system. We have expanded the list of basic occupations by including many popular job titles. If you cannot find the job title that your firm uses, try looking for an associated or alternative title for that occupation. For example, if you have an employee who works as a Building Custodian, you won't find that job title in the alphabetical listing; however, Custodian, Janitor, and Cleaner are all listed under SOC code 37-2011.

I found the job title for one of my workers, but the duties described are different from the duties the worker actually performs. Why is that?

The job titles that you use to identify occupations within your business may not be the same as the ones used in this manual. If your job title does not match the description of duties, scan nearby codes to find a better match or try an alternative job title.

Why are there no supervisors listed for most professional occupations?

Supervisors of professional and technical workers are classified with the workers they supervise. Similarly, supervisors, team leaders, and lead workers of sales, service and production workers who spend at least 20 percent of their time performing work similar to the workers they supervise are classified with those workers. Those who spend more than 80 percent of their time in supervisory activities are coded separately from the people they supervise. If no separate category is indicated, code the supervisor with the workers they oversee. *The key here is the amount of time spent in direct supervision versus the time spent performing tasks similar to the supervised workers.*

Where do I code a Consultant?

Consultants are coded with the occupation they perform. For example, a Computer Systems Consultant is reported as a Computer Systems Analyst (15-1121). General business consultants are reported as Management Analysts (13-1111).

Do I have to use a code or can I just write my employee's title on the form?

A descriptive occupational title is acceptable. We encourage you to use codes because you know the duties of your employees and can therefore assign the most accurate codes. Titles that you report without codes are assigned codes in our office. Be as descriptive and complete as possible on occupational titles. For example, Clerk is not descriptive enough because there are 26 different occupation codes for clerks. You need to list the type of clerk, such as Accounting Clerk or Payroll and Timekeeping Clerk.

What if my employee does two different jobs?

An occupation that combines two different activities is reported with the code for the occupation that requires the highest level of skill or education. If the skill levels are the same, report the occupation in which the employee spends the most time. For employees who change jobs during the quarter because of transfers, promotions, demotions, or reclassifications, report only their *last* occupation.

Where will I find a carpenter's apprentice?

All apprentice workers, including student teachers, are classified with the appropriate skilled trade occupation. In this case, the apprentice is coded the same as a carpenter (47-2031).

How do I code an employee who assists another employee?

Identify aides, helpers, and laborers separately if they are not training for the occupation in which they are helping, or if their work is truly different. Code apprentices, student teachers, and trainees in the occupation for which they are training. If the assistant has job duties different from the occupation they support, such as Dental Assistant, code the employee separately. If the assistant's duties are similar to the occupation they support, such as Assistant Manager, classify the assistant in the same category as the manager.

My employee didn't actually work during the quarter. We paid an after-season bonus. What code do I use?

If the employee did not work during the reported quarter, but wages were paid *for any reason*, enter "777777" as the occupation code and leave the county name blank.

My employee only works part-time. Does that change the occupation code I use?

No. Part-time employees are reported in the occupation that they perform, regardless of the number of hours they work.

Why do I have to supply a county name? You know the address of my company.

Often employees work in locations other than the home office of the employer. The county name should indicate the location where the employee actually performed work during the quarter.

I'm in Pennsylvania. My company has employees working in West Virginia, but I don't know what they do or where they are.

This is best handled by consulting with your firm's manager or supervisor in West Virginia.

My employee travels statewide. What is the correct county name?

Choose the county in which the employee spends the most time.

I have a question about my tax rate. Can you help me with that?

Research, Information and Analysis works with occupational and geographic coding. Questions about your tax rate should be addressed to uctaxunit@wv.gov.

What if I still have questions or can't find the proper code for an employee?

You may contact Research, Information and Analysis at (304)558-2660 or send an email to WorkforceLMI@wv.gov.

Alphabetical List of Occupational Codes

SOC Code	Total	Page #
13-2011	Accountants and Auditors	27
27-2011	Actors	51
15-2011	Actuaries	31
29-1291	Acupuncturists	56
29-1141	Acute Care Nurses	54
25-2059	Adapted Physical Education Specialists	48
51-9191	Adhesive Bonding Machine Operators and Tenders	89
23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	44
11-3012	Administrative Services Managers	21
25-3011	Adult Basic Education, Adult Secondary Education, and English as a Second Language Instructors	48
29-1141	Advanced Practice Psychiatric Nurses	55
11-2011	Advertising and Promotions Managers	21
41-3011	Advertising Sales Agents	68
17-3021	Aerospace Engineering and Operations Technologists and Technicians	35
17-2011	Aerospace Engineers	32
13-1011	Agents and Business Managers of Artists, Performers, and Athletes	24
17-2021	Agricultural Engineers	32
45-2091	Agricultural Equipment Operators	74
45-2011	Agricultural Inspectors	74
25-1041	Agricultural Sciences Teachers, Postsecondary	45
19-4012	Agricultural Technicians	41
45-2099	Agricultural Workers, All Other	75
53-2021	Air Traffic Controllers	90
53-1041	Aircraft Cargo Handling Supervisors	90
49-3011	Aircraft Mechanics and Service Technicians	81
53-6032	Aircraft Service Attendants	92
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	83
53-2022	Airfield Operations Specialists	90
53-2011	Airline Pilots, Copilots, and Flight Engineers	90
29-1229	Allergists and Immunologists	56
53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	90

SOC Code	Total	Page #
39-3091	Amusement and Recreation Attendants	66
29-1071	Anesthesiologist Assistants	53
29-1211	Anesthesiologists	55
45-2021	Animal Breeders	74
39-2021	Animal Caretakers	66
33-9011	Animal Control Workers	63
19-1011	Animal Scientists	37
39-2011	Animal Trainers	65
19-3091	Anthropologists and Archeologists	40
25-1061	Anthropology and Archeology Teachers, Postsecondary	46
13-2023	Appraisers and Assessors of Real Estate	27
13-2022	Appraisers of Personal and Business Property	27
23-1022	Arbitrators, Mediators, and Conciliators	44
17-1011	Architects, Except Landscape and Naval	32
17-3011	Architectural and Civil Drafters	35
11-9041	Architectural and Engineering Managers	23
25-1031	Architecture Teachers, Postsecondary	45
25-4011	Archivists	49
25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary	46
27-1011	Art Directors	50
29-1129	Art Therapists	54
25-1121	Art, Drama, and Music Teachers, Postsecondary	47
27-1019	Artists and Related Workers, All Other	50
51-2099	Assemblers and Fabricators, All Other	84
19-2011	Astronomers	38
27-2021	Athletes and Sports Competitors	51
29-9091	Athletic Trainers	59
19-2021	Atmospheric and Space Scientists	38
25-1051	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	46
27-4011	Audio and Video Technicians	52
29-1181	Audiologists	55
49-2097	Audiovisual Equipment Installers and Repairers	81
53-6031	Automotive and Watercraft Service Attendants	92

SOC Code	Total	Page #
49-3021	Automotive Body and Related Repairers	81
17-3027	Automotive Engineering Technicians	36
17-2141	Automotive Engineers	34
49-3022	Automotive Glass Installers and Repairers	81
49-3023	Automotive Service Technicians and Mechanics	81
53-6051	Aviation Inspectors	92
49-2091	Avionics Technicians	80
39-6011	Baggage Porters and Bellhops	67
33-3011	Bailiffs	62
51-3011	Bakers	84
39-5011	Barbers	67
35-3023	Baristas	64
35-3011	Bartenders	64
49-3091	Bicycle Repairers	81
43-3011	Bill and Account Collectors	70
43-3021	Billing and Posting Clerks	70
19-1021	Biochemists and Biophysicists	37
17-2031	Bioengineers and Biomedical Engineers	33
51-8099	Biofuels Processing Technicians	87
11-3051	Biofuels Production Managers	22
11-9041	Biofuels/Biodiesel Technology and Product Development Managers	23
19-1029	Bioinformatics Scientists	37
15-2099	Bioinformatics Technicians	32
25-1042	Biological Science Teachers, Postsecondary	45
19-1029	Biological Scientists, All Other	37
19-4021	Biological Technicians	41
19-1029	Biologists	37
51-8013	Biomass Plant Technicians	87
11-3051	Biomass Power Plant Managers	22
15-2041	Biostatisticians	31
15-1299	Blockchain Engineers	31
47-2011	Boilermakers	76
43-3031	Bookkeeping, Accounting, and Auditing Clerks	70
47-2021	Brickmasons and Blockmasons	76
53-6011	Bridge and Lock Tenders	92
27-3011	Broadcast Announcers and Radio Disc Jockeys	51
27-4012	Broadcast Technicians	52
43-4011	Brokerage Clerks	70

SOC Code	Total	Page #
11-9199	Brownfield Redevelopment Specialists and Site Managers	24
13-2031	Budget Analysts	27
37-2019	Building Cleaning Workers, All Other	65
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	81
53-3051	Bus Drivers, School	91
53-3052	Bus Drivers, Transit and Intercity	91
13-1199	Business Continuity Planners	27
15-2051	Business Intelligence Analysts	32
13-1199	Business Operations Specialists, All Other	26
25-1011	Business Teachers, Postsecondary	45
51-3021	Butchers and Meat Cutters	84
13-1021	Buyers and Purchasing Agents, Farm Products	24
51-7011	Cabinetmakers and Bench Carpenters	86
17-3028	Calibration Technologists and Technicians	36
49-9061	Camera and Photographic Equipment Repairers	82
27-4031	Camera Operators, Television, Video, and Film	52
53-5021	Captains, Mates, and Pilots of Water Vessels	91
29-1212	Cardiologists	55
29-2031	Cardiovascular Technologists and Technicians	57
25-2023	Career/Technical Education Teachers, Middle School	48
25-1194	Career/Technical Education Teachers, Postsecondary	47
25-2032	Career/Technical Education Teachers, Secondary School	48
43-5011	Cargo and Freight Agents	72
47-2031	Carpenters	76
47-2041	Carpet Installers	76
17-1021	Cartographers and Photogrammetrists	32
41-2011	Cashiers	68
47-2051	Cement Masons and Concrete Finishers	76
35-1011	Chefs and Head Cooks	63
17-2041	Chemical Engineers	33
51-9011	Chemical Equipment Operators and Tenders	87
51-8091	Chemical Plant and System Operators	87
19-4031	Chemical Technicians	41
25-1052	Chemistry Teachers, Postsecondary	46

SOC Code	Total	Page #
19-2031	Chemists	38
11-1011	Chief Executives	21
11-1011	Chief Sustainability Officers	21
21-1021	Child, Family, and School Social Workers	43
39-9011	Childcare Workers	67
29-1011	Chiropractors	53
27-2032	Choreographers	51
17-3022	Civil Engineering Technologists and Technicians	35
17-2051	Civil Engineers	33
13-1031	Claims Adjusters, Examiners, and Investigators	25
53-7061	Cleaners of Vehicles and Equipment	92
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	89
21-2011	Clergy	44
19-2041	Climate Change Policy Analysts	39
19-3033	Clinical and Counseling Psychologists	40
15-2051	Clinical Data Managers	32
19-3039	Clinical Neuropsychologists	40
29-1141	Clinical Nurse Specialists	55
11-9121	Clinical Research Coordinators	23
27-2022	Coaches and Scouts	51
51-9124	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	88
51-2021	Coil Winders, Tapers, and Finishers	83
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	82
27-1021	Commercial and Industrial Designers	50
49-9092	Commercial Divers	82
53-2012	Commercial Pilots	90
43-2099	Communications Equipment Operators, All Other	69
25-1122	Communications Teachers, Postsecondary	47
21-1099	Community and Social Service Specialists, All Other	44
21-1094	Community Health Workers	44
11-3111	Compensation and Benefits Managers	22
13-1141	Compensation, Benefits, and Job Analysis Specialists	26
11-9199	Compliance Managers	24
13-1041	Compliance Officers	25
15-1221	Computer and Information Research Scientists	28

SOC Code	Total	Page #
11-3021	Computer and Information Systems Managers	22
17-2061	Computer Hardware Engineers	33
15-1241	Computer Network Architects	29
15-1231	Computer Network Support Specialists	28
51-9161	Computer Numerically Controlled Tool Operators	89
51-9162	Computer Numerically Controlled Tool Programmers	89
15-1299	Computer Occupations, All Other	30
15-1251	Computer Programmers	29
25-1021	Computer Science Teachers, Postsecondary	45
15-1211	Computer Systems Analysts	28
15-1299	Computer Systems Engineers/Architects	31
15-1232	Computer User Support Specialists	29
49-2011	Computer, Automated Teller, and Office Machine Repairers	80
39-6012	Concierges	67
19-1031	Conservation Scientists	38
47-4011	Construction and Building Inspectors	78
47-4099	Construction and Related Workers, All Other	79
47-2061	Construction Laborers	76
11-9021	Construction Managers	23
47-5041	Continuous Mining Machine Operators	79
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	81
53-7011	Conveyor Operators and Tenders	92
35-2019	Cooks, All Other	64
35-2011	Cooks, Fast Food	63
35-2012	Cooks, Institution and Cafeteria	63
35-2013	Cooks, Private Household	64
35-2014	Cooks, Restaurant	64
35-2015	Cooks, Short Order	64
51-9193	Cooling and Freezing Equipment Operators and Tenders	89
13-1041	Coroners	25
33-3012	Correctional Officers and Jailers	62
43-4021	Correspondence Clerks	70
13-1051	Cost Estimators	25
39-3092	Costume Attendants	66
21-1019	Counselors, All Other	43
41-2021	Counter and Rental Clerks	68
43-5021	Couriers and Messengers	72

SOC Code	Total	Page #
27-3092	Court Reporters and Simultaneous Captioners	52
43-4031	Court, Municipal, and License Clerks	70
27-1012	Craft Artists	50
53-7021	Crane and Tower Operators	92
13-2041	Credit Analysts	27
43-4041	Credit Authorizers, Checkers, and Clerks	71
13-2071	Credit Counselors	28
39-4012	Crematory Operators	66
25-1111	Criminal Justice and Law Enforcement Teachers, Postsecondary	47
29-1141	Critical Care Nurses	55
33-9091	Crossing Guards and Flaggers	63
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	88
25-4012	Curators	49
43-4051	Customer Service Representatives	71
33-3051	Customs and Border Protection Officers	63
13-1041	Customs Brokers	25
51-9031	Cutters and Trimmers, Hand	88
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	88
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	84
29-2011	Cytogenetic Technologists	57
29-2011	Cytotechnologists	57
27-2031	Dancers	51
43-9021	Data Entry Keyers	73
15-2051	Data Scientists	32
15-1243	Data Warehousing Specialists	29
15-1242	Database Administrators	29
15-1243	Database Architects	29
41-9011	Demonstrators and Product Promoters	69
31-9091	Dental Assistants	61
29-1292	Dental Hygienists	56
51-9081	Dental Laboratory Technicians	88
29-1029	Dentists, All Other Specialists	53
29-1021	Dentists, General	53
29-1213	Dermatologists	55
47-5011	Derrick Operators, Oil and Gas	79
27-1029	Designers, All Other	50
43-9031	Desktop Publishers	73
33-3021	Detectives and Criminal Investigators	62

SOC Code	Total	Page #
29-2032	Diagnostic Medical Sonographers	57
29-2051	Dietetic Technicians	58
29-1031	Dietitians and Nutritionists	
15-1299	Digital Forensics Analysts	31
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	64
21-2021	Directors, Religious Activities and Education	44
27-2091	Disc Jockeys, Except Radio	51
35-9021	Dishwashers	64
43-5032	Dispatchers, Except Police, Fire, and Ambulance	72
15-1299	Document Management Specialists	30
41-9091	Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	69
17-3019	Drafters, All Other	35
53-7031	Dredge Operators	92
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	84
53-3031	Driver/Sales Workers	90
47-2081	Drywall and Ceiling Tile Installers	77
47-5023	Earth Drillers, Except Oil and Gas	79
25-1063	Economics Teachers, Postsecondary	46
19-3011	Economists	39
27-3041	Editors	52
11-9039	Education Administrators, All Other	23
11-9032	Education Administrators, Kindergarten through Secondary	23
11-9033	Education Administrators, Postsecondary	23
11-9031	Education and Childcare Administrators, Preschool and Daycare	23
25-1081	Education Teachers, Postsecondary	46
25-9099	Educational Instruction and Library Workers, All Other	50
21-1012	Educational, Guidance, and Career Counselors and Advisors	43
49-2092	Electric Motor, Power Tool, and Related Repairers	80
17-3023	Electrical and Electronic Engineering Technologists and Technicians	35
51-2022	Electrical and Electronic Equipment Assemblers	83
17-3012	Electrical and Electronics Drafters	35
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	80

SOC Code	Total	Page #
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	80
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	80
17-2071	Electrical Engineers	33
49-9051	Electrical Power-Line Installers and Repairers	82
47-2111	Electricians	77
17-3024	Electro-Mechanical and Mechatronics Technologists and Technicians	36
51-2023	Electromechanical Equipment Assemblers	83
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	80
17-2072	Electronics Engineers, Except Computer	33
25-2021	Elementary School Teachers, Except Special Education	48
47-4021	Elevator and Escalator Installers and Repairers	78
43-4061	Eligibility Interviewers, Government Programs	71
39-4011	Embalmers	66
11-9161	Emergency Management Directors	24
29-2042	Emergency Medical Technicians	58
29-1214	Emergency Medicine Physicians	55
31-9099	Endoscopy Technicians	61
47-4011	Energy Auditors	78
17-2199	Energy Engineers, Except Wind and Solar	35
51-2031	Engine and Other Machine Assemblers	83
25-1032	Engineering Teachers, Postsecondary	45
17-3029	Engineering Technologists and Technicians, Except Drafters, All Other	36
17-2199	Engineers, All Other	34
25-1123	English Language and Literature Teachers, Postsecondary	47
27-2099	Entertainers and Performers, Sports and Related Workers, All Other	51
11-9072	Entertainment and Recreation Managers, Except Gambling	23
39-3099	Entertainment Attendants and Related Workers, All Other	66
13-1041	Environmental Compliance Inspectors	25
19-3011	Environmental Economists	39
17-3025	Environmental Engineering Technologists and Technicians	36
17-2081	Environmental Engineers	33
19-2041	Environmental Restoration Planners	39

SOC Code	Total	Page #
19-4042	Environmental Science and Protection Technicians, Including Health	41
25-1053	Environmental Science Teachers, Postsecondary	46
19-2041	Environmental Scientists and Specialists, Including Health	38
19-1041	Epidemiologists	38
13-1041	Equal Opportunity Representatives and Officers	25
51-9194	Etchers and Engravers	89
47-5022	Excavating and Loading Machine and Dragline Operators, Surface Mining	79
43-6011	Executive Secretaries and Executive Administrative Assistants	73
29-1128	Exercise Physiologists	54
39-9031	Exercise Trainers and Group Fitness Instructors	67
47-5032	Explosives Workers, Ordnance Handling Experts, and Blasters	79
47-5099	Extraction Workers, All Other	80
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	84
51-6091	Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers	86
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	88
51-6092	Fabric and Apparel Patternmakers	86
11-3013	Facilities Managers	21
45-4021	Fallers	75
25-1192	Family and Consumer Sciences Teachers, Postsecondary	47
29-1215	Family Medicine Physicians	55
25-9021	Farm and Home Management Educators	49
49-3041	Farm Equipment Mechanics and Service Technicians	81
13-1074	Farm Labor Contractors	26
11-9013	Farmers, Ranchers, and Other Agricultural Managers	23
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	75
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	75
27-1022	Fashion Designers	50
35-3023	Fast Food and Counter Workers	64
47-4031	Fence Erectors	78
51-2051	Fiberglass Laminators and Fabricators	83

SOC Code	Total	Page #
43-4071	File Clerks	71
27-4032	Film and Video Editors	52
13-2051	Financial and Investment Analysts	27
43-3099	Financial Clerks, All Other	70
13-2061	Financial Examiners	27
11-3031	Financial Managers	22
13-2099	Financial Quantitative Analysts	28
13-2054	Financial Risk Specialists	27
13-2099	Financial Specialists, All Other	28
27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	50
33-2021	Fire Inspectors and Investigators	62
33-2011	Firefighters	62
17-2111	Fire-Prevention and Protection Engineers	33
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	75
33-1011	First-Line Supervisors of Correctional Officers	62
39-1014	First-Line Supervisors of Entertainment and Recreation Workers, Except Gambling Services	65
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	74
33-1021	First-Line Supervisors of Firefighting and Prevention Workers	62
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	63
39-1013	First-Line Supervisors of Gambling Services Workers	65
53-1042	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	90
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	64
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	64
53-1043	First-Line Supervisors of Material-Moving Machine and Vehicle Operators	90
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	80
41-1012	First-Line Supervisors of Non-Retail Sales Workers	68
43-1011	First-Line Supervisors of Office and Administrative Support Workers	69
53-1044	First-Line Supervisors of Passenger Attendants	90
39-1022	First-Line Supervisors of Personal Service Workers	65

SOC Code	Total	Page #
33-1012	First-Line Supervisors of Police and Detectives	62
51-1011	First-Line Supervisors of Production and Operating Workers	83
33-1099	First-Line Supervisors of Protective Service Workers, All Other	62
41-1011	First-Line Supervisors of Retail Sales Workers	68
33-1091	First-Line Supervisors of Security Workers	62
53-1049	First-Line Supervisors of Transportation Workers, All Other	90
33-3031	Fish and Game Wardens	62
45-3031	Fishing and Hunting Workers	75
11-9179	Fitness and Wellness Coordinators	24
53-2031	Flight Attendants	90
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	76
47-2043	Floor Sanders and Finishers	76
27-1023	Floral Designers	50
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	84
51-3092	Food Batchmakers	84
51-3093	Food Cooking Machine Operators and Tenders	84
35-9099	Food Preparation and Serving Related Workers, All Other	64
35-2021	Food Preparation Workers	64
51-3099	Food Processing Workers, All Other	84
19-4013	Food Science Technicians	41
19-1012	Food Scientists and Technologists	37
35-3041	Food Servers, Nonrestaurant	64
11-9051	Food Service Managers	23
25-1124	Foreign Language and Literature Teachers, Postsecondary	47
19-4092	Forensic Science Technicians	42
19-4071	Forest and Conservation Technicians	42
45-4011	Forest and Conservation Workers	75
33-2022	Forest Fire Inspectors and Prevention Specialists	62
19-1032	Foresters	38
25-1043	Forestry and Conservation Science Teachers, Postsecondary	45
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	84
51-4071	Foundry Mold and Coremakers	85
13-2099	Fraud Examiners, Investigators and Analysts	28

SOC Code	Total	Page #
43-5011	Freight Forwarders	72
17-2141	Fuel Cell Engineers	34
13-1131	Fundraisers	26
11-2033	Fundraising Managers	21
39-4021	Funeral Attendants	66
11-9171	Funeral Home Managers	24
51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	88
51-7021	Furniture Finishers	86
39-3012	Gambling and Sports Book Writers and Runners	66
43-3041	Gambling Cage Workers	70
41-2012	Gambling Change Persons and Booth Cashiers	68
39-3011	Gambling Dealers	66
11-9071	Gambling Managers	23
39-3019	Gambling Service Workers, All Other	66
33-9031	Gambling Surveillance Officers and Gambling Investigators	63
53-7071	Gas Compressor and Gas Pumping Station Operators	93
51-8092	Gas Plant Operators	87
51-9071	Gem and Diamond Workers	88
11-1021	General and Operations Managers	21
29-1216	General Internal Medicine Physicians	55
29-9092	Genetic Counselors	59
19-1029	Geneticists	37
17-1022	Geodetic Surveyors	32
19-3092	Geographers	40
15-1299	Geographic Information Systems Technologists and Technicians	30
25-1064	Geography Teachers, Postsecondary	46
19-4043	Geological Technicians, Except Hydrologic Technicians	41
19-2042	Geoscientists, Except Hydrologists and Geographers	39
11-3051	Geothermal Production Managers	22
49-9099	Geothermal Technicians	83
51-9195	Glass Blowers, Molders, Benders, and Finishers	89
47-2121	Glaziers	77
13-1041	Government Property Inspectors and Investigators	25
45-2041	Graders and Sorters, Agricultural Products	74
27-1024	Graphic Designers	50
51-9022	Grinding and Polishing Workers, Hand	88

SOC Code	Total	Page #
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	84
37-3019	Grounds Maintenance Workers, All Other	65
39-5012	Hairdressers, Hairstylists, and Cosmetologists	67
47-4041	Hazardous Materials Removal Workers	79
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	33
21-1091	Health Education Specialists	43
15-1211	Health Informatics Specialists	28
29-9021	Health Information Technologists and Medical Registrars	59
25-1071	Health Specialties Teachers, Postsecondary	46
29-2099	Health Technologists and Technicians, All Other	59
29-1299	Healthcare Diagnosing or Treating Practitioners, All Other	56
29-9099	Healthcare Practitioners and Technical Workers, All Other	59
21-1022	Healthcare Social Workers	43
31-9099	Healthcare Support Workers, All Other	61
29-2092	Hearing Aid Specialists	59
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	85
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	81
53-3032	Heavy and Tractor-Trailer Truck Drivers	91
47-3019	Helpers, Construction Trades, All Other	78
47-3011	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	78
47-3012	Helpers--Carpenters	78
47-3013	Helpers--Electricians	78
47-5081	Helpers--Extraction Workers	80
49-9098	Helpers--Installation, Maintenance, and Repair Workers	83
47-3014	Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons	78
47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	78
51-9198	Helpers--Production Workers	89
47-3016	Helpers--Roofers	78
47-4051	Highway Maintenance Workers	79
29-2012	Histology Technicians	57

SOC Code	Total	Page #
19-3093	Historians	40
25-1125	History Teachers, Postsecondary	47
29-2011	Histotechnologists	57
53-7041	Hoist and Winch Operators	92
49-9031	Home Appliance Repairers	81
31-1121	Home Health Aides	60
29-1229	Hospitalists	56
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	64
43-4081	Hotel, Motel, and Resort Desk Clerks	71
17-2112	Human Factors Engineers and Ergonomists	34
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	71
11-3121	Human Resources Managers	22
13-1071	Human Resources Specialists	25
51-8013	Hydroelectric Plant Technicians	87
11-3051	Hydroelectric Production Managers	22
19-4044	Hydrologic Technicians	42
19-2043	Hydrologists	39
19-2041	Industrial Ecologists	39
17-3026	Industrial Engineering Technologists and Technicians	36
17-2112	Industrial Engineers	34
49-9041	Industrial Machinery Mechanics	82
11-3051	Industrial Production Managers	22
53-7051	Industrial Truck and Tractor Operators	92
19-3032	Industrial-Organizational Psychologists	39
43-4199	Information and Record Clerks, All Other	72
15-1212	Information Security Analysts	28
15-1299	Information Security Engineers	31
15-1299	Information Technology Project Managers	31
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	88
49-9099	Installation, Maintenance, and Repair Workers, All Other	83
25-9031	Instructional Coordinators	49
47-2131	Insulation Workers, Floor, Ceiling, and Wall	77
47-2132	Insulation Workers, Mechanical	77
13-1032	Insurance Appraisers, Auto Damage	25
43-9041	Insurance Claims and Policy Processing Clerks	74
41-3021	Insurance Sales Agents	68
13-2053	Insurance Underwriters	27

SOC Code	Total	Page #
33-3021	Intelligence Analysts	62
27-1025	Interior Designers	50
27-3091	Interpreters and Translators	52
43-4111	Interviewers, Except Eligibility and Loan	71
11-3031	Investment Fund Managers	22
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	64
51-9071	Jewelers and Precious Stone and Metal Workers	88
23-1023	Judges, Magistrate Judges, and Magistrates	44
23-1012	Judicial Law Clerks	44
25-2012	Kindergarten Teachers, Except Special Education	47
13-1075	Labor Relations Specialists	26
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	92
17-1012	Landscape Architects	32
37-3011	Landscaping and Groundskeeping Workers	65
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	84
51-6011	Laundry and Dry-Cleaning Workers	86
25-1112	Law Teachers, Postsecondary	47
23-1011	Lawyers	44
51-4192	Layout Workers, Metal and Plastic	85
43-6012	Legal Secretaries and Administrative Assistants	73
23-2099	Legal Support Workers, All Other	45
11-1031	Legislators	21
25-4022	Librarians and Media Collections Specialists	49
43-4121	Library Assistants, Clerical	71
25-1082	Library Science Teachers, Postsecondary	47
25-4031	Library Technicians	49
29-2061	Licensed Practical and Licensed Vocational Nurses	58
19-1099	Life Scientists, All Other	38
19-4099	Life, Physical, and Social Science Technicians, All Other	42
33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	63
53-3033	Light Truck Drivers	91
27-4015	Lighting Technicians	52
47-5044	Loading and Moving Machine Operators, Underground Mining	80

SOC Code	Total	Page #
43-4131	Loan Interviewers and Clerks	71
13-2072	Loan Officers	28
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	66
49-9094	Locksmiths and Safe Repairers	82
53-4011	Locomotive Engineers	91
11-9081	Lodging Managers	23
45-4023	Log Graders and Scalers	75
45-4022	Logging Equipment Operators	75
45-4029	Logging Workers, All Other	75
13-1081	Logisticians	26
13-1081	Logistics Analysts	26
13-1081	Logistics Engineers	26
11-9199	Loss Prevention Managers	24
29-1122	Low Vision Therapists, Orientation and Mobility Specialists, and Vision Rehabilitation Therapists	54
53-7063	Machine Feeders and Offbearers	93
51-4041	Machinists	85
29-2035	Magnetic Resonance Imaging Technologists	57
37-2012	Maids and Housekeeping Cleaners	65
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	74
49-9071	Maintenance and Repair Workers, General	82
49-9043	Maintenance Workers, Machinery	82
39-5091	Makeup Artists, Theatrical and Performance	67
13-1111	Management Analysts	26
11-9199	Managers, All Other	24
39-5092	Manicurists and Pedicurists	67
49-9095	Manufactured Building and Mobile Home Installers	82
17-2112	Manufacturing Engineers	34
17-2121	Marine Engineers and Naval Architects	34
13-1161	Market Research Analysts and Marketing Specialists	26
11-2021	Marketing Managers	21
21-1013	Marriage and Family Therapists	43
31-9011	Massage Therapists	61
53-7199	Material Moving Workers, All Other	93
17-2131	Materials Engineers	34
19-2032	Materials Scientists	38
15-2099	Mathematical Science Occupations, All Other	32

SOC Code	Total	Page #
25-1022	Mathematical Science Teachers, Postsecondary	45
15-2021	Mathematicians	31
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	84
49-9011	Mechanical Door Repairers	81
17-3013	Mechanical Drafters	35
17-3027	Mechanical Engineering Technologists and Technicians	36
17-2141	Mechanical Engineers	34
17-2199	Mechatronics Engineers	35
27-4099	Media and Communication Equipment Workers, All Other	52
27-3099	Media and Communication Workers, All Other	52
27-2012	Media Programming Directors	51
27-2012	Media Technical Directors/Managers	51
29-2012	Medical and Clinical Laboratory Technicians	57
29-2011	Medical and Clinical Laboratory Technologists	57
11-9111	Medical and Health Services Managers	23
51-9082	Medical Appliance Technicians	88
31-9092	Medical Assistants	61
29-2036	Medical Dosimetrists	58
31-9093	Medical Equipment Preparers	61
49-9062	Medical Equipment Repairers	82
29-2072	Medical Records Specialists	58
19-1042	Medical Scientists, Except Epidemiologists	38
43-6013	Medical Secretaries and Administrative Assistants	73
31-9094	Medical Transcriptionists	61
13-1121	Meeting, Convention, and Event Planners	26
21-1023	Mental Health and Substance Abuse Social Workers	43
21-1014	Mental Health Counselors	43
27-1026	Merchandise Displayers and Window Trimmers	50
51-4199	Metal Workers and Plastic Workers, All Other	85
51-4051	Metal-Refining Furnace Operators and Tenders	85
43-5041	Meter Readers, Utilities	72
19-1022	Microbiologists	37
17-2199	Microsystems Engineers	35

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25-2022	Middle School Teachers, Except Special and Career/Technical Education	48
29-9099	Midwives	60
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	84
49-9044	Millwrights	82
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	34
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	88
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	81
51-4061	Model Makers, Metal and Plastic	85
51-7031	Model Makers, Wood	87
41-9012	Models	69
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	89
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	85
19-1029	Molecular and Cellular Biologists	37
39-4031	Morticians, Undertakers, and Funeral Arrangers	67
39-3021	Motion Picture Projectionists	66
53-3099	Motor Vehicle Operators, All Other	91
49-3051	Motorboat Mechanics and Service Technicians	81
53-5022	Motorboat Operators	91
49-3052	Motorcycle Mechanics	81
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	85
25-4013	Museum Technicians and Conservators	49
27-2041	Music Directors and Composers	
29-1129	Music Therapists	54
49-9063	Musical Instrument Repairers and Tuners	82
27-2042	Musicians and Singers	51
39-9011	Nannies	67
17-2199	Nanosystems Engineers	35
17-3026	Nanotechnology Engineering Technologists and Technicians	36
11-9121	Natural Sciences Managers	23
29-1299	Naturopathic Physicians	57
15-1244	Network and Computer Systems Administrators	29
29-2099	Neurodiagnostic Technologists	59

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29-1217	Neurologists	55
19-3039	Neuropsychologists	40
43-4141	New Accounts Clerks	71
27-3023	News Analysts, Reporters, and Journalists	51
17-3029	Non-Destructive Testing Specialists	36
17-2161	Nuclear Engineers	34
29-2033	Nuclear Medicine Technologists	57
19-4051	Nuclear Monitoring Technicians	42
51-8011	Nuclear Power Reactor Operators	87
19-4051	Nuclear Technicians	42
29-1151	Nurse Anesthetists	55
29-1161	Nurse Midwives	55
29-1171	Nurse Practitioners	55
31-1131	Nursing Assistants	60
25-1072	Nursing Instructors and Teachers, Postsecondary	46
29-1218	Obstetricians and Gynecologists	55
19-5011	Occupational Health and Safety Specialists	42
19-5012	Occupational Health and Safety Technicians	42
29-1122	Occupational Therapists	53
31-2012	Occupational Therapy Aides	60
31-2011	Occupational Therapy Assistants	60
43-9199	Office and Administrative Support Workers, All Other	74
43-9061	Office Clerks, General	74
43-9071	Office Machine Operators, Except Computer	74
13-1199	Online Merchants	27
47-2073	Operating Engineers and Other Construction Equipment Operators	77
15-2031	Operations Research Analysts	31
51-9083	Ophthalmic Laboratory Technicians	88
29-2057	Ophthalmic Medical Technicians	58
29-2099	Ophthalmic Medical Technologists	59
29-1241	Ophthalmologists, Except Pediatric	56
29-2081	Opticians, Dispensing	59
29-1041	Optometrists	53
29-1022	Oral and Maxillofacial Surgeons	53
43-4151	Order Clerks	71
31-1132	Orderlies	60
29-1023	Orthodontists	53
29-1242	Orthopedic Surgeons, Except Pediatric	56
29-1299	Orthoptists	57

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29-2091	Orthotists and Prosthetists	59
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	81
51-9111	Packaging and Filling Machine Operators and Tenders	88
53-7064	Packers and Packers, Hand	93
47-2141	Painters, Construction and Maintenance	77
51-9123	Painting, Coating, and Decorating Workers	88
51-9196	Paper Goods Machine Setters, Operators, and Tenders	89
47-2142	Paperhangers	77
23-2011	Paralegals and Legal Assistants	45
29-2043	Paramedics	58
19-1031	Park Naturalists	38
53-6021	Parking Attendants	92
33-3041	Parking Enforcement Workers	62
41-2022	Parts Salespersons	68
53-6061	Passenger Attendants	92
29-2099	Patient Representatives	59
51-4062	Patternmakers, Metal and Plastic	85
51-7032	Patternmakers, Wood	87
47-2071	Paving, Surfacing, and Tamping Equipment Operators	76
43-3051	Payroll and Timekeeping Clerks	70
29-1243	Pediatric Surgeons	56
29-1221	Pediatricians, General	56
15-1299	Penetration Testers	30
31-1122	Personal Care Aides	60
39-9099	Personal Care and Service Workers, All Other	68
13-2052	Personal Financial Advisors	27
11-9179	Personal Service Managers, All Other	24
37-2021	Pest Control Workers	65
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	65
17-2171	Petroleum Engineers	34
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	87
29-1051	Pharmacists	53
31-9095	Pharmacy Aides	61
29-2052	Pharmacy Technicians	58
25-1126	Philosophy and Religion Teachers, Postsecondary	47
31-9097	Phlebotomists	61
27-4021	Photographers	52

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51-9151	Photographic Process Workers and Processing Machine Operators	89
17-2199	Photonics Engineers	35
17-3029	Photonics Technicians	36
29-1229	Physical Medicine and Rehabilitation Physicians	56
19-2099	Physical Scientists, All Other	39
31-2022	Physical Therapist Aides	61
31-2021	Physical Therapist Assistants	60
29-1123	Physical Therapists	54
29-1071	Physician Assistants	53
29-1229	Physicians, All Other	56
29-1222	Physicians, Pathologists	56
19-2012	Physicists	38
25-1054	Physics Teachers, Postsecondary	46
47-2072	Pile Driver Operators	76
47-2151	Pipelayers	77
51-8099	Plant and System Operators, All Other	87
47-2161	Plasterers and Stucco Masons	77
51-4193	Plating Machine Setters, Operators, and Tenders, Metal and Plastic	85
47-2152	Plumbers, Pipefitters, and Steamfitters	77
29-1081	Podiatrists	53
27-3043	Poets, Lyricists and Creative Writers	52
33-3051	Police and Sheriff's Patrol Officers	62
33-3021	Police Identification and Records Officers	62
25-1065	Political Science Teachers, Postsecondary	46
19-3094	Political Scientists	41
43-5051	Postal Service Clerks	72
43-5052	Postal Service Mail Carriers	72
43-5053	Postal Service Mail Sorters, Processors, and Processing Machine Operators	73
11-9131	Postmasters and Mail Superintendents	23
25-1199	Postsecondary Teachers, All Other	47
51-9195	Potters, Manufacturing	89
51-4052	Pourers and Casters, Metal	85
51-8012	Power Distributors and Dispatchers	87
51-8013	Power Plant Operators	87
19-4012	Precision Agriculture Technicians	41
49-9069	Precision Instrument and Equipment Repairers, All Other	82
51-5111	Prepress Technicians and Workers	86
25-2011	Preschool Teachers, Except Special Education	47

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51-6021	Pressers, Textile, Garment, and Related Materials	86
29-1229	Preventive Medicine Physicians	56
51-5113	Print Binding and Finishing Workers	86
51-5112	Printing Press Operators	86
33-9021	Private Detectives and Investigators	63
21-1092	Probation Officers and Correctional Treatment Specialists	44
43-3061	Procurement Clerks	70
27-2012	Producers and Directors	51
51-9199	Production Workers, All Other	89
43-5061	Production, Planning, and Expediting Clerks	73
13-1082	Project Management Specialists	26
43-9081	Proofreaders and Copy Markers	74
11-9141	Property, Real Estate, and Community Association Managers	24
29-1024	Prosthodontists	53
33-9099	Protective Service Workers, All Other	63
31-1133	Psychiatric Aides	60
29-2053	Psychiatric Technicians	58
29-1223	Psychiatrists	56
19-3039	Psychologists, All Other	40
25-1066	Psychology Teachers, Postsecondary	46
11-2032	Public Relations Managers	21
27-3031	Public Relations Specialists	51
43-5031	Public Safety Telecommunicators	72
53-7072	Pump Operators, Except Wellhead Pumps	93
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	25
11-3061	Purchasing Managers	22
19-4099	Quality Control Analysts	42
11-3051	Quality Control Systems Managers	22
29-1124	Radiation Therapists	54
17-2072	Radio Frequency Identification Device Specialists	33
49-2021	Radio, Cellular, and Tower Equipment Installers and Repairers	80
29-2034	Radiologic Technologists and Technicians	57
29-1224	Radiologists	56
49-3043	Rail Car Repairers	81
53-4099	Rail Transportation Workers, All Other	91
53-4013	Rail Yard Engineers, Dinkey Operators, and Hostlers	91

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53-4022	Railroad Brake, Signal, and Switch Operators and Locomotive Firers	91
53-4031	Railroad Conductors and Yardmasters	91
47-4061	Rail-Track Laying and Maintenance Equipment Operators	79
19-1031	Range Managers	38
41-9021	Real Estate Brokers	69
41-9022	Real Estate Sales Agents	69
43-4171	Receptionists and Information Clerks	72
25-1193	Recreation and Fitness Studies Teachers, Postsecondary	47
39-9032	Recreation Workers	67
29-1125	Recreational Therapists	54
49-3092	Recreational Vehicle Service Technicians	81
53-7062	Recycling and Reclamation Workers	93
53-1042	Recycling Coordinators	90
49-9045	Refractory Materials Repairers, Except Brickmasons	82
53-7081	Refuse and Recyclable Material Collectors	93
29-1141	Registered Nurses	54
11-9199	Regulatory Affairs Managers	24
13-1041	Regulatory Affairs Specialists	25
21-1015	Rehabilitation Counselors	43
47-2171	Reinforcing Iron and Rebar Workers	77
21-2099	Religious Workers, All Other	44
19-2099	Remote Sensing Scientists and Technologists	39
19-4099	Remote Sensing Technicians	42
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	72
39-9041	Residential Advisors	68
29-1126	Respiratory Therapists	54
33-9099	Retail Loss Prevention Specialists	63
41-2031	Retail Salespersons	68
49-9096	Riggers	82
17-2199	Robotics Engineers	35
17-3024	Robotics Technicians	36
47-5051	Rock Splitters, Quarry	80
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	84
47-5043	Roof Bolters, Mining	79
47-2181	Roofers	77
47-5012	Rotary Drill Operators, Oil and Gas	79
47-5071	Roustabouts, Oil and Gas	80
53-5011	Sailors and Marine Oilers	91

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41-9099	Sales and Related Workers, All Other	69
41-9031	Sales Engineers	69
11-2022	Sales Managers	21
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	68
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	69
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	69
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	87
33-9094	School Bus Monitors	63
19-3034	School Psychologists	40
13-1161	Search Marketing Strategists	26
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	48
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	73
41-3031	Securities, Commodities, and Financial Services Sales Agents	68
49-2098	Security and Fire Alarm Systems Installers	81
33-9032	Security Guards	63
13-1199	Security Management Specialists	27
11-3013	Security Managers	21
47-4091	Segmental Pavers	79
25-3021	Self-Enrichment Teachers	48
51-9141	Semiconductor Processing Technicians	89
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	88
47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	79
47-5013	Service Unit Operators, Oil and Gas	79
27-1027	Set and Exhibit Designers	50
51-6051	Sewers, Hand	86
51-6031	Sewing Machine Operators	86
39-5093	Shampooers	67
47-2211	Sheet Metal Workers	78
53-5031	Ship Engineers	92
43-5071	Shipping, Receiving, and Inventory Clerks	73
51-6041	Shoe and Leather Workers and Repairers	86

SOC Code	Total	Page #
51-6042	Shoe Machine Operators and Tenders	86
53-3053	Shuttle Drivers and Chauffeurs	91
49-9097	Signal and Track Switch Repairers	83
39-5094	Skincare Specialists	67
51-3023	Slaughterers and Meat Packers	84
11-9151	Social and Community Service Managers	24
21-1093	Social and Human Service Assistants	44
19-4061	Social Science Research Assistants	42
25-1069	Social Sciences Teachers, Postsecondary, All Other	46
19-3099	Social Scientists and Related Workers, All Other	41
25-1113	Social Work Teachers, Postsecondary	47
21-1029	Social Workers, All Other	43
19-3041	Sociologists	40
25-1067	Sociology Teachers, Postsecondary	46
15-1252	Software Developers	30
15-1253	Software Quality Assurance Analysts and Testers	30
19-1013	Soil and Plant Scientists	37
47-1011	Solar Energy Installation Managers	75
17-2199	Solar Energy Systems Engineers	35
47-2231	Solar Photovoltaic Installers	78
41-4011	Solar Sales Representatives and Assessors	69
47-2152	Solar Thermal Installers and Technicians	77
27-4014	Sound Engineering Technicians	52
11-9179	Spa Managers	24
25-2059	Special Education Teachers, All Other	48
25-2056	Special Education Teachers, Elementary School	48
25-2055	Special Education Teachers, Kindergarten	48
25-2057	Special Education Teachers, Middle School	48
25-2051	Special Education Teachers, Preschool	48
25-2058	Special Education Teachers, Secondary School	48
27-1014	Special Effects Artists and Animators	50
29-1127	Speech-Language Pathologists	54
31-9099	Speech-Language Pathology Assistants	61
29-1229	Sports Medicine Physicians	56
51-8021	Stationary Engineers and Boiler Operators	87
43-9111	Statistical Assistants	74

SOC Code	Total	Page #
15-2041	Statisticians	31
53-7065	Stockers and Order Fillers	93
51-9195	Stone Cutters and Carvers, Manufacturing	89
47-2022	Stonemasons	76
47-2221	Structural Iron and Steel Workers	78
51-2041	Structural Metal Fabricators and Fitters	83
21-1011	Substance Abuse and Behavioral Disorder Counselors	42
25-3031	Substitute Teachers, Short-Term	48
53-4041	Subway and Streetcar Operators	91
11-3071	Supply Chain Managers	22
29-1249	Surgeons, All Other	56
29-9093	Surgical Assistants	59
29-2055	Surgical Technologists	58
19-3022	Survey Researchers	39
17-3031	Surveying and Mapping Technicians	36
17-1022	Surveyors	32
13-1199	Sustainability Specialists	27
43-2011	Switchboard Operators, Including Answering Service	69
51-6052	Tailors, Dressmakers, and Custom Sewers	86
27-2012	Talent Directors	51
53-7121	Tank Car, Truck, and Ship Loaders	93
47-2082	Tapers	77
13-2081	Tax Examiners and Collectors, and Revenue Agents	28
13-2082	Tax Preparers	28
53-3054	Taxi Drivers	91
25-3099	Teachers and Instructors, All Other	49
25-9049	Teaching Assistants, All Other	50
25-9044	Teaching Assistants, Postsecondary	50
25-9042	Teaching Assistants, Preschool, Elementary, Middle, and Secondary School, Except Special Education	49
25-9043	Teaching Assistants, Special Education	50
51-2092	Team Assemblers	83
27-3042	Technical Writers	52
15-1241	Telecommunications Engineering Specialists	29
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	80
49-9052	Telecommunications Line Installers and Repairers	82
41-9041	Telemarketers	69

SOC Code	Total	Page #
43-2021	Telephone Operators	69
43-3071	Tellers	70
47-2053	Terrazzo Workers and Finishers	76
51-6061	Textile Bleaching and Dyeing Machine Operators and Tenders	86
51-6062	Textile Cutting Machine Setters, Operators, and Tenders	86
51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders	86
51-6064	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders	86
51-6099	Textile, Apparel, and Furnishings Workers, All Other	86
29-1129	Therapists, All Other	54
47-2044	Tile and Stone Setters	76
51-2061	Timing Device Assemblers and Adjusters	83
51-9197	Tire Builders	89
49-3093	Tire Repairers and Changers	81
23-2093	Title Examiners, Abstractors, and Searchers	45
51-4111	Tool and Die Makers	85
51-4194	Tool Grinders, Filers, and Sharpeners	85
39-7011	Tour Guides and Escorts	67
53-6041	Traffic Technicians	92
11-3131	Training and Development Managers	22
13-1151	Training and Development Specialists	26
33-3052	Transit and Railroad Police	63
17-2051	Transportation Engineers	33
53-6051	Transportation Inspectors	92
19-3099	Transportation Planners	41
33-9093	Transportation Security Screeners	63
53-6051	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	92
53-6099	Transportation Workers, All Other	92
11-3071	Transportation, Storage, and Distribution Managers	22
41-3041	Travel Agents	68
39-7012	Travel Guides	67
11-3031	Treasurers and Controllers	22
37-3013	Tree Trimmers and Pruners	65
25-3041	Tutors	49
27-2023	Umpires, Referees, and Other Sports Officials	51
47-5049	Underground Mining Machine Operators, All Other	80

SOC Code	Total	Page #
51-6093	Upholsterers	86
19-3051	Urban and Regional Planners	40
29-1229	Urologists	56
39-3031	Ushers, Lobby Attendants, and Ticket Takers	66
17-2112	Validation Engineers	34
29-1131	Veterinarians	54
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	61
29-2056	Veterinary Technologists and Technicians	58
15-1255	Video Game Designers	30
35-3031	Waiters and Waitresses	64
49-9064	Watch and Clock Repairers	82
51-8031	Water and Wastewater Treatment Plant and System Operators	87
11-9121	Water Resource Specialists	23
17-2051	Water/Wastewater Engineers	33
47-4099	Weatherization Installers and Technicians	79
15-1299	Web Administrators	30
15-1255	Web and Digital Interface Designers	30
15-1254	Web Developers	30

SOC Code	Total	Page #
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	73
51-4121	Welders, Cutters, Solderers, and Brazers	85
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	85
53-7073	Wellhead Pumpers	93
13-1022	Wholesale and Retail Buyers, Except Farm Products	25
11-9199	Wind Energy Development Managers	24
17-2199	Wind Energy Engineers	35
11-9199	Wind Energy Operations Managers	24
49-9081	Wind Turbine Service Technicians	82
51-7099	Woodworkers, All Other	87
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	87
43-9022	Word Processors and Typists	73
27-3043	Writers and Authors	52
19-1023	Zoologists and Wildlife Biologists	37

Numeric List of Occupational Codes

O*NET- SOC Code	Title	Description
Management Occupations		
11-1011	Chief Executives	Determine and formulate policies and provide overall direction of companies or private and public sector organizations within guidelines set up by a board of directors or similar governing body. Plan, direct, or coordinate operational activities at the highest level of management with the help of subordinate executives and staff managers.
11-1011	Chief Sustainability Officers	Communicate and coordinate with management, shareholders, customers, and employees to address sustainability issues. Enact or oversee a corporate sustainability strategy.
11-1021	General and Operations Managers	Plan, direct, or coordinate the operations of public or private sector organizations, overseeing multiple departments or locations. 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. Usually manage through subordinate supervisors. Excludes First-Line Supervisors.
11-1031	Legislators	Develop, introduce, or enact laws and statutes at the local, tribal, state, or federal level. Includes only workers in elected positions.
11-2011	Advertising and Promotions Managers	Plan, direct, or coordinate advertising policies and programs or produce collateral materials, such as posters, contests, coupons, or giveaways, to create extra interest in the purchase of a product or service for a department, an entire organization, or on an account basis.
11-2021	Marketing Managers	Plan, direct, or coordinate marketing policies and programs, such as determining the demand for products and services offered by a firm and its competitors, and identify potential customers. Develop pricing strategies with the goal of maximizing the firm's profits or share of the market while ensuring the firm's customers are satisfied. Oversee product development or monitor trends that indicate the need for new products and services.
11-2022	Sales Managers	Plan, direct, or coordinate the actual distribution or movement of a product or service to the customer. Coordinate sales distribution by establishing sales territories, quotas, and goals and establish training programs for sales representatives. Analyze sales statistics gathered by staff to determine sales potential and inventory requirements and monitor the preferences of customers.
11-2032	Public Relations Managers	Plan, direct, or coordinate activities designed to create or maintain a favorable public image or raise issue awareness for their organization or client.
11-2033	Fundraising Managers	Plan, direct, or coordinate activities to solicit and maintain funds for special projects or nonprofit organizations.
11-3012	Administrative Services Managers	Plan, direct, or coordinate one or more administrative services of an organization, such as records and information management, mail distribution, and other office support services.
11-3013	Facilities Managers	Plan, direct, or coordinate operations and functionalities of facilities and buildings. May include surrounding grounds or multiple facilities of an organization's campus.
11-3013	Security Managers	Direct an organization's security functions, including physical security and safety of employees and facilities.

O*NET- SOC Code	Title	Description
11-3021	Computer and Information Systems Managers	Plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming.
11-3031	Financial Managers	Plan, direct, or coordinate accounting, investing, banking, insurance, securities, and other financial activities of a branch, office, or department of an establishment.
11-3031	Treasurers and Controllers	Direct financial activities, such as planning, procurement, and investments for all or part of an organization.
11-3031	Investment Fund Managers	Plan, direct, or coordinate investment strategy or operations for a large pool of liquid assets supplied by institutional investors or individual investors.
11-3051	Industrial Production Managers	Plan, direct, or coordinate the work activities and resources necessary for manufacturing products in accordance with cost, quality, and quantity specifications.
11-3051	Quality Control Systems Managers	Plan, direct, or coordinate quality assurance programs. Formulate quality control policies and control quality of laboratory and production efforts.
11-3051	Geothermal Production Managers	Manage operations at geothermal power generation facilities. Maintain and monitor geothermal plant equipment for efficient and safe plant operations.
11-3051	Biofuels Production Managers	Manage biofuels production and plant operations. Collect and process information on plant production and performance, diagnose problems, and design corrective procedures.
11-3051	Biomass Power Plant Managers	Manage operations at biomass power generation facilities. Direct work activities at plant, including supervision of operations and maintenance staff.
11-3051	Hydroelectric Production Managers	Manage operations at hydroelectric power generation facilities. Maintain and monitor hydroelectric plant equipment for efficient and safe plant operations.
11-3061	Purchasing Managers	Plan, direct, or coordinate the activities of buyers, purchasing officers, and related workers involved in purchasing materials, products, and services. Includes wholesale or retail trade merchandising managers and procurement managers.
11-3071	Transportation, Storage, and Distribution Managers	Plan, direct, or coordinate transportation, storage, or distribution activities in accordance with organizational policies and applicable government laws or regulations. Includes logistics managers.
11-3071	Supply Chain Managers	Direct or coordinate production, purchasing, warehousing, distribution, or financial forecasting services or activities to limit costs and improve accuracy, customer service, or safety. Examine existing procedures or opportunities for streamlining activities to meet product distribution needs. Direct the movement, storage, or processing of inventory.
11-3111	Compensation and Benefits Managers	Plan, direct, or coordinate compensation and benefits activities of an organization.
11-3121	Human Resources Managers	Plan, direct, or coordinate human resources activities and staff of an organization.
11-3131	Training and Development Managers	Plan, direct, or coordinate the training and development activities and staff of an organization.
11-9013	Farmers, Ranchers, and Other Agricultural Managers	Plan, direct, or coordinate the management or operation of farms, ranches, greenhouses, aquacultural operations, nurseries, timber tracts, or other agricultural establishments. May hire, train, and supervise farm workers or contract for services to carry out the day-to-day activities of the managed operation. May engage in or supervise planting, cultivating, harvesting, and financial and marketing activities.

O*NET- SOC Code	Title	Description
11-9021	Construction Managers	Plan, direct, or coordinate, usually through subordinate supervisory personnel, activities concerned with the construction and maintenance of structures, facilities, and systems. Participate in the conceptual development of a construction project and oversee its organization, scheduling, budgeting, and implementation. Includes managers in specialized construction fields, such as carpentry or plumbing.
11-9031	Education and Childcare Administrators, Preschool and Daycare	Plan, direct, or coordinate academic or nonacademic activities of preschools or childcare centers and programs, including before- and after-school care.
11-9032	Education Administrators, Kindergarten through Secondary	Plan, direct, or coordinate the academic, administrative, or auxiliary activities of kindergarten, elementary, or secondary schools.
11-9033	Education Administrators, Postsecondary	Plan, direct, or coordinate student instruction, administration, and services, as well as other research and educational activities, at postsecondary institutions, including universities, colleges, and junior and community colleges.
11-9039	Education Administrators, All Other	All education administrators not listed separately.
11-9041	Architectural and Engineering Managers	Plan, direct, or coordinate activities in such fields as architecture and engineering or research and development in these fields.
11-9041	Biofuels/Biodiesel Technology and Product Development Managers	Define, plan, or execute biofuels/biodiesel research programs that evaluate alternative feedstock and process technologies with near-term commercial potential.
11-9051	Food Service Managers	Plan, direct, or coordinate activities of an organization or department that serves food and beverages.
11-9071	Gambling Managers	Plan, direct, or coordinate gambling operations in a casino. May formulate house rules.
11-9072	Entertainment and Recreation Managers, Except Gambling	Plan, direct, or coordinate entertainment and recreational activities and operations of a recreational facility, including cruise ships and parks.
11-9081	Lodging Managers	Plan, direct, or coordinate activities of an organization or department that provides lodging and other accommodations.
11-9111	Medical and Health Services Managers	Plan, direct, or coordinate medical and health services in hospitals, clinics, managed care organizations, public health agencies, or similar organizations.
11-9121	Natural Sciences Managers	Plan, direct, or coordinate activities in such fields as life sciences, physical sciences, mathematics, statistics, and research and development in these fields.
11-9121	Clinical Research Coordinators	Plan, direct, or coordinate clinical research projects. Direct the activities of workers engaged in clinical research projects to ensure compliance with protocols and overall clinical objectives. May evaluate and analyze clinical data.
11-9121	Water Resource Specialists	Design or implement programs and strategies related to water resource issues such as supply, quality, and regulatory compliance issues.
11-9131	Postmasters and Mail Superintendents	Plan, direct, or coordinate operational, administrative, management, and support services of a U.S. post office; or coordinate activities of workers engaged in postal and related work in assigned post office.
11-9141	Property, Real Estate, and Community Association Managers	Plan, direct, or coordinate the selling, buying, leasing, or governance activities of commercial, industrial, or residential real estate properties. Includes managers of homeowner and condominium associations, rented or leased housing units, buildings, or land (including rights-of-way).

O*NET- SOC Code	Title	Description
11-9151	Social and Community Service Managers	Plan, direct, or coordinate the activities of a social service program or community outreach organization. Oversee the program or organization's budget and policies regarding participant involvement, program requirements, and benefits. Work may involve directing social workers, counselors, or probation officers.
11-9161	Emergency Management Directors	Plan and direct 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 or hazardous materials spills) disasters or hostage situations.
11-9171	Funeral Home Managers	Plan, direct, or coordinate the services or resources of funeral homes. Includes activities such as determining prices for services or merchandise and managing the facilities of funeral homes.
11-9179	Personal Service Managers, All Other	All personal service managers not listed separately.
11-9179	Fitness and Wellness Coordinators	Manage or coordinate fitness and wellness programs and services. Manage and train staff of wellness specialists, health educators, or fitness instructors.
11-9179	Spa Managers	Plan, direct, or coordinate activities of a spa facility. Coordinate programs, schedule and direct staff, and oversee financial activities.
11-9199	Managers, All Other	All managers not listed separately.
11-9199	Regulatory Affairs Managers	Plan, direct, or coordinate production activities of an organization to ensure compliance with regulations and standard operating procedures.
11-9199	Compliance Managers	Plan, direct, or coordinate activities of an organization to ensure compliance with ethical or regulatory standards.
11-9199	Loss Prevention Managers	Plan and direct policies, procedures, or systems to prevent the loss of assets. Determine risk exposure or potential liability, and develop risk control measures.
11-9199	Wind Energy Operations Managers	Manage wind field operations, including personnel, maintenance activities, financial activities, and planning.
11-9199	Wind Energy Development Managers	Lead or manage the development and evaluation of potential wind energy business opportunities, including environmental studies, permitting, and proposals. May also manage construction of projects.
11-9199	Brownfield Redevelopment Specialists and Site Managers	Plan and direct cleanup and redevelopment of contaminated properties for reuse. Does not include properties sufficiently contaminated to qualify as Superfund sites.

Business and Financial Operations Occupations

13-1011	Agents and Business Managers of Artists, Performers, and Athletes	Represent and promote artists, performers, and athletes in dealings with current or prospective employers. May handle contract negotiation and other business matters for clients.
13-1021	Buyers and Purchasing Agents, Farm Products	Purchase farm products either for further processing or resale. Includes tree farm contractors, grain brokers and market operators, grain buyers, and tobacco buyers. May negotiate contracts.
13-1022	Wholesale and Retail Buyers, Except Farm Products	Buy merchandise or commodities, other than farm products, for resale to consumers at the wholesale or retail level, including both durable and nondurable goods. Analyze past buying trends, sales records, price, and quality of merchandise to determine value and yield. Select, order, and authorize payment for merchandise according to contractual agreements. May conduct meetings with sales personnel and introduce new products. May negotiate contracts. Includes assistant wholesale and retail buyers of nonfarm products.

O*NET- SOC Code	Title	Description
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	Purchase machinery, equipment, tools, parts, supplies, or services necessary for the operation of an establishment. Purchase raw or semifinished materials for manufacturing. May negotiate contracts.
13-1031	Claims Adjusters, Examiners, and Investigators	Review settled claims to determine that payments and settlements are made in accordance with company practices and procedures. Confer with legal counsel on claims requiring litigation. May also settle insurance claims.
13-1032	Insurance Appraisers, Auto Damage	Appraise automobile or other vehicle damage to determine repair costs for insurance claim settlement. Prepare insurance forms to indicate repair cost or cost estimates and recommendations. May seek agreement with automotive repair shop on repair costs.
13-1041	Compliance Officers	Examine, evaluate, and investigate eligibility for or conformity with laws and regulations governing contract compliance of licenses and permits, and perform other compliance and enforcement inspection and analysis activities not classified elsewhere.
13-1041	Environmental Compliance Inspectors	Inspect and investigate sources of pollution to protect the public and environment and ensure conformance with Federal, State, and local regulations and ordinances.
13-1041	Equal Opportunity Representatives and Officers	Monitor and evaluate compliance with equal opportunity laws, guidelines, and policies to ensure that employment practices and contracting arrangements give equal opportunity without regard to race, religion, color, national origin, sex, age, or disability.
13-1041	Government Property Inspectors and Investigators	Investigate or inspect government property to ensure compliance with contract agreements and government regulations.
13-1041	Coroners	Direct activities such as autopsies, pathological and toxicological analyses, and inquests relating to the investigation of deaths occurring within a legal jurisdiction to determine cause of death or to fix responsibility for accidental, violent, or unexplained deaths.
13-1041	Regulatory Affairs Specialists	Coordinate and document internal regulatory processes, such as internal audits, inspections, license renewals, or registrations. May compile and prepare materials for submission to regulatory agencies.
13-1041	Customs Brokers	Prepare customs documentation and ensure that shipments meet all applicable laws to facilitate the import and export of goods. Determine and track duties and taxes payable and process payments on behalf of client. Sign documents under a power of attorney. Represent clients in meetings with customs officials and apply for duty refunds and tariff reclassifications. Coordinate transportation and storage of imported goods.
13-1051	Cost Estimators	Prepare cost estimates for product manufacturing, construction projects, or services to aid management in bidding on or determining price of product or service. May specialize according to particular service performed or type of product manufactured.
13-1071	Human Resources Specialists	Recruit, screen, interview, or place individuals within an organization. May perform other activities in multiple human resources areas.
13-1074	Farm Labor Contractors	Recruit and hire seasonal or temporary agricultural laborers. May transport, house, and provide meals for workers.
13-1075	Labor Relations Specialists	Resolve disputes between workers and managers, negotiate collective bargaining agreements, or coordinate grievance procedures to handle employee complaints.
13-1081	Logisticians	Analyze and coordinate the ongoing logistical functions of a firm or organization. Responsible for the entire life cycle of a product, including acquisition, distribution, internal allocation, delivery, and final disposal of resources.

O*NET- SOC Code	Title	Description
13-1081	Logistics Engineers	Design or analyze operational solutions for projects such as transportation optimization, network modeling, process and methods analysis, cost containment, capacity enhancement, routing and shipment optimization, or information management.
13-1081	Logistics Analysts	Analyze product delivery or supply chain processes to identify or recommend changes. May manage route activity including invoicing, electronic bills, and shipment tracing.
13-1082	Project Management Specialists	Analyze and coordinate the schedule, timeline, procurement, staffing, and budget of a product or service on a per project basis. Lead and guide the work of technical staff. May serve as a point of contact for the client or customer.
13-1111	Management Analysts	Conduct organizational studies and evaluations, design systems and procedures, conduct work simplification and measurement studies, and prepare operations and procedures manuals to assist management in operating more efficiently and effectively. Includes program analysts and management consultants.
13-1121	Meeting, Convention, and Event Planners	Coordinate activities of staff, convention personnel, or clients to make arrangements for group meetings, events, or conventions.
13-1131	Fundraisers	Organize activities to raise funds or otherwise solicit and gather monetary donations or other gifts for an organization. May design and produce promotional materials. May also raise awareness of the organization's work, goals, and financial needs.
13-1141	Compensation, Benefits, and Job Analysis Specialists	Conduct programs of compensation and benefits and job analysis for employer. May specialize in specific areas, such as position classification and pension programs.
13-1151	Training and Development Specialists	Design or conduct work-related training and development programs to improve individual skills or organizational performance. May analyze organizational training needs or evaluate training effectiveness.
13-1161	Market Research Analysts and Marketing Specialists	Research conditions in local, regional, national, or online markets. Gather information to determine potential sales of a product or service, or plan a marketing or advertising campaign. May gather information on competitors, prices, sales, and methods of marketing and distribution. May employ search marketing tactics, analyze web metrics, and develop recommendations to increase search engine ranking and visibility to target markets.
13-1161	Search Marketing Strategists	Employ search marketing tactics to increase visibility and engagement with content, products, or services in Internet-enabled devices or interfaces. Examine search query behaviors on general or specialty search engines or other Internet-based content. Analyze research, data, or technology to understand user intent and measure outcomes for ongoing optimization.
13-1199	Business Operations Specialists, All Other	All business operations specialists not listed separately.
13-1199	Business Continuity Planners	Develop, maintain, or implement business continuity and disaster recovery strategies and solutions, including risk assessments, business impact analyses, strategy selection, and documentation of business continuity and disaster recovery procedures. Plan, conduct, and debrief regular mock-disaster exercises to test the adequacy of existing plans and strategies, updating procedures and plans regularly. Act as a coordinator for continuity efforts after a disruption event.
13-1199	Sustainability Specialists	Address organizational sustainability issues, such as waste stream management, green building practices, and green procurement plans.

O*NET- SOC Code	Title	Description
13-1199	Online Merchants	Conduct retail activities of businesses operating exclusively online. May perform duties such as preparing business strategies, buying merchandise, managing inventory, implementing marketing activities, fulfilling and shipping online orders, and balancing financial records.
13-1199	Security Management Specialists	Conduct security assessments for organizations, and design security systems and processes. May specialize in areas such as physical security or the safety of employees and facilities.
13-2011	Accountants and Auditors	Examine, analyze, and interpret accounting records to prepare financial statements, give advice, or audit and evaluate statements prepared by others. Install or advise on systems of recording costs or other financial and budgetary data.
13-2022	Appraisers of Personal and Business Property	Appraise and estimate the fair value of tangible personal or business property, such as jewelry, art, antiques, collectibles, and equipment. May also appraise land.
13-2023	Appraisers and Assessors of Real Estate	Appraise real estate, exclusively, and estimate its fair value. May assess taxes in accordance with prescribed schedules.
13-2031	Budget Analysts	Examine budget estimates for completeness, accuracy, and conformance with procedures and regulations. Analyze budgeting and accounting reports.
13-2041	Credit Analysts	Analyze credit data and financial statements of individuals or firms to determine the degree of risk involved in extending credit or lending money. Prepare reports with credit information for use in decisionmaking.
13-2051	Financial and Investment Analysts	Conduct quantitative analyses of information involving investment programs or financial data of public or private institutions, including valuation of businesses.
13-2052	Personal Financial Advisors	Advise clients on financial plans using knowledge of tax and investment strategies, securities, insurance, pension plans, and real estate. Duties include assessing clients' assets, liabilities, cash flow, insurance coverage, tax status, and financial objectives. May also buy and sell financial assets for clients.
13-2053	Insurance Underwriters	Review individual applications for insurance to evaluate degree of risk involved and determine acceptance of applications.
13-2054	Financial Risk Specialists	Analyze and measure exposure to credit and market risk threatening the assets, earning capacity, or economic state of an organization. May make recommendations to limit risk.
13-2061	Financial Examiners	Enforce or ensure compliance with laws and regulations governing financial and securities institutions and financial and real estate transactions. May examine, verify, or authenticate records.
13-2071	Credit Counselors	Advise and educate individuals or organizations on acquiring and managing debt. May provide guidance in determining the best type of loan and explain loan requirements or restrictions. May help develop debt management plans or student financial aid packages. May advise on credit issues, or provide budget, mortgage, bankruptcy, or student financial aid counseling.
13-2072	Loan Officers	Evaluate, authorize, or recommend approval of commercial, real estate, or credit loans. Advise borrowers on financial status and payment methods. Includes mortgage loan officers and agents, collection analysts, loan servicing officers, loan underwriters, and payday loan officers.
13-2081	Tax Examiners and Collectors, and Revenue Agents	Determine tax liability or collect taxes from individuals or business firms according to prescribed laws and regulations.
13-2082	Tax Preparers	Prepare tax returns for individuals or small businesses.

O*NET- SOC Code	Title	Description
13-2099	Financial Specialists, All Other	All financial specialists not listed separately.
13-2099	Financial Quantitative Analysts	Develop quantitative techniques to inform securities investing, equities investing, pricing, or valuation of financial instruments. Develop mathematical or statistical models for risk management, asset optimization, pricing, or relative value analysis.
13-2099	Fraud Examiners, Investigators and Analysts	Obtain evidence, take statements, produce reports, and testify to findings regarding resolution of fraud allegations. May coordinate fraud detection and prevention activities.

Computer and Mathematical Occupations

15-1211	Computer Systems Analysts	Analyze science, engineering, business, and other data processing problems to develop and implement solutions to complex applications problems, system administration issues, or network concerns. Perform systems management and integration functions, improve existing computer systems, and review computer system capabilities, workflow, and schedule limitations. May analyze or recommend commercially available software.
15-1211	Health Informatics Specialists	Apply knowledge of nursing and informatics to assist in the design, development, and ongoing modification of computerized health care systems. May educate staff and assist in problem solving to promote the implementation of the health care system.
15-1212	Information Security Analysts	Plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. Assess system vulnerabilities for security risks and propose and implement risk mitigation strategies. May ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure. May respond to computer security breaches and viruses.
15-1221	Computer and Information Research Scientists	Conduct research into fundamental computer and information science as theorists, designers, or inventors. Develop solutions to problems in the field of computer hardware and software.
15-1231	Computer Network Support Specialists	Analyze, test, troubleshoot, and evaluate existing network systems, such as local area networks (LAN), wide area networks (WAN), cloud networks, servers, and other data communications networks. Perform network maintenance to ensure networks operate correctly with minimal interruption.
15-1232	Computer User Support Specialists	Provide technical assistance to computer users. Answer questions or resolve computer problems for clients in person, via telephone, or electronically. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.
15-1241	Computer Network Architects	Design and implement computer and information networks, such as local area networks (LAN), wide area networks (WAN), intranets, extranets, and other data communications networks. Perform network modeling, analysis, and planning, including analysis of capacity needs for network infrastructures. May also design network and computer security measures. May research and recommend network and data communications hardware and software.
15-1241	Telecommunications Engineering Specialists	Design or configure wired, wireless, and satellite communications systems for voice, video, and data services. Supervise installation, service, and maintenance.

O*NET- SOC Code	Title	Description
15-1242	Database Administrators	Administer, test, and implement computer databases, applying knowledge of database management systems. Coordinate changes to computer databases. Identify, investigate, and resolve database performance issues, database capacity, and database scalability. May plan, coordinate, and implement security measures to safeguard computer databases.
15-1243	Database Architects	Design strategies for enterprise databases, data warehouse systems, and multidimensional networks. Set standards for database operations, programming, query processes, and security. Model, design, and construct large relational databases or data warehouses. Create and optimize data models for warehouse infrastructure and workflow. Integrate new systems with existing warehouse structure and refine system performance and functionality.
15-1243	Data Warehousing Specialists	Design, model, or implement corporate data warehousing activities. Program and configure warehouses of database information and provide support to warehouse users.
15-1244	Network and Computer Systems Administrators	Install, configure, and maintain an organization's local area network (LAN), wide area network (WAN), data communications network, operating systems, and physical and virtual servers. Perform system monitoring and verify the integrity and availability of hardware, network, and server resources and systems. Review system and application logs and verify completion of scheduled jobs, including system backups. Analyze network and server resource consumption and control user access. Install and upgrade software and maintain software licenses. May assist in network modeling, analysis, planning, and coordination between network and data communications hardware and software.
15-1251	Computer Programmers	Create, modify, and test the code and scripts that allow computer applications to run. Work from specifications drawn up by software and web developers or other individuals. May develop and write computer programs to store, locate, and retrieve specific documents, data, and information.
15-1252	Software Developers	Research, design, and develop computer and network software or specialized utility programs. Analyze user needs and develop software solutions, applying principles and techniques of computer science, engineering, and mathematical analysis. Update software or enhance existing software capabilities. May work with computer hardware engineers to integrate hardware and software systems, and develop specifications and performance requirements. May maintain databases within an application area, working individually or coordinating database development as part of a team.
15-1253	Software Quality Assurance Analysts and Testers	Develop and execute software tests to identify software problems and their causes. Test system modifications to prepare for implementation. Document software and application defects using a bug tracking system and report defects to software or web developers. Create and maintain databases of known defects. May participate in software design reviews to provide input on functional requirements, operational characteristics, product designs, and schedules.
15-1254	Web Developers	Develop and implement websites, web applications, application databases, and interactive web interfaces. Evaluate code to ensure that it is properly structured, meets industry standards, and is compatible with browsers and devices. Optimize website performance, scalability, and server-side code and processes. May develop website infrastructure and integrate websites with other computer applications.

O*NET- SOC Code	Title	Description
15-1255	Web and Digital Interface Designers	Design digital user interfaces or websites. Develop and test layouts, interfaces, functionality, and navigation menus to ensure compatibility and usability across browsers or devices. May use web framework applications as well as client-side code and processes. May evaluate web design following web and accessibility standards, and may analyze web use metrics and optimize websites for marketability and search engine ranking. May design and test interfaces that facilitate the human-computer interaction and maximize the usability of digital devices, websites, and software with a focus on aesthetics and design. May create graphics used in websites and manage website content and links.
15-1255	Video Game Designers	Design core features of video games. Specify innovative game and role-play mechanics, story lines, and character biographies. Create and maintain design documentation. Guide and collaborate with production staff to produce games as designed.
15-1299	Computer Occupations, All Other	All computer occupations not listed separately.
15-1299	Web Administrators	Manage web environment design, deployment, development and maintenance activities. Perform testing and quality assurance of web sites and web applications.
15-1299	Geographic Information Systems Technologists and Technicians	Assist scientists or related professionals in building, maintaining, modifying, or using geographic information systems (GIS) databases. May also perform some custom application development or provide user support.
15-1299	Document Management Specialists	Implement and administer enterprise-wide document management systems and related procedures that allow organizations to capture, store, retrieve, share, and destroy electronic records and documents.
15-1299	Penetration Testers	Evaluate network system security by conducting simulated internal and external cyberattacks using adversary tools and techniques. Attempt to breach and exploit critical systems and gain access to sensitive information to assess system security.
15-1299	Information Security Engineers	Develop and oversee the implementation of information security procedures and policies. Build, maintain and upgrade security technology, such as firewalls, for the safe use of computer networks and the transmission and retrieval of information. Design and implement appropriate security controls to identify vulnerabilities and protect digital files and electronic infrastructures. Monitor and respond to computer security breaches, viruses, and intrusions, and perform forensic investigation. May oversee the assessment of information security systems.
15-1299	Digital Forensics Analysts	Conduct investigations on computer-based crimes establishing documentary or physical evidence, such as digital media and logs associated with cyber intrusion incidents. Analyze digital evidence and investigate computer security incidents to derive information in support of system and network vulnerability mitigation. Preserve and present computer-related evidence in support of criminal, fraud, counterintelligence, or law enforcement investigations.
15-1299	Blockchain Engineers	Maintain and support distributed and decentralized blockchain-based networks or block-chain applications such as cryptocurrency exchange, payment processing, document sharing, and digital voting. Design and deploy secure block-chain design patterns and solutions over geographically distributed networks using advanced technologies. May assist with infrastructure setup and testing for application transparency and security.

O*NET- SOC Code	Title	Description
15-1299	Computer Systems Engineers/Architects	Design and develop solutions to complex applications problems, system administration issues, or network concerns. Perform systems management and integration functions.
15-1299	Information Technology Project Managers	Plan, initiate, and manage information technology (IT) projects. Lead and guide the work of technical staff. Serve as liaison between business and technical aspects of projects. Plan project stages and assess business implications for each stage. Monitor progress to assure deadlines, standards, and cost targets are met.
15-2011	Actuaries	Analyze statistical data, such as mortality, accident, sickness, disability, and retirement rates and construct probability tables to forecast risk and liability for payment of future benefits. May ascertain insurance rates required and cash reserves necessary to ensure payment of future benefits.
15-2021	Mathematicians	Conduct research in fundamental mathematics or in application of mathematical techniques to science, management, and other fields. Solve problems in various fields using mathematical methods.
15-2031	Operations Research Analysts	Formulate and apply mathematical modeling and other optimizing methods to develop and interpret information that assists management with decisionmaking, policy formulation, or other managerial functions. May collect and analyze data and develop decision support software, services, or products. May develop and supply optimal time, cost, or logistics networks for program evaluation, review, or implementation.
15-2041	Statisticians	Develop or apply mathematical or statistical theory and methods to collect, organize, interpret, and summarize numerical data to provide usable information. May specialize in fields such as biostatistics, agricultural statistics, business statistics, or economic statistics. Includes mathematical and survey statisticians.
15-2041	Biostatisticians	Develop and apply biostatistical theory and methods to the study of life sciences.
15-2051	Data Scientists	Develop and implement a set of techniques or analytics applications to transform raw data into meaningful information using data-oriented programming languages and visualization software. Apply data mining, data modeling, natural language processing, and machine learning to extract and analyze information from large structured and unstructured datasets. Visualize, interpret, and report data findings. May create dynamic data reports.
15-2051	Business Intelligence Analysts	Produce financial and market intelligence by querying data repositories and generating periodic reports. Devise methods for identifying data patterns and trends in available information sources.
15-2051	Clinical Data Managers	Apply knowledge of health care and database management to analyze clinical data, and to identify and report trends.
15-2099	Mathematical Science Occupations, All Other	All mathematical scientists not listed separately.
15-2099	Bioinformatics Technicians	Apply principles and methods of bioinformatics to assist scientists in areas such as pharmaceuticals, medical technology, biotechnology, computational biology, proteomics, computer information science, biology and medical informatics. Apply bioinformatics tools to visualize, analyze, manipulate or interpret molecular data. May build and maintain databases for processing and analyzing genomic or other biological information.

O*NET- SOC Code	Title	Description
Architecture and Engineering Occupations		
17-1011	Architects, Except Landscape and Naval	Plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property.
17-1012	Landscape Architects	Plan and design land areas for projects such as parks and other recreational facilities, airports, highways, hospitals, schools, land subdivisions, and commercial, industrial, and residential sites.
17-1021	Cartographers and Photogrammetrists	Research, study, and prepare maps and other spatial data in digital or graphic form for one or more purposes, such as legal, social, political, educational, and design purposes. May work with Geographic Information Systems (GIS). May design and evaluate algorithms, data structures, and user interfaces for GIS and mapping systems. May collect, analyze, and interpret geographic information provided by geodetic surveys, aerial photographs, and satellite data.
17-1022	Surveyors	Make exact measurements and determine property boundaries. Provide data relevant to the shape, contour, gravitation, location, elevation, or dimension of land or land features on or near the earth's surface for engineering, mapmaking, mining, land evaluation, construction, and other purposes.
17-1022	Geodetic Surveyors	Measure large areas of the Earth's surface using satellite observations, global navigation satellite systems (GNSS), light detection and ranging (LIDAR), or related sources.
17-2011	Aerospace Engineers	Perform engineering duties in designing, constructing, and testing aircraft, missiles, and spacecraft. May conduct basic and applied research to evaluate adaptability of materials and equipment to aircraft design and manufacture. May recommend improvements in testing equipment and techniques.
17-2021	Agricultural Engineers	Apply knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing of agricultural products.
17-2031	Bioengineers and Biomedical Engineers	Apply knowledge of engineering, biology, chemistry, computer science, and biomechanical principles to the design, development, and evaluation of biological, agricultural, and health systems and products, such as artificial organs, prostheses, instrumentation, medical information systems, and health management and care delivery systems.
17-2041	Chemical Engineers	Design chemical plant equipment and devise processes for manufacturing chemicals and products, such as gasoline, synthetic rubber, plastics, detergents, cement, paper, and pulp, by applying principles and technology of chemistry, physics, and engineering.
17-2051	Civil Engineers	Perform engineering duties in planning, designing, and overseeing construction and maintenance of building structures and facilities, such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, and water and sewage systems.
17-2051	Transportation Engineers	Develop plans for surface transportation projects, according to established engineering standards and state or federal construction policy. Prepare designs, specifications, or estimates for transportation facilities. Plan modifications of existing streets, highways, or freeways to improve traffic flow.

O*NET- SOC Code	Title	Description
17-2051	Water/Wastewater Engineers	Design or oversee projects involving provision of potable water, disposal of wastewater and sewage, or prevention of flood-related damage. Prepare environmental documentation for water resources, regulatory program compliance, data management and analysis, and field work. Perform hydraulic modeling and pipeline design.
17-2061	Computer Hardware Engineers	Research, design, develop, or test computer or computer-related equipment for commercial, industrial, military, or scientific use. May supervise the manufacturing and installation of computer or computer-related equipment and components.
17-2071	Electrical Engineers	Research, design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use.
17-2072	Electronics Engineers, Except Computer	Research, design, develop, or test electronic components and systems for commercial, industrial, military, or scientific use employing knowledge of electronic theory and materials properties. Design electronic circuits and components for use in fields such as telecommunications, aerospace guidance and propulsion control, acoustics, or instruments and controls.
17-2072	Radio Frequency Identification Device Specialists	Design and implement radio frequency identification device (RFID) systems used to track shipments or goods.
17-2081	Environmental Engineers	Research, design, plan, or perform engineering duties in the prevention, control, and remediation of environmental hazards using various engineering disciplines. Work may include waste treatment, site remediation, or pollution control technology.
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	Promote worksite or product safety by applying knowledge of industrial processes, mechanics, chemistry, psychology, and industrial health and safety laws. Includes industrial product safety engineers.
17-2111	Fire-Prevention and Protection Engineers	Research causes of fires, determine fire protection methods, and design or recommend materials or equipment such as structural components or fire-detection equipment to assist organizations in safeguarding life and property against fire, explosion, and related hazards.
17-2112	Industrial Engineers	Design, develop, test, and evaluate integrated systems for managing industrial production processes, including human work factors, quality control, inventory control, logistics and material flow, cost analysis, and production coordination.
17-2112	Human Factors Engineers and Ergonomists	Design objects, facilities, and environments to optimize human well-being and overall system performance, applying theory, principles, and data regarding the relationship between humans and respective technology. Investigate and analyze characteristics of human behavior and performance as it relates to the use of technology.
17-2112	Validation Engineers	Design or plan protocols for equipment or processes to produce products meeting internal and external purity, safety, and quality requirements.
17-2112	Manufacturing Engineers	Design, integrate, or improve manufacturing systems or related processes. May work with commercial or industrial designers to refine product designs to increase producibility and decrease costs.
17-2121	Marine Engineers and Naval Architects	Design, develop, and evaluate the operation of marine vessels, ship machinery, and related equipment, such as power supply and propulsion systems.

O*NET- SOC Code	Title	Description
17-2131	Materials Engineers	Evaluate materials and develop machinery and processes to manufacture materials for use in products that must meet specialized design and performance specifications. Develop new uses for known materials. Includes those engineers working with composite materials or specializing in one type of material, such as graphite, metal and metal alloys, ceramics and glass, plastics and polymers, and naturally occurring materials. Includes metallurgists and metallurgical engineers, ceramic engineers, and welding engineers.
17-2141	Mechanical Engineers	Perform engineering duties in planning and designing tools, engines, machines, and other mechanically functioning equipment. Oversee installation, operation, maintenance, and repair of equipment such as centralized heat, gas, water, and steam systems.
17-2141	Fuel Cell Engineers	Design, evaluate, modify, or construct fuel cell components or systems for transportation, stationary, or portable applications.
17-2141	Automotive Engineers	Develop new or improved designs for vehicle structural members, engines, transmissions, or other vehicle systems, using computer-assisted design technology. Direct building, modification, or testing of vehicle or components.
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	Conduct subsurface surveys to identify the characteristics of potential land or mining development sites. May specify the ground support systems, processes, and equipment for safe, economical, and environmentally sound extraction or underground construction activities. May inspect areas for unsafe geological conditions, equipment, and working conditions. May design, implement, and coordinate mine safety programs.
17-2161	Nuclear Engineers	Conduct research on nuclear engineering projects or apply principles and theory of nuclear science to problems concerned with release, control, and use of nuclear energy and nuclear waste disposal.
17-2171	Petroleum Engineers	Devise methods to improve oil and gas extraction and production and determine the need for new or modified tool designs. Oversee drilling and offer technical advice.
17-2199	Engineers, All Other	All engineers not listed separately.
17-2199	Energy Engineers, Except Wind and Solar	Design, develop, or evaluate energy-related projects or programs to reduce energy costs or improve energy efficiency during the designing, building, or remodeling stages of construction. May specialize in electrical systems; heating, ventilation, and air-conditioning (HVAC) systems; green buildings; lighting; air quality; or energy procurement.
17-2199	Mechatronics Engineers	Research, design, develop, or test automation, intelligent systems, smart devices, or industrial systems control.
17-2199	Microsystems Engineers	Research, design, develop, or test microelectromechanical systems (MEMS) devices.
17-2199	Photonics Engineers	Design technologies specializing in light information or light energy, such as laser or fiber optics technology.
17-2199	Robotics Engineers	Research, design, develop, or test robotic applications.
17-2199	Nanosystems Engineers	Design, develop, or supervise the production of materials, devices, or systems of unique molecular or macromolecular composition, applying principles of nanoscale physics and electrical, chemical, or biological engineering.
17-2199	Wind Energy Engineers	Design underground or overhead wind farm collector systems and prepare and develop site specifications.

O*NET- SOC Code	Title	Description
17-2199	Solar Energy Systems Engineers	Perform site-specific engineering analysis or evaluation of energy efficiency and solar projects involving residential, commercial, or industrial customers. Design solar domestic hot water and space heating systems for new and existing structures, applying knowledge of structural energy requirements, local climates, solar technology, and thermodynamics.
17-3011	Architectural and Civil Drafters	Prepare detailed drawings of architectural and structural features of buildings or drawings and topographical relief maps used in civil engineering projects, such as highways, bridges, and public works. Use knowledge of building materials, engineering practices, and mathematics to complete drawings.
17-3012	Electrical and Electronics Drafters	Prepare wiring diagrams, circuit board assembly diagrams, and layout drawings used for the manufacture, installation, or repair of electrical equipment.
17-3013	Mechanical Drafters	Prepare detailed working diagrams of machinery and mechanical devices, including dimensions, fastening methods, and other engineering information.
17-3019	Drafters, All Other	All drafters not listed separately.
17-3021	Aerospace Engineering and Operations Technologists and Technicians	Operate, install, adjust, and maintain integrated computer/communications systems, consoles, simulators, and other data acquisition, test, and measurement instruments and equipment, which are used to launch, track, position, and evaluate air and space vehicles. May record and interpret test data.
17-3022	Civil Engineering Technologists and Technicians	Apply theory and principles of civil engineering in planning, designing, and overseeing construction and maintenance of structures and facilities under the direction of engineering staff or physical scientists.
17-3023	Electrical and Electronic Engineering Technologists and Technicians	Apply electrical and electronic theory and related knowledge, usually under the direction of engineering staff, to design, build, repair, adjust, and modify electrical components, circuitry, controls, and machinery for subsequent evaluation and use by engineering staff in making engineering design decisions.
17-3024	Electro-Mechanical and Mechatronics Technologists and Technicians	Operate, test, maintain, or adjust unmanned, automated, servomechanical, or electromechanical equipment. May operate unmanned submarines, aircraft, or other equipment to observe or record visual information at sites such as oil rigs, crop fields, buildings, or for similar infrastructure, deep ocean exploration, or hazardous waste removal. May assist engineers in testing and designing robotics equipment.
17-3024	Robotics Technicians	Build, install, test, or maintain robotic equipment or related automated production systems.
17-3025	Environmental Engineering Technologists and Technicians	Apply theory and principles of environmental engineering to modify, test, and operate equipment and devices used in the prevention, control, and remediation of environmental problems, including waste treatment and site remediation, under the direction of engineering staff or scientists. May assist in the development of environmental remediation devices.
17-3026	Industrial Engineering Technologists and Technicians	Apply engineering theory and principles to problems of industrial layout or manufacturing production, usually under the direction of engineering staff. May perform time and motion studies on worker operations in a variety of industries for purposes such as establishing standard production rates or improving efficiency.

O*NET- SOC Code	Title	Description
17-3026	Nanotechnology Engineering Technologists and Technicians	Implement production processes and operate commercial-scale production equipment to produce, test, or modify materials, devices, or systems of unique molecular or macromolecular composition. Operate advanced microscopy equipment to manipulate nanoscale objects. Work under the supervision of nanoengineering staff.
17-3027	Mechanical Engineering Technologists and Technicians	Apply theory and principles of mechanical engineering to modify, develop, test, or adjust machinery and equipment under direction of engineering staff or physical scientists.
17-3027	Automotive Engineering Technicians	Assist engineers in determining the practicality of proposed product design changes and plan and carry out tests on experimental test devices or equipment for performance, durability, or efficiency.
17-3028	Calibration Technologists and Technicians	Execute or adapt procedures and techniques for calibrating measurement devices, by applying knowledge of measurement science, mathematics, physics, chemistry, and electronics, sometimes under the direction of engineering staff. Determine measurement standard suitability for calibrating measurement devices. May perform preventive maintenance on equipment. May perform corrective actions to address identified calibration problems.
17-3029	Engineering Technologists and Technicians, Except Drafters, All Other	All engineering technologists and technicians, except drafters, not listed separately.
17-3029	Non-Destructive Testing Specialists	Test the safety of structures, vehicles, or vessels using x-ray, ultrasound, fiber optic or related equipment.
17-3029	Photonics Technicians	Build, install, test, or maintain optical or fiber optic equipment, such as lasers, lenses, or mirrors, using spectrometers, interferometers, or related equipment.
17-3031	Surveying and Mapping Technicians	Perform surveying and mapping duties, usually under the direction of an engineer, surveyor, cartographer, or photogrammetrist, to obtain data used for construction, mapmaking, boundary location, mining, or other purposes. May calculate mapmaking information and create maps from source data, such as surveying notes, aerial photography, satellite data, or other maps to show topographical features, political boundaries, and other features. May verify accuracy and completeness of maps.

Life, Physical, and Social Science Occupations

19-1011	Animal Scientists	Conduct research in the genetics, nutrition, reproduction, growth, and development of domestic farm animals.
19-1012	Food Scientists and Technologists	Use chemistry, microbiology, engineering, and other sciences to study the principles underlying the processing and deterioration of foods; analyze food content to determine levels of vitamins, fat, sugar, and protein; discover new food sources; research ways to make processed foods safe, palatable, and healthful; and apply food science knowledge to determine best ways to process, package, preserve, store, and distribute food.
19-1013	Soil and Plant Scientists	Conduct research in breeding, physiology, production, yield, and management of crops and agricultural plants or trees, shrubs, and nursery stock, their growth in soils, and control of pests; or study the chemical, physical, biological, and mineralogical composition of soils as they relate to plant or crop growth. May classify and map soils and investigate effects of alternative practices on soil and crop productivity.

O*NET- SOC Code	Title	Description
19-1021	Biochemists and Biophysicists	Study the chemical composition or physical principles of living cells and organisms, their electrical and mechanical energy, and related phenomena. May conduct research to further understanding of the complex chemical combinations and reactions involved in metabolism, reproduction, growth, and heredity. May determine the effects of foods, drugs, serums, hormones, and other substances on tissues and vital processes of living organisms.
19-1022	Microbiologists	Investigate the growth, structure, development, and other characteristics of microscopic organisms, such as bacteria, algae, or fungi. Includes medical microbiologists who study the relationship between organisms and disease or the effects of antibiotics on microorganisms.
19-1023	Zoologists and Wildlife Biologists	Study the origins, behavior, diseases, genetics, and life processes of animals and wildlife. May specialize in wildlife research and management. May collect and analyze biological data to determine the environmental effects of present and potential use of land and water habitats.
19-1029	Biological Scientists, All Other	All biological scientists not listed separately.
19-1029	Bioinformatics Scientists	Conduct research using bioinformatics theory and methods in areas such as pharmaceuticals, medical technology, biotechnology, computational biology, proteomics, computer information science, biology and medical informatics. May design databases and develop algorithms for processing and analyzing genomic information, or other biological information.
19-1029	Molecular and Cellular Biologists	Research and study cellular molecules and organelles to understand cell function and organization.
19-1029	Geneticists	Research and study the inheritance of traits at the molecular, organism or population level. May evaluate or treat patients with genetic disorders.
19-1029	Biologists	Research or study basic principles of plant and animal life, such as origin, relationship, development, anatomy, and functions.
19-1031	Conservation Scientists	Manage, improve, and protect natural resources to maximize their use without damaging the environment. May conduct soil surveys and develop plans to eliminate soil erosion or to protect rangelands. May instruct farmers, agricultural production managers, or ranchers in best ways to use crop rotation, contour plowing, or terracing to conserve soil and water; in the number and kind of livestock and forage plants best suited to particular ranges; and in range and farm improvements, such as fencing and reservoirs for stock watering.
19-1031	Range Managers	Research or study range land management practices to provide sustained production of forage, livestock, and wildlife.
19-1031	Park Naturalists	Plan, develop, and conduct programs to inform public of historical, natural, and scientific features of national, state, or local park.
19-1032	Foresters	Manage public and private forested lands for economic, recreational, and conservation purposes. May inventory the type, amount, and location of standing timber, appraise the timber's worth, negotiate the purchase, and draw up contracts for procurement. May determine how to conserve wildlife habitats, creek beds, water quality, and soil stability, and how best to comply with environmental regulations. May devise plans for planting and growing new trees, monitor trees for healthy growth, and determine optimal harvesting schedules.
19-1041	Epidemiologists	Investigate and describe the determinants and distribution of disease, disability, or health outcomes. May develop the means for prevention and control.

O*NET- SOC Code	Title	Description
19-1042	Medical Scientists, Except Epidemiologists	Conduct research dealing with the understanding of human diseases and the improvement of human health. Engage in clinical investigation, research and development, or other related activities.
19-1099	Life Scientists, All Other	All life scientists not listed separately.
19-2011	Astronomers	Observe, research, and interpret astronomical phenomena to increase basic knowledge or apply such information to practical problems.
19-2012	Physicists	Conduct research into physical phenomena, develop theories on the basis of observation and experiments, and devise methods to apply physical laws and theories.
19-2021	Atmospheric and Space Scientists	Investigate atmospheric phenomena and interpret meteorological data, gathered by surface and air stations, satellites, and radar to prepare reports and forecasts for public and other uses. Includes weather analysts and forecasters whose functions require the detailed knowledge of meteorology.
19-2031	Chemists	Conduct qualitative and quantitative chemical analyses or experiments in laboratories for quality or process control or to develop new products or knowledge.
19-2032	Materials Scientists	Research and study the structures and chemical properties of various natural and synthetic or composite materials, including metals, alloys, rubber, ceramics, semiconductors, polymers, and glass. Determine ways to strengthen or combine materials or develop new materials with new or specific properties for use in a variety of products and applications. Includes glass scientists, ceramic scientists, metallurgical scientists, and polymer scientists.
19-2041	Environmental Scientists and Specialists, Including Health	Conduct research or perform investigation for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or public health. Using knowledge of various scientific disciplines, may collect, synthesize, study, report, and recommend action based on data derived from measurements or observations of air, food, soil, water, and other sources.
19-2041	Climate Change Policy Analysts	Research and analyze policy developments related to climate change. Make climate-related recommendations for actions such as legislation, awareness campaigns, or fundraising approaches.
19-2041	Environmental Restoration Planners	Collaborate with field and biology staff to oversee the implementation of restoration projects and to develop new products. Process and synthesize complex scientific data into practical strategies for restoration, monitoring or management.
19-2041	Industrial Ecologists	Apply principles and processes of natural ecosystems to develop models for efficient industrial systems. Use knowledge from the physical and social sciences to maximize effective use of natural resources in the production and use of goods and services. Examine societal issues and their relationship with both technical systems and the environment.
19-2042	Geoscientists, Except Hydrologists and Geographers	Study the composition, structure, and other physical aspects of the Earth. May use geological, physics, and mathematics knowledge in exploration for oil, gas, minerals, or underground water; or in waste disposal, land reclamation, or other environmental problems. May study the Earth's internal composition, atmospheres, and oceans, and its magnetic, electrical, and gravitational forces. Includes mineralogists, paleontologists, stratigraphers, geodesists, and seismologists.
19-2043	Hydrologists	Research the distribution, circulation, and physical properties of underground and surface waters; and study the form and intensity of precipitation and its rate of infiltration into the soil, movement through the earth, and return to the ocean and atmosphere.

O*NET- SOC Code	Title	Description
19-2099	Physical Scientists, All Other	All physical scientists not listed separately.
19-2099	Remote Sensing Scientists and Technologists	Apply remote sensing principles and methods to analyze data and solve problems in areas such as natural resource management, urban planning, or homeland security. May develop new sensor systems, analytical techniques, or new applications for existing systems.
19-3011	Economists	Conduct research, prepare reports, or formulate plans to address economic problems related to the production and distribution of goods and services or monetary and fiscal policy. May collect and process economic and statistical data using sampling techniques and econometric methods.
19-3011	Environmental Economists	Conduct economic analysis related to environmental protection and use of the natural environment, such as water, air, land, and renewable energy resources. Evaluate and quantify benefits, costs, incentives, and impacts of alternative options using economic principles and statistical techniques.
19-3022	Survey Researchers	Plan, develop, or conduct surveys. May analyze and interpret the meaning of survey data, determine survey objectives, or suggest or test question wording. Includes social scientists who primarily design questionnaires or supervise survey teams.
19-3032	Industrial-Organizational Psychologists	Apply principles of psychology to human resources, administration, management, sales, and marketing problems. Activities may include policy planning; employee testing and selection, training, and development; and organizational development and analysis. May work with management to organize the work setting to improve worker productivity.
19-3033	Clinical and Counseling Psychologists	Assess, diagnose, and treat mental and emotional disorders of individuals through observation, interview, and psychological tests. Help individuals with distress or maladjustment understand their problems through their knowledge of case history, interviews with patients, and theory. Provide individual or group counseling services to assist individuals in achieving more effective personal, social, educational, and vocational development and adjustment. May design behavior modification programs and consult with medical personnel regarding the best treatment for patients.
19-3034	School Psychologists	Diagnose and implement individual or schoolwide interventions or strategies to address educational, behavioral, or developmental issues that adversely impact educational functioning in a school. May address student learning and behavioral problems and counsel students or families. May design and implement performance plans, and evaluate performance. May consult with other school-based personnel.
19-3039	Psychologists, All Other	All psychologists not listed separately.
19-3039	Neuropsychologists	Apply theories and principles of neuropsychology to evaluate and diagnose disorders of higher cerebral functioning, often in research and medical settings. Study the human brain and the effect of physiological states on human cognition and behavior. May formulate and administer programs of treatment.
19-3039	Clinical Neuropsychologists	Assess and diagnose patients with neurobehavioral problems related to acquired or developmental disorders of the nervous system, such as neurodegenerative disorders, traumatic brain injury, seizure disorders, and learning disabilities. Recommend treatment after diagnosis, such as therapy, medication, or surgery. Assist with evaluation before and after neurosurgical procedures, such as deep brain stimulation.

O*NET- SOC Code	Title	Description
19-3041	Sociologists	Study human society and social behavior by examining the groups and social institutions that people form, as well as various social, religious, political, and business organizations. May study the behavior and interaction of groups, trace their origin and growth, and analyze the influence of group activities on individual members.
19-3051	Urban and Regional Planners	Develop comprehensive plans and programs for use of land and physical facilities of jurisdictions, such as towns, cities, counties, and metropolitan areas.
19-3091	Anthropologists and Archeologists	Study the origin, development, and behavior of human beings. May study the way of life, language, or physical characteristics of people in various parts of the world. May engage in systematic recovery and examination of material evidence, such as tools or pottery remaining from past human cultures, in order to determine the history, customs, and living habits of earlier civilizations.
19-3092	Geographers	Study the nature and use of areas of the Earth's surface, relating and interpreting interactions of physical and cultural phenomena. Conduct research on physical aspects of a region, including land forms, climates, soils, plants, and animals, and conduct research on the spatial implications of human activities within a given area, including social characteristics, economic activities, and political organization, as well as researching interdependence between regions at scales ranging from local to global.
19-3093	Historians	Research, analyze, record, and interpret the past as recorded in sources, such as government and institutional records, newspapers and other periodicals, photographs, interviews, films, electronic media, and unpublished manuscripts, such as personal diaries and letters.
19-3094	Political Scientists	Study the origin, development, and operation of political systems. May study topics, such as public opinion, political decisionmaking, and ideology. May analyze the structure and operation of governments, as well as various political entities. May conduct public opinion surveys, analyze election results, or analyze public documents.
19-3099	Social Scientists and Related Workers, All Other	All social scientists and related workers not listed separately.
19-3099	Transportation Planners	Prepare studies for proposed transportation projects. Gather, compile, and analyze data. Study the use and operation of transportation systems. Develop transportation models or simulations.
19-4012	Agricultural Technicians	Work with agricultural scientists in plant, fiber, and animal research, or assist with animal breeding and nutrition. Set up or maintain laboratory equipment and collect samples from crops or animals. Prepare specimens or record data to assist scientists in biology or related life science experiments. Conduct tests and experiments to improve yield and quality of crops or to increase the resistance of plants and animals to disease or insects.
19-4012	Precision Agriculture Technicians	Apply geospatial technologies, including geographic information systems (GIS) and Global Positioning System (GPS), to agricultural production or management activities, such as pest scouting, site-specific pesticide application, yield mapping, or variable-rate irrigation. May use computers to develop or analyze maps or remote sensing images to compare physical topography with data on soils, fertilizer, pests, or weather.

O*NET- SOC Code	Title	Description
19-4013	Food Science Technicians	Work with food scientists or technologists to perform standardized qualitative and quantitative tests to determine physical or chemical properties of food or beverage products. Includes technicians who assist in research and development of production technology, quality control, packaging, processing, and use of foods.
19-4021	Biological Technicians	Assist biological and medical scientists. Set up, operate, and maintain laboratory instruments and equipment, monitor experiments, collect data and samples, make observations, and calculate and record results. May analyze organic substances, such as blood, food, and drugs.
19-4031	Chemical Technicians	Conduct chemical and physical laboratory tests to assist scientists in making qualitative and quantitative analyses of solids, liquids, and gaseous materials for research and development of new products or processes, quality control, maintenance of environmental standards, and other work involving experimental, theoretical, or practical application of chemistry and related sciences.
19-4042	Environmental Science and Protection Technicians, Including Health	Perform laboratory and field tests to monitor the environment and investigate sources of pollution, including those that affect health, under the direction of an environmental scientist, engineer, or other specialist. May collect samples of gases, soil, water, and other materials for testing.
19-4043	Geological Technicians, Except Hydrologic Technicians	Assist scientists or engineers in the use of electronic, sonic, or nuclear measuring instruments in laboratory, exploration, and production activities to obtain data indicating resources such as metallic ore, minerals, gas, coal, or petroleum. Analyze mud and drill cuttings. Chart pressure, temperature, and other characteristics of wells or bore holes.
19-4044	Hydrologic Technicians	Collect and organize data concerning the distribution and circulation of ground and surface water, and data on its physical, chemical, and biological properties. Measure and report on flow rates and ground water levels, maintain field equipment, collect water samples, install and collect sampling equipment, and process samples for shipment to testing laboratories. May collect data on behalf of hydrologists, engineers, developers, government agencies, or agriculture.
19-4051	Nuclear Technicians	Assist nuclear physicists, nuclear engineers, or other scientists in laboratory, power generation, or electricity production activities. May operate, maintain, or provide quality control for nuclear testing and research equipment. May monitor radiation.
19-4051	Nuclear Monitoring Technicians	Collect and test samples to monitor results of nuclear experiments and contamination of humans, facilities, and environment.
19-4061	Social Science Research Assistants	Assist social scientists in laboratory, survey, and other social science research. May help prepare findings for publication and assist in laboratory analysis, quality control, or data management.
19-4071	Forest and Conservation Technicians	Provide technical assistance regarding the conservation of soil, water, forests, or related natural resources. May compile data pertaining to size, content, condition, and other characteristics of forest tracts under the direction of foresters, or train and lead forest workers in forest propagation and fire prevention and suppression. May assist conservation scientists in managing, improving, and protecting rangelands and wildlife habitats.

O*NET- SOC Code	Title	Description
19-4092	Forensic Science Technicians	Collect, identify, classify, and analyze physical evidence related to criminal investigations. Perform tests on weapons or substances, such as fiber, hair, and tissue to determine significance to investigation. May testify as expert witnesses on evidence or crime laboratory techniques. May serve as specialists in area of expertise, such as ballistics, fingerprinting, handwriting, or biochemistry.
19-4099	Life, Physical, and Social Science Technicians, All Other	All life, physical, and social science technicians not listed separately.
19-4099	Quality Control Analysts	Conduct tests to determine quality of raw materials, bulk intermediate and finished products. May conduct stability sample tests.
19-4099	Remote Sensing Technicians	Apply remote sensing technologies to assist scientists in areas such as natural resources, urban planning, or homeland security. May prepare flight plans or sensor configurations for flight trips.
19-5011	Occupational Health and Safety Specialists	Review, evaluate, and analyze work environments and design programs and procedures to control, eliminate, and prevent disease or injury caused by chemical, physical, and biological agents or ergonomic factors. May conduct inspections and enforce adherence to laws and regulations governing the health and safety of individuals. May be employed in the public or private sector.
19-5012	Occupational Health and Safety Technicians	Collect data on work environments for analysis by occupational health and safety specialists. Implement and conduct evaluation of programs designed to limit chemical, physical, biological, and ergonomic risks to workers.

Community and Social Services Occupations

21-1011	Substance Abuse and Behavioral Disorder Counselors	Counsel and advise individuals with alcohol, tobacco, drug, or other problems, such as gambling and eating disorders. May counsel individuals, families, or groups or engage in prevention programs.
21-1012	Educational, Guidance, and Career Counselors and Advisors	Advise and assist students and provide educational and vocational guidance services.
21-1013	Marriage and Family Therapists	Diagnose and treat mental and emotional disorders, whether cognitive, affective, or behavioral, within the context of marriage and family systems. Apply psychotherapeutic and family systems theories and techniques in the delivery of services to individuals, couples, and families for the purpose of treating such diagnosed nervous and mental disorders.
21-1014	Mental Health Counselors	Counsel and advise individuals and groups to promote optimum mental and emotional health, with an emphasis on prevention. May help individuals deal with a broad range of mental health issues, such as those associated with addictions and substance abuse; family, parenting, and marital problems; stress management; self-esteem; or aging.
21-1015	Rehabilitation Counselors	Counsel individuals to maximize the independence and employability of persons coping with personal, social, and vocational difficulties that result from birth defects, illness, disease, accidents, aging, or the stress of daily life. Coordinate activities for residents of care and treatment facilities. Assess client needs and design and implement rehabilitation programs that may include personal and vocational counseling, training, and job placement.
21-1019	Counselors, All Other	All counselors not listed separately.

O*NET- SOC Code	Title	Description
21-1021	Child, Family, and School Social Workers	Provide social services and assistance to improve the social and psychological functioning of children and their families and to maximize the family well-being and the academic functioning of children. May assist parents, arrange adoptions, and find foster homes for abandoned or abused children. In schools, they address such problems as teenage pregnancy, misbehavior, and truancy. May also advise teachers.
21-1022	Healthcare Social Workers	Provide individuals, families, and groups with the psychosocial support needed to cope with chronic, acute, or terminal illnesses. Services include advising family caregivers. Provide patients with information and counseling, and make referrals for other services. May also provide case and care management or interventions designed to promote health, prevent disease, and address barriers to access to healthcare.
21-1023	Mental Health and Substance Abuse Social Workers	Assess and treat individuals with mental, emotional, or substance abuse problems, including abuse of alcohol, tobacco, and/or other drugs. Activities may include individual and group therapy, crisis intervention, case management, client advocacy, prevention, and education.
21-1029	Social Workers, All Other	All social workers not listed separately.
21-1091	Health Education Specialists	Provide and manage health education programs that help individuals, families, and their communities maximize and maintain healthy lifestyles. Use data to identify community needs prior to planning, implementing, monitoring, and evaluating programs designed to encourage healthy lifestyles, policies, and environments. May link health systems, health providers, insurers, and patients to address individual and population health needs. May serve as resource to assist individuals, other health professionals, or the community, and may administer fiscal resources for health education programs.
21-1092	Probation Officers and Correctional Treatment Specialists	Provide social services to assist in rehabilitation of law offenders in custody or on probation or parole. Make recommendations for actions involving formulation of rehabilitation plan and treatment of offender, including conditional release and education and employment stipulations.
21-1093	Social and Human Service Assistants	Assist other social and human service providers in providing client services in a wide variety of fields, such as psychology, rehabilitation, or social work, including support for families. May assist clients in identifying and obtaining available benefits and social and community services. May assist social workers with developing, organizing, and conducting programs to prevent and resolve problems relevant to substance abuse, human relationships, rehabilitation, or dependent care.
21-1094	Community Health Workers	Promote health within a community by assisting individuals to adopt healthy behaviors. Serve as an advocate for the health needs of individuals by assisting community residents in effectively communicating with healthcare providers or social service agencies. Act as liaison or advocate and implement programs that promote, maintain, and improve individual and overall community health. May deliver health-related preventive services such as blood pressure, glaucoma, and hearing screenings. May collect data to help identify community health needs.
21-1099	Community and Social Service Specialists, All Other	All community and social service specialists not listed separately.
21-2011	Clergy	Conduct religious worship and perform other spiritual functions associated with beliefs and practices of religious faith or denomination. Provide spiritual and moral guidance and assistance to members.

O*NET- SOC Code	Title	Description
21-2021	Directors, Religious Activities and Education	Coordinate or design programs and conduct outreach to promote the religious education or activities of a denominational group. May provide counseling, guidance, and leadership relative to marital, health, financial, and religious problems.
21-2099	Religious Workers, All Other	All religious workers not listed separately.

Legal Occupations

23-1011	Lawyers	Represent clients in criminal and civil litigation and other legal proceedings, draw up legal documents, or manage or advise clients on legal transactions. May specialize in a single area or may practice broadly in many areas of law.
23-1012	Judicial Law Clerks	Assist judges in court or by conducting research or preparing legal documents.
23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	Conduct hearings to recommend or make decisions on claims concerning government programs or other government-related matters. Determine liability, sanctions, or penalties, or recommend the acceptance or rejection of claims or settlements.
23-1022	Arbitrators, Mediators, and Conciliators	Facilitate negotiation and conflict resolution through dialogue. Resolve conflicts outside of the court system by mutual consent of parties involved.
23-1023	Judges, Magistrate Judges, and Magistrates	Arbitrate, advise, adjudicate, or administer justice in a court of law. May sentence defendant in criminal cases according to government statutes or sentencing guidelines. May determine liability of defendant in civil cases. May perform wedding ceremonies.
23-2011	Paralegals and Legal Assistants	Assist lawyers by investigating facts, preparing legal documents, or researching legal precedent. Conduct research to support a legal proceeding, to formulate a defense, or to initiate legal action.
23-2093	Title Examiners, Abstractors, and Searchers	Search real estate records, examine titles, or summarize pertinent legal or insurance documents or details for a variety of purposes. May compile lists of mortgages, contracts, and other instruments pertaining to titles by searching public and private records for law firms, real estate agencies, or title insurance companies.
23-2099	Legal Support Workers, All Other	All legal support workers not listed separately.

Education, Training, and Library Occupations

25-1011	Business Teachers, Postsecondary	Teach courses in business administration and management, such as accounting, finance, human resources, labor and industrial relations, marketing, and operations research. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1021	Computer Science Teachers, Postsecondary	Teach courses in computer science. May specialize in a field of computer science, such as the design and function of computers or operations and research analysis. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.

O*NET- SOC Code	Title	Description
25-1022	Mathematical Science Teachers, Postsecondary	Teach courses pertaining to mathematical concepts, statistics, and actuarial science and to the application of original and standardized mathematical techniques in solving specific problems and situations. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1031	Architecture Teachers, Postsecondary	Teach courses in architecture and architectural design, such as architectural environmental design, interior architecture/design, and landscape architecture. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1032	Engineering Teachers, Postsecondary	Teach courses pertaining to the application of physical laws and principles of engineering for the development of machines, materials, instruments, processes, and services. Includes teachers of subjects such as chemical, civil, electrical, industrial, mechanical, mineral, and petroleum engineering. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1041	Agricultural Sciences Teachers, Postsecondary	Teach courses in the agricultural sciences. Includes teachers of agronomy, dairy sciences, fisheries management, horticultural sciences, poultry sciences, range management, and agricultural soil conservation. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1042	Biological Science Teachers, Postsecondary	Teach courses in biological sciences. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1043	Forestry and Conservation Science Teachers, Postsecondary	Teach courses in forestry and conservation science. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1051	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	Teach courses in the physical sciences, except chemistry and physics. Includes both teachers primarily engaged in teaching, and those who do a combination of teaching and research.
25-1052	Chemistry Teachers, Postsecondary	Teach courses pertaining to the chemical and physical properties and compositional changes of substances. Work may include providing instruction in the methods of qualitative and quantitative chemical analysis. Includes both teachers primarily engaged in teaching, and those who do a combination of teaching and research.
25-1053	Environmental Science Teachers, Postsecondary	Teach courses in environmental science. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1054	Physics Teachers, Postsecondary	Teach courses pertaining to the laws of matter and energy. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1061	Anthropology and Archeology Teachers, Postsecondary	Teach courses in anthropology or archeology. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1062	Area, Ethnic, and Cultural Studies Teachers, Postsecondary	Teach courses pertaining to the culture and development of an area, an ethnic group, or any other group, such as Latin American studies, women's studies, or urban affairs. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1063	Economics Teachers, Postsecondary	Teach courses in economics. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.

O*NET- SOC Code	Title	Description
25-1064	Geography Teachers, Postsecondary	Teach courses in geography. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1065	Political Science Teachers, Postsecondary	Teach courses in political science, international affairs, and international relations. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1066	Psychology Teachers, Postsecondary	Teach courses in psychology, such as child, clinical, and developmental psychology, and psychological counseling. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1067	Sociology Teachers, Postsecondary	Teach courses in sociology. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1069	Social Sciences Teachers, Postsecondary, All Other	All postsecondary social sciences teachers not listed separately.
25-1071	Health Specialties Teachers, Postsecondary	Teach courses in health specialties, in fields such as dentistry, laboratory technology, medicine, pharmacy, public health, therapy, and veterinary medicine.
25-1072	Nursing Instructors and Teachers, Postsecondary	Demonstrate and teach patient care in classroom and clinical units to nursing students. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1081	Education Teachers, Postsecondary	Teach courses pertaining to education, such as counseling, curriculum, guidance, instruction, teacher education, and teaching English as a second language. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1082	Library Science Teachers, Postsecondary	Teach courses in library science. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1111	Criminal Justice and Law Enforcement Teachers, Postsecondary	Teach courses in criminal justice, corrections, and law enforcement administration. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1112	Law Teachers, Postsecondary	Teach courses in law. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1113	Social Work Teachers, Postsecondary	Teach courses in social work. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1121	Art, Drama, and Music Teachers, Postsecondary	Teach courses in drama, music, and the arts including fine and applied art, such as painting and sculpture, or design and crafts. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1122	Communications Teachers, Postsecondary	Teach courses in communications, such as organizational communications, public relations, radio/television broadcasting, and journalism. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1123	English Language and Literature Teachers, Postsecondary	Teach courses in English language and literature, including linguistics and comparative literature. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1124	Foreign Language and Literature Teachers, Postsecondary	Teach languages and literature courses in languages other than English. Includes teachers of American Sign Language (ASL). Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1125	History Teachers, Postsecondary	Teach courses in human history and historiography. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.

O*NET- SOC Code	Title	Description
25-1126	Philosophy and Religion Teachers, Postsecondary	Teach courses in philosophy, religion, and theology. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1192	Family and Consumer Sciences Teachers, Postsecondary	Teach courses in childcare, family relations, finance, nutrition, and related subjects pertaining to home management. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1193	Recreation and Fitness Studies Teachers, Postsecondary	Teach courses pertaining to recreation, leisure, and fitness studies, including exercise physiology and facilities management. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.
25-1194	Career/Technical Education Teachers, Postsecondary	Teach vocational courses intended to provide occupational training below the baccalaureate level in subjects such as construction, mechanics/repair, manufacturing, transportation, or cosmetology, primarily to students who have graduated from or left high school. Teaching takes place in public or private schools whose primary business is academic or vocational education.
25-1199	Postsecondary Teachers, All Other	All postsecondary teachers not listed separately.
25-2011	Preschool Teachers, Except Special Education	Instruct preschool-aged students, following curricula or lesson plans, in activities designed to promote social, physical, and intellectual growth.
25-2012	Kindergarten Teachers, Except Special Education	Teach academic and social skills to kindergarten students.
25-2021	Elementary School Teachers, Except Special Education	Teach academic and social skills to students at the elementary school level.
25-2022	Middle School Teachers, Except Special and Career/Technical Education	Teach one or more subjects to students at the middle, intermediate, or junior high school level.
25-2023	Career/Technical Education Teachers, Middle School	Teach occupational, vocational, career, or technical subjects to students at the middle, intermediate, or junior high school level.
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	Teach one or more subjects to students at the secondary school level.
25-2032	Career/Technical Education Teachers, Secondary School	Teach occupational, vocational, career, or technical subjects to students at the secondary school level.
25-2051	Special Education Teachers, Preschool	Teach academic, social, and life skills to preschool-aged students with learning, emotional, or physical disabilities. Includes teachers who specialize and work with students who are blind or have visual impairments; students who are deaf or have hearing impairments; and students with intellectual disabilities.
25-2055	Special Education Teachers, Kindergarten	Teach academic, social, and life skills to kindergarten students with learning, emotional, or physical disabilities. Includes teachers who specialize and work with students who are blind or have visual impairments; students who are deaf or have hearing impairments; and students with intellectual disabilities.
25-2056	Special Education Teachers, Elementary School	Teach academic, social, and life skills to elementary school students with learning, emotional, or physical disabilities. Includes teachers who specialize and work with students who are blind or have visual impairments; students who are deaf or have hearing impairments; and students with intellectual disabilities.

O*NET- SOC Code	Title	Description
25-2057	Special Education Teachers, Middle School	Teach academic, social, and life skills to middle school students with learning, emotional, or physical disabilities. Includes teachers who specialize and work with students who are blind or have visual impairments; students who are deaf or have hearing impairments; and students with intellectual disabilities.
25-2058	Special Education Teachers, Secondary School	Teach academic, social, and life skills to secondary school students with learning, emotional, or physical disabilities. Includes teachers who specialize and work with students who are blind or have visual impairments; students who are deaf or have hearing impairments; and students with intellectual disabilities.
25-2059	Special Education Teachers, All Other	All special education teachers not listed separately.
25-2059	Adapted Physical Education Specialists	Provide individualized physical education instruction or services to children, youth, or adults with exceptional physical needs due to gross motor developmental delays or other impairments.
25-3011	Adult Basic Education, Adult Secondary Education, and English as a Second Language Instructors	Teach or instruct out-of-school youths and adults in basic education, literacy, or English as a Second Language classes, or in classes for earning a high school equivalency credential.
25-3021	Self-Enrichment Teachers	Teach or instruct individuals or groups for the primary purpose of self-enrichment or recreation, rather than for an occupational objective, educational attainment, competition, or fitness.
25-3031	Substitute Teachers, Short-Term	Teach students on a short-term basis as a temporary replacement for a regular classroom teacher, typically using the regular teacher's lesson plan.
25-3041	Tutors	Instruct individual students or small groups of students in academic subjects to support formal class instruction or to prepare students for standardized or admissions tests.
25-3099	Teachers and Instructors, All Other	All teachers and instructors not listed separately.
25-4011	Archivists	Appraise, edit, and direct safekeeping of permanent records and historically valuable documents. Participate in research activities based on archival materials.
25-4012	Curators	Administer collections, such as artwork, collectibles, historic items, or scientific specimens of museums or other institutions. May conduct instructional, research, or public service activities of institution.
25-4013	Museum Technicians and Conservators	Restore, maintain, or prepare objects in museum collections for storage, research, or exhibit. May work with specimens such as fossils, skeletal parts, or botanicals; or artifacts, textiles, or art. May identify and record objects or install and arrange them in exhibits. Includes book or document conservators.
25-4022	Librarians and Media Collections Specialists	Administer and maintain libraries or collections of information, for public or private access through reference or borrowing. Work in a variety of settings, such as educational institutions, museums, and corporations, and with various types of informational materials, such as books, periodicals, recordings, films, and databases. Tasks may include acquiring, cataloging, and circulating library materials, and user services such as locating and organizing information, providing instruction on how to access information, and setting up and operating a library's media equipment.

O*NET- SOC Code	Title	Description
25-4031	Library Technicians	Assist librarians by helping readers in the use of library catalogs, databases, and indexes to locate books and other materials; and by answering questions that require only brief consultation of standard reference. Compile records; sort and shelve books or other media; remove or repair damaged books or other media; register patrons; and check materials in and out of the circulation process. Replace materials in shelving area (stacks) or files. Includes bookmobile drivers who assist with providing services in mobile libraries.
25-9021	Farm and Home Management Educators	Instruct and advise individuals and families engaged in agriculture, agricultural-related processes, or home management activities. Demonstrate procedures and apply research findings to advance agricultural and home management activities. May develop educational outreach programs. May instruct on either agricultural issues such as agricultural processes and techniques, pest management, and food safety, or on home management issues such as budgeting, nutrition, and child development.
25-9031	Instructional Coordinators	Develop instructional material, coordinate educational content, and incorporate current technology into instruction in order to provide guidelines to educators and instructors for developing curricula and conducting courses. May train and coach teachers. Includes educational consultants and specialists, and instructional material directors.
25-9042	Teaching Assistants, Preschool, Elementary, Middle, and Secondary School, Except Special Education	Assist a preschool, elementary, middle, or secondary school teacher with instructional duties. Serve in a position for which a teacher has primary responsibility for the design and implementation of educational programs and services.
25-9043	Teaching Assistants, Special Education	Assist a preschool, elementary, middle, or secondary school teacher to provide academic, social, or life skills to students who have learning, emotional, or physical disabilities. Serve in a position for which a teacher has primary responsibility for the design and implementation of educational programs and services.
25-9044	Teaching Assistants, Postsecondary	Assist faculty or other instructional staff in postsecondary institutions by performing instructional support activities, such as developing teaching materials, leading discussion groups, preparing and giving examinations, and grading examinations or papers.
25-9049	Teaching Assistants, All Other	All teaching assistants not listed separately.
25-9099	Educational Instruction and Library Workers, All Other	All educational instruction and library workers not listed separately.

Arts, Design, Entertainment, Sports and Media Occupations

27-1011	Art Directors	Formulate design concepts and presentation approaches for visual productions and media, such as print, broadcasting, video, and film. Direct workers engaged in artwork or layout design.
27-1012	Craft Artists	Create or reproduce handmade objects for sale and exhibition using a variety of techniques, such as welding, weaving, pottery, and needlecraft.
27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	Create original artwork using any of a wide variety of media and techniques.
27-1014	Special Effects Artists and Animators	Create special effects or animations using film, video, computers, or other electronic tools and media for use in products, such as computer games, movies, music videos, and commercials.
27-1019	Artists and Related Workers, All Other	All artists and related workers not listed separately.

O*NET- SOC Code	Title	Description
27-1021	Commercial and Industrial Designers	Design and develop manufactured products, such as cars, home appliances, and children's toys. Combine artistic talent with research on product use, marketing, and materials to create the most functional and appealing product design.
27-1022	Fashion Designers	Design clothing and accessories. Create original designs or adapt fashion trends.
27-1023	Floral Designers	Design, cut, and arrange live, dried, or artificial flowers and foliage.
27-1024	Graphic Designers	Design or create graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. May use a variety of mediums to achieve artistic or decorative effects.
27-1025	Interior Designers	Plan, design, and furnish the internal space of rooms or buildings. Design interior environments or create physical layouts that are practical, aesthetic, and conducive to the intended purposes. May specialize in a particular field, style, or phase of interior design.
27-1026	Merchandise Displayers and Window Trimmers	Plan and erect commercial displays, such as those in windows and interiors of retail stores and at trade exhibitions.
27-1027	Set and Exhibit Designers	Design special exhibits and sets for film, video, television, and theater productions. May study scripts, confer with directors, and conduct research to determine appropriate architectural styles.
27-1029	Designers, All Other	All designers not listed separately.
27-2011	Actors	Play parts in stage, television, radio, video, or film productions, or other settings for entertainment, information, or instruction. Interpret serious or comic role by speech, gesture, and body movement to entertain or inform audience. May dance and sing.
27-2012	Producers and Directors	Produce or direct stage, television, radio, video, or film productions for entertainment, information, or instruction. Responsible for creative decisions, such as interpretation of script, choice of actors or guests, set design, sound, special effects, and choreography.
27-2012	Media Programming Directors	Direct and coordinate activities of personnel engaged in preparation of radio or television station program schedules and programs, such as sports or news.
27-2012	Talent Directors	Audition and interview performers to select most appropriate talent for parts in stage, television, radio, or motion picture productions.
27-2012	Media Technical Directors/Managers	Coordinate activities of technical departments, such as taping, editing, engineering, and maintenance, to produce radio or television programs.
27-2021	Athletes and Sports Competitors	Compete in athletic events.
27-2022	Coaches and Scouts	Instruct or coach groups or individuals in the fundamentals of sports for the primary purpose of competition. Demonstrate techniques and methods of participation. May evaluate athletes' strengths and weaknesses as possible recruits or to improve the athletes' technique to prepare them for competition. Those required to hold teaching certifications should be reported in the appropriate teaching category.
27-2023	Umpires, Referees, and Other Sports Officials	Officiate at competitive athletic or sporting events. Detect infractions of rules and decide penalties according to established regulations. Includes all sporting officials, referees, and competition judges.
27-2031	Dancers	Perform dances. May perform on stage, for broadcasting, or for video recording.
27-2032	Choreographers	Create new dance routines. Rehearse performance of routines. May direct and stage presentations.

O*NET- SOC Code	Title	Description
27-2041	Music Directors and Composers	Conduct, direct, plan, and lead instrumental or vocal performances by musical artists or groups, such as orchestras, bands, choirs, and glee clubs; or create original works of music.
27-2042	Musicians and Singers	Play one or more musical instruments or sing. May perform on stage, for broadcasting, or for sound or video recording.
27-2091	Disc Jockeys, Except Radio	Play prerecorded music for live audiences at venues or events such as clubs, parties, or wedding receptions. May use techniques such as mixing, cutting, or sampling to manipulate recordings. May also perform as emcee (master of ceremonies).
27-2099	Entertainers and Performers, Sports and Related Workers, All Other	All entertainers and performers, sports and related workers not listed separately.
27-3011	Broadcast Announcers and Radio Disc Jockeys	Speak or read from scripted materials, such as news reports or commercial messages, on radio, television, or other communications media. May play and queue music, announce artist or title of performance, identify station, or interview guests.
27-3023	News Analysts, Reporters, and Journalists	Narrate or write news stories, reviews, or commentary for print, broadcast, or other communications media such as newspapers, magazines, radio, or television. May collect and analyze information through interview, investigation, or observation.
27-3031	Public Relations Specialists	Promote or create an intended public image for individuals, groups, or organizations. May write or select material for release to various communications media. May specialize in using social media.
27-3041	Editors	Plan, coordinate, revise, or edit written material. May review proposals and drafts for possible publication.
27-3042	Technical Writers	Write technical materials, such as equipment manuals, appendices, or operating and maintenance instructions. May assist in layout work.
27-3043	Writers and Authors	Originate and prepare written material, such as scripts, stories, advertisements, and other material.
27-3043	Poets, Lyricists and Creative Writers	Create original written works, such as scripts, essays, prose, poetry or song lyrics, for publication or performance.
27-3091	Interpreters and Translators	Interpret oral or sign language, or translate written text from one language into another.
27-3092	Court Reporters and Simultaneous Captioners	Use verbatim methods and equipment to capture, store, retrieve, and transcribe pretrial and trial proceedings or other information. Includes stenocaptioners who operate computerized stenographic captioning equipment to provide captions of live or prerecorded broadcasts for hearing-impaired viewers.
27-3099	Media and Communication Workers, All Other	All media and communication workers not listed separately.
27-4011	Audio and Video Technicians	Set up, maintain, and dismantle audio and video equipment, such as microphones, sound speakers, connecting wires and cables, sound and mixing boards, video cameras, video monitors and servers, and related electronic equipment for live or recorded events, such as concerts, meetings, conventions, presentations, podcasts, news conferences, and sporting events.
27-4012	Broadcast Technicians	Set up, operate, and maintain the electronic equipment used to acquire, edit, and transmit audio and video for radio or television programs. Control and adjust incoming and outgoing broadcast signals to regulate sound volume, signal strength, and signal clarity. Operate satellite, microwave, or other transmitter equipment to broadcast radio or television programs.

O*NET- SOC Code	Title	Description
27-4014	Sound Engineering Technicians	Assemble and operate equipment to record, synchronize, mix, edit, or reproduce sound, including music, voices, or sound effects, for theater, video, film, television, podcasts, sporting events, and other productions.
27-4015	Lighting Technicians	Set up, maintain, and dismantle light fixtures, lighting control devices, and the associated lighting electrical and rigging equipment used for photography, television, film, video, and live productions. May focus or operate light fixtures, or attach color filters or other lighting accessories.
27-4021	Photographers	Photograph people, landscapes, merchandise, or other subjects. May use lighting equipment to enhance a subject's appearance. May use editing software to produce finished images and prints. Includes commercial and industrial photographers, scientific photographers, and photojournalists.
27-4031	Camera Operators, Television, Video, and Film	Operate television, video, or film camera to record images or scenes for television, video, or film productions.
27-4032	Film and Video Editors	Edit moving images on film, video, or other media. May work with a producer or director to organize images for final production. May edit or synchronize soundtracks with images.
27-4099	Media and Communication Equipment Workers, All Other	All media and communication equipment workers not listed separately.

Healthcare Practitioner and Technical Occupations

29-1011	Chiropractors	Assess, treat, and care for patients by manipulation of spine and musculoskeletal system. May provide spinal adjustment or address sacral or pelvic misalignment.
29-1021	Dentists, General	Examine, diagnose, and treat diseases, injuries, and malformations of teeth and gums. May treat diseases of nerve, pulp, and other dental tissues affecting oral hygiene and retention of teeth. May fit dental appliances or provide preventive care.
29-1022	Oral and Maxillofacial Surgeons	Perform surgery and related procedures on the hard and soft tissues of the oral and maxillofacial regions to treat diseases, injuries, or defects. May diagnose problems of the oral and maxillofacial regions. May perform surgery to improve function or appearance.
29-1023	Orthodontists	Examine, diagnose, and treat dental malocclusions and oral cavity anomalies. Design and fabricate appliances to realign teeth and jaws to produce and maintain normal function and to improve appearance.
29-1024	Prosthodontists	Diagnose, treat, rehabilitate, design, and fit prostheses that maintain oral function, health, and appearance for patients with clinical conditions associated with teeth, oral and maxillofacial tissues, or the jaw.
29-1029	Dentists, All Other Specialists	All dentists not listed separately.
29-1031	Dietitians and Nutritionists	Plan and conduct food service or nutritional programs to assist in the promotion of health and control of disease. May supervise activities of a department providing quantity food services, counsel individuals, or conduct nutritional research.
29-1041	Optometrists	Diagnose, manage, and treat conditions and diseases of the human eye and visual system. Examine eyes and visual system, diagnose problems or impairments, prescribe corrective lenses, and provide treatment. May prescribe therapeutic drugs to treat specific eye conditions.

O*NET- SOC Code	Title	Description
29-1051	Pharmacists	Dispense drugs prescribed by physicians and other health practitioners and provide information to patients about medications and their use. May advise physicians and other health practitioners on the selection, dosage, interactions, and side effects of medications.
29-1071	Physician Assistants	Provide healthcare services typically performed by a physician, under the supervision of a physician. Conduct complete physicals, provide treatment, and counsel patients. May, in some cases, prescribe medication. Must graduate from an accredited educational program for physician assistants.
29-1071	Anesthesiologist Assistants	Assist anesthesiologists in the administration of anesthesia for surgical and non-surgical procedures. Monitor patient status and provide patient care during surgical treatment.
29-1081	Podiatrists	Diagnose and treat diseases and deformities of the human foot.
29-1122	Occupational Therapists	Assess, plan, and organize rehabilitative programs that help build or restore vocational, homemaking, and daily living skills, as well as general independence, to persons with disabilities or developmental delays. Use therapeutic techniques, adapt the individual's environment, teach skills, and modify specific tasks that present barriers to the individual.
29-1122	Low Vision Therapists, Orientation and Mobility Specialists, and Vision Rehabilitation Therapists	Provide therapy to patients with visual impairments to improve their functioning in daily life activities. May train patients in activities such as computer use, communication skills, or home management skills.
29-1123	Physical Therapists	Assess, plan, organize, and participate in rehabilitative programs that improve mobility, relieve pain, increase strength, and improve or correct disabling conditions resulting from disease or injury.
29-1124	Radiation Therapists	Provide radiation therapy to patients as prescribed by a radiation oncologist according to established practices and standards. Duties may include reviewing prescription and diagnosis; acting as liaison with physician and supportive care personnel; preparing equipment, such as immobilization, treatment, and protection devices; and maintaining records, reports, and files. May assist in dosimetry procedures and tumor localization.
29-1125	Recreational Therapists	Plan, direct, or coordinate medically-approved recreation programs for patients in hospitals, nursing homes, or other institutions. Activities include sports, trips, dramatics, social activities, and crafts. May assess a patient condition and recommend appropriate recreational activity.
29-1126	Respiratory Therapists	Assess, treat, and care for patients with breathing disorders. Assume primary responsibility for all respiratory care modalities, including the supervision of respiratory therapy technicians. Initiate and conduct therapeutic procedures; maintain patient records; and select, assemble, check, and operate equipment.
29-1127	Speech-Language Pathologists	Assess and treat persons with speech, language, voice, and fluency disorders. May select alternative communication systems and teach their use. May perform research related to speech and language problems.
29-1128	Exercise Physiologists	Assess, plan, or implement fitness programs that include exercise or physical activities such as those designed to improve cardiorespiratory function, body composition, muscular strength, muscular endurance, or flexibility.
29-1129	Therapists, All Other	All therapists not listed separately.
29-1129	Art Therapists	Plan or conduct art therapy sessions or programs to improve clients' physical, cognitive, or emotional well-being.

O*NET- SOC Code	Title	Description
29-1129	Music Therapists	Plan, organize, direct, or assess clinical and evidenced-based music therapy interventions to positively influence individuals' physical, psychological, cognitive, or behavioral status.
29-1131	Veterinarians	Diagnose, treat, or research diseases and injuries of animals. Includes veterinarians who conduct research and development, inspect livestock, or care for pets and companion animals.
29-1141	Registered Nurses	Assess patient health problems and needs, develop and implement nursing care plans, and maintain medical records. Administer nursing care to ill, injured, convalescent, or disabled patients. May advise patients on health maintenance and disease prevention or provide case management. Licensing or registration required.
29-1141	Acute Care Nurses	Provide advanced nursing care for patients with acute conditions such as heart attacks, respiratory distress syndrome, or shock. May care for pre- and post-operative patients or perform advanced, invasive diagnostic or therapeutic procedures.
29-1141	Advanced Practice Psychiatric Nurses	Assess, diagnose, and treat individuals and families with mental health or substance use disorders or the potential for such disorders. Apply therapeutic activities, including the prescription of medication, per state regulations, and the administration of psychotherapy.
29-1141	Critical Care Nurses	Provide specialized nursing care for patients in critical or coronary care units.
29-1141	Clinical Nurse Specialists	Direct nursing staff in the provision of patient care in a clinical practice setting, such as a hospital, hospice, clinic, or home. Ensure adherence to established clinical policies, protocols, regulations, and standards.
29-1151	Nurse Anesthetists	Administer anesthesia, monitor patient's vital signs, and oversee patient recovery from anesthesia. May assist anesthesiologists, surgeons, other physicians, or dentists. Must be registered nurses who have specialized graduate education.
29-1161	Nurse Midwives	Diagnose and coordinate all aspects of the birthing process, either independently or as part of a healthcare team. May provide well-woman gynecological care. Must have specialized, graduate nursing education.
29-1171	Nurse Practitioners	Diagnose and treat acute, episodic, or chronic illness, independently or as part of a healthcare team. May focus on health promotion and disease prevention. May order, perform, or interpret diagnostic tests such as lab work and x rays. May prescribe medication. Must be registered nurses who have specialized graduate education.
29-1181	Audiologists	Assess and treat persons with hearing and related disorders. May fit hearing aids and provide auditory training. May perform research related to hearing problems.
29-1211	Anesthesiologists	Administer anesthetics and analgesics for pain management prior to, during, or after surgery.
29-1212	Cardiologists	Diagnose, treat, manage, and prevent diseases or conditions of the cardiovascular system. May further subspecialize in interventional procedures (e.g., balloon angioplasty and stent placement), echocardiography, or electrophysiology.
29-1213	Dermatologists	Diagnose and treat diseases relating to the skin, hair, and nails. May perform both medical and dermatological surgery functions.
29-1214	Emergency Medicine Physicians	Make immediate medical decisions and act to prevent death or further disability. Provide immediate recognition, evaluation, care, stabilization, and disposition of patients. May direct emergency medical staff in an emergency department.

O*NET- SOC Code	Title	Description
29-1215	Family Medicine Physicians	Diagnose, treat, and provide preventive care to individuals and families across the lifespan. May refer patients to specialists when needed for further diagnosis or treatment.
29-1216	General Internal Medicine Physicians	Diagnose and provide nonsurgical treatment for a wide range of diseases and injuries of internal organ systems. Provide care mainly for adults and adolescents, and are based primarily in an outpatient care setting.
29-1217	Neurologists	Diagnose, manage, and treat disorders and diseases of the brain, spinal cord, and peripheral nerves, with a primarily nonsurgical focus.
29-1218	Obstetricians and Gynecologists	Provide medical care related to pregnancy or childbirth. Diagnose, treat, and help prevent diseases of women, particularly those affecting the reproductive system. May also provide general care to women. May perform both medical and gynecological surgery functions.
29-1221	Pediatricians, General	Diagnose, treat, and help prevent diseases and injuries in children. May refer patients to specialists for further diagnosis or treatment, as needed.
29-1222	Physicians, Pathologists	Diagnose diseases and conduct lab tests using organs, body tissues, and fluids. Includes medical examiners.
29-1223	Psychiatrists	Diagnose, treat, and help prevent mental disorders.
29-1224	Radiologists	Diagnose and treat diseases and injuries using medical imaging techniques, such as x rays, magnetic resonance imaging (MRI), nuclear medicine, and ultrasounds. May perform minimally invasive medical procedures and tests.
29-1229	Physicians, All Other	All physicians not listed separately.
29-1229	Allergists and Immunologists	Diagnose, treat, and help prevent allergic diseases and disease processes affecting the immune system.
29-1229	Hospitalists	Provide inpatient care predominantly in settings such as medical wards, acute care units, intensive care units, rehabilitation centers, or emergency rooms. Manage and coordinate patient care throughout treatment.
29-1229	Urologists	Diagnose, treat, and help prevent benign and malignant medical and surgical disorders of the genitourinary system and the renal glands.
29-1229	Physical Medicine and Rehabilitation Physicians	Diagnose and treat disorders requiring physiotherapy to provide physical, mental, and occupational rehabilitation.
29-1229	Preventive Medicine Physicians	Apply knowledge of general preventive medicine and public health issues to promote health care to groups or individuals, and aid in the prevention or reduction of risk of disease, injury, disability, or death. May practice population-based medicine or diagnose and treat patients in the context of clinical health promotion and disease prevention.
29-1229	Sports Medicine Physicians	Diagnose, treat, and help prevent injuries that occur during sporting events, athletic training, and physical activities.
29-1241	Ophthalmologists, Except Pediatric	Diagnose and perform surgery to treat and help prevent disorders and diseases of the eye. May also provide vision services for treatment including glasses and contacts.
29-1242	Orthopedic Surgeons, Except Pediatric	Diagnose and perform surgery to treat and prevent rheumatic and other diseases in the musculoskeletal system.
29-1243	Pediatric Surgeons	Diagnose and perform surgery to treat fetal abnormalities and birth defects, diseases, and injuries in fetuses, premature and newborn infants, children, and adolescents. Includes all pediatric surgical specialties and subspecialties.

O*NET- SOC Code	Title	Description
29-1249	Surgeons, All Other	All surgeons not listed separately.
29-1291	Acupuncturists	Diagnose, treat, and prevent disorders by stimulating specific acupuncture points within the body using acupuncture needles. May also use cups, nutritional supplements, therapeutic massage, acupressure, and other alternative health therapies.
29-1292	Dental Hygienists	Administer oral hygiene care to patients. Assess patient oral hygiene problems or needs and maintain health records. Advise patients on oral health maintenance and disease prevention. May provide advanced care such as providing fluoride treatment or administering topical anesthesia.
29-1299	Healthcare Diagnosing or Treating Practitioners, All Other	All healthcare diagnosing or treating practitioners not listed separately.
29-1299	Naturopathic Physicians	Diagnose, treat, and help prevent diseases using a system of practice that is based on the natural healing capacity of individuals. May use physiological, psychological or mechanical methods. May also use natural medicines, prescription or legend drugs, foods, herbs, or other natural remedies.
29-1299	Orthoptists	Diagnose and treat visual system disorders such as binocular vision and eye movement impairments.
29-2011	Medical and Clinical Laboratory Technologists	Perform complex medical laboratory tests for diagnosis, treatment, and prevention of disease. May train or supervise staff.
29-2011	Cytogenetic Technologists	Analyze chromosomes or chromosome segments found in biological specimens, such as amniotic fluids, bone marrow, solid tumors, and blood to aid in the study, diagnosis, classification, or treatment of inherited or acquired genetic diseases. Conduct analyses through classical cytogenetic, fluorescent in situ hybridization (FISH) or array comparative genome hybridization (aCGH) techniques.
29-2011	Cytotechnologists	Stain, mount, and study cells to detect evidence of cancer, hormonal abnormalities, and other pathological conditions following established standards and practices.
29-2011	Histotechnologists	Apply knowledge of health and disease causes to evaluate new laboratory techniques and procedures to examine tissue samples. Process and prepare histological slides from tissue sections for microscopic examination and diagnosis by pathologists. May solve technical or instrument problems or assist with research studies.
29-2012	Medical and Clinical Laboratory Technicians	Perform routine medical laboratory tests for the diagnosis, treatment, and prevention of disease. May work under the supervision of a medical technologist.
29-2012	Histology Technicians	Prepare histological slides from tissue sections for microscopic examination and diagnosis by pathologists. May assist with research studies.
29-2031	Cardiovascular Technologists and Technicians	Conduct tests on pulmonary or cardiovascular systems of patients for diagnostic, therapeutic, or research purposes. May conduct or assist in electrocardiograms, cardiac catheterizations, pulmonary functions, lung capacity, and similar tests.
29-2032	Diagnostic Medical Sonographers	Produce ultrasonic recordings of internal organs for use by physicians. Includes vascular technologists.

O*NET- SOC Code	Title	Description
29-2033	Nuclear Medicine Technologists	Prepare, administer, and measure radioactive isotopes in therapeutic, diagnostic, and tracer studies using a variety of radioisotope equipment. Prepare stock solutions of radioactive materials and calculate doses to be administered by radiologists. Subject patients to radiation. Execute blood volume, red cell survival, and fat absorption studies following standard laboratory techniques.
29-2034	Radiologic Technologists and Technicians	Take x-rays and CAT scans or administer nonradioactive materials into patient's bloodstream for diagnostic or research purposes. Includes radiologic technologists and technicians who specialize in other scanning modalities.
29-2035	Magnetic Resonance Imaging Technologists	Operate Magnetic Resonance Imaging (MRI) scanners. Monitor patient safety and comfort, and view images of area being scanned to ensure quality of pictures. May administer gadolinium contrast dosage intravenously. May interview patient, explain MRI procedures, and position patient on examining table. May enter into the computer data such as patient history, anatomical area to be scanned, orientation specified, and position of entry.
29-2036	Medical Dosimetrists	Generate radiation treatment plans, develop radiation dose calculations, communicate and supervise the treatment plan implementation, and consult with members of radiation oncology team.
29-2042	Emergency Medical Technicians	Assess injuries and illnesses and administer basic emergency medical care. May transport injured or sick persons to medical facilities.
29-2043	Paramedics	Administer basic or advanced emergency medical care and assess injuries and illnesses. May administer medication intravenously, use equipment such as EKGs, or administer advanced life support to sick or injured individuals.
29-2051	Dietetic Technicians	Assist in the provision of food service and nutritional programs, under the supervision of a dietitian. May plan and produce meals based on established guidelines, teach principles of food and nutrition, or counsel individuals.
29-2052	Pharmacy Technicians	Prepare medications under the direction of a pharmacist. May measure, mix, count out, label, and record amounts and dosages of medications according to prescription orders.
29-2053	Psychiatric Technicians	Care for individuals with mental or emotional conditions or disabilities, following the instructions of physicians or other health practitioners. Monitor patients' physical and emotional well-being and report to medical staff. May participate in rehabilitation and treatment programs, help with personal hygiene, and administer oral or injectable medications.
29-2055	Surgical Technologists	Assist in operations, under the supervision of surgeons, registered nurses, or other surgical personnel. May help set up operating room, prepare and transport patients for surgery, adjust lights and equipment, pass instruments and other supplies to surgeons and surgeons' assistants, hold retractors, cut sutures, and help count sponges, needles, supplies, and instruments.
29-2056	Veterinary Technologists and Technicians	Perform medical tests in a laboratory environment for use in the treatment and diagnosis of diseases in animals. Prepare vaccines and serums for prevention of diseases. Prepare tissue samples, take blood samples, and execute laboratory tests, such as urinalysis and blood counts. Clean and sterilize instruments and materials and maintain equipment and machines. May assist a veterinarian during surgery.
29-2057	Ophthalmic Medical Technicians	Assist ophthalmologists by performing ophthalmic clinical functions. May administer eye exams, administer eye medications, and instruct the patient in care and use of corrective lenses.

O*NET- SOC Code	Title	Description
29-2061	Licensed Practical and Licensed Vocational Nurses	Care for ill, injured, or convalescing patients or persons with disabilities in hospitals, nursing homes, clinics, private homes, group homes, and similar institutions. May work under the supervision of a registered nurse. Licensing required.
29-2072	Medical Records Specialists	Compile, process, and maintain medical records of hospital and clinic patients in a manner consistent with medical, administrative, ethical, legal, and regulatory requirements of the healthcare system. Classify medical and healthcare concepts, including diagnosis, procedures, medical services, and equipment, into the healthcare industry's numerical coding system. Includes medical coders.
29-2081	Opticians, Dispensing	Design, measure, fit, and adapt lenses and frames for client according to written optical prescription or specification. Assist client with inserting, removing, and caring for contact lenses. Assist client with selecting frames. Measure customer for size of eyeglasses and coordinate frames with facial and eye measurements and optical prescription. Prepare work order for optical laboratory containing instructions for grinding and mounting lenses in frames. Verify exactness of finished lens spectacles. Adjust frame and lens position to fit client. May shape or reshape frames. Includes contact lens opticians.
29-2091	Orthotists and Prosthetists	Design, measure, fit, and adapt orthopedic braces, appliances or prostheses, such as limbs or facial parts for patients with disabling conditions.
29-2092	Hearing Aid Specialists	Select and fit hearing aids for customers. Administer and interpret tests of hearing. Assess hearing instrument efficacy. Take ear impressions and prepare, design, and modify ear molds.
29-2099	Health Technologists and Technicians, All Other	All health technologists and technicians not listed separately.
29-2099	Neurodiagnostic Technologists	Conduct electroneurodiagnostic (END) tests such as electroencephalograms, evoked potentials, polysomnograms, or electronystagmograms. May perform nerve conduction studies.
29-2099	Ophthalmic Medical Technologists	Assist ophthalmologists by performing ophthalmic clinical functions and ophthalmic photography. Provide instruction and supervision to other ophthalmic personnel. Assist with minor surgical procedures, applying aseptic techniques and preparing instruments. May perform eye exams, administer eye medications, and instruct patients in care and use of corrective lenses.
29-2099	Patient Representatives	Assist patients in obtaining services, understanding policies and making health care decisions.
29-9021	Health Information Technologists and Medical Registrars	Apply knowledge of healthcare and information systems to assist in the design, development, and continued modification and analysis of computerized healthcare systems. Abstract, collect, and analyze treatment and followup information of patients. May educate staff and assist in problem solving to promote the implementation of the healthcare information system. May design, develop, test, and implement databases with complete history, diagnosis, treatment, and health status to help monitor diseases.
29-9091	Athletic Trainers	Evaluate and treat musculoskeletal injuries or illnesses. Provide preventive, therapeutic, emergency, and rehabilitative care.

O*NET-SOC Code	Title	Description
29-9092	Genetic Counselors	Assess individual or family risk for a variety of inherited conditions, such as genetic disorders and birth defects. Provide information to other healthcare providers or to individuals and families concerned with the risk of inherited conditions. Advise individuals and families to support informed decisionmaking and coping methods for those at risk. May help conduct research related to genetic conditions or genetic counseling.
29-9093	Surgical Assistants	Assist in operations, under the supervision of surgeons. May, in accordance with state laws, help surgeons to make incisions and close surgical sites, manipulate or remove tissues, implant surgical devices or drains, suction the surgical site, place catheters, clamp or cauterize vessels or tissue, and apply dressings to surgical site.
29-9099	Healthcare Practitioners and Technical Workers, All Other	All healthcare practitioners and technical workers not listed separately.
29-9099	Midwives	Provide prenatal care and childbirth assistance.

Healthcare Support Occupations

31-1121	Home Health Aides	Monitor the health status of an individual with disabilities or illness, and address their health-related needs, such as changing bandages, dressing wounds, or administering medication. Work is performed under the direction of offsite or intermittent onsite licensed nursing staff. Provide assistance with routine healthcare tasks or activities of daily living, such as feeding, bathing, toileting, or ambulation. May also help with tasks such as preparing meals, doing light housekeeping, and doing laundry depending on the patient's abilities.
31-1122	Personal Care Aides	Provide personalized assistance to individuals with disabilities or illness who require help with personal care and activities of daily living support (e.g., feeding, bathing, dressing, grooming, toileting, and ambulation). May also provide help with tasks such as preparing meals, doing light housekeeping, and doing laundry. Work is performed in various settings depending on the needs of the care recipient and may include locations such as their home, place of work, out in the community, or at a daytime nonresidential facility.
31-1131	Nursing Assistants	Provide or assist with basic care or support under the direction of onsite licensed nursing staff. Perform duties such as monitoring of health status, feeding, bathing, dressing, grooming, toileting, or ambulation of patients in a health or nursing facility. May include medication administration and other health-related tasks. Includes nursing care attendants, nursing aides, and nursing attendants.
31-1132	Orderlies	Transport patients to areas such as operating rooms or x-ray rooms using wheelchairs, stretchers, or moveable beds. May maintain stocks of supplies or clean and transport equipment. Psychiatric orderlies are included in Psychiatric Aides.
31-1133	Psychiatric Aides	Assist mentally impaired or emotionally disturbed patients, working under direction of nursing and medical staff. May assist with daily living activities, lead patients in educational and recreational activities, or accompany patients to and from examinations and treatments. May restrain violent patients. Includes psychiatric orderlies.

O*NET- SOC Code	Title	Description
31-2011	Occupational Therapy Assistants	Assist occupational therapists in providing occupational therapy treatments and procedures. May, in accordance with state laws, assist in development of treatment plans, carry out routine functions, direct activity programs, and document the progress of treatments. Generally requires formal training.
31-2012	Occupational Therapy Aides	Under close supervision of an occupational therapist or occupational therapy assistant, perform only delegated, selected, or routine tasks in specific situations. These duties include preparing patient and treatment room.
31-2021	Physical Therapist Assistants	Assist physical therapists in providing physical therapy treatments and procedures. May, in accordance with state laws, assist in the development of treatment plans, carry out routine functions, document the progress of treatment, and modify specific treatments in accordance with patient status and within the scope of treatment plans established by a physical therapist. Generally requires formal training.
31-2022	Physical Therapist Aides	Under close supervision of a physical therapist or physical therapy assistant, perform only delegated, selected, or routine tasks in specific situations. These duties include preparing the patient and the treatment area.
31-9011	Massage Therapists	Perform therapeutic massages of soft tissues and joints. May assist in the assessment of range of motion and muscle strength, or propose client therapy plans.
31-9091	Dental Assistants	Perform limited clinical duties under the direction of a dentist. Clinical duties may include equipment preparation and sterilization, preparing patients for treatment, assisting the dentist during treatment, and providing patients with instructions for oral healthcare procedures. May perform administrative duties such as scheduling appointments, maintaining medical records, billing, and coding information for insurance purposes.
31-9092	Medical Assistants	Perform administrative and certain clinical duties under the direction of a physician. Administrative duties may include scheduling appointments, maintaining medical records, billing, and coding information for insurance purposes. Clinical duties may include taking and recording vital signs and medical histories, preparing patients for examination, drawing blood, and administering medications as directed by physician.
31-9093	Medical Equipment Preparers	Prepare, sterilize, install, or clean laboratory or healthcare equipment. May perform routine laboratory tasks and operate or inspect equipment.
31-9094	Medical Transcriptionists	Transcribe medical reports recorded by physicians and other healthcare practitioners using various electronic devices, covering office visits, emergency room visits, diagnostic imaging studies, operations, chart reviews, and final summaries. Transcribe dictated reports and translate abbreviations into fully understandable form. Edit as necessary and return reports in either printed or electronic form for review and signature, or correction.
31-9095	Pharmacy Aides	Record drugs delivered to the pharmacy, store incoming merchandise, and inform the supervisor of stock needs. May operate cash register and accept prescriptions for filling.

O*NET- SOC Code	Title	Description
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	Feed, water, and examine pets and other nonfarm animals for signs of illness, disease, or injury in laboratories and animal hospitals and clinics. Clean and disinfect cages and work areas, and sterilize laboratory and surgical equipment. May provide routine postoperative care, administer medication orally or topically, or prepare samples for laboratory examination under the supervision of veterinary or laboratory animal technologists or technicians, veterinarians, or scientists.
31-9097	Phlebotomists	Draw blood for tests, transfusions, donations, or research. May explain the procedure to patients and assist in the recovery of patients with adverse reactions.
31-9099	Healthcare Support Workers, All Other	All healthcare support workers not listed separately.
31-9099	Speech-Language Pathology Assistants	Assist speech-language pathologists in the assessment and treatment of speech, language, voice, and fluency disorders. Implement speech and language programs or activities as planned and directed by speech-language pathologists. Monitor the use of alternative communication devices and systems.
31-9099	Endoscopy Technicians	Maintain a sterile field to provide support for physicians and nurses during endoscopy procedures. Prepare and maintain instruments and equipment. May obtain specimens.

Protective Service Occupations

33-1011	First-Line Supervisors of Correctional Officers	Directly supervise and coordinate activities of correctional officers and jailers.
33-1012	First-Line Supervisors of Police and Detectives	Directly supervise and coordinate activities of members of police force.
33-1021	First-Line Supervisors of Firefighting and Prevention Workers	Directly supervise and coordinate activities of workers engaged in firefighting and fire prevention and control.
33-1091	First-Line Supervisors of Security Workers	Directly supervise and coordinate activities of security workers and security guards.
33-1099	First-Line Supervisors of Protective Service Workers, All Other	All protective service supervisors not listed separately above.
33-2011	Firefighters	Control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance.
33-2021	Fire Inspectors and Investigators	Inspect buildings to detect fire hazards and enforce local ordinances and state laws, or investigate and gather facts to determine cause of fires and explosions.
33-2022	Forest Fire Inspectors and Prevention Specialists	Enforce fire regulations, inspect forest for fire hazards, and recommend forest fire prevention or control measures. May report forest fires and weather conditions.
33-3011	Bailiffs	Maintain order in courts of law.
33-3012	Correctional Officers and Jailers	Guard inmates in penal or rehabilitative institutions in accordance with established regulations and procedures. May guard prisoners in transit between jail, courtroom, prison, or other point. Includes deputy sheriffs and police who spend the majority of their time guarding prisoners in correctional institutions.
33-3021	Detectives and Criminal Investigators	Conduct investigations related to suspected violations of federal, state, or local laws to prevent or solve crimes.

O*NET- SOC Code	Title	Description
33-3021	Police Identification and Records Officers	Collect evidence at crime scene, classify and identify fingerprints, and photograph evidence for use in criminal and civil cases.
33-3021	Intelligence Analysts	Gather, analyze, or evaluate information from a variety of sources, such as law enforcement databases, surveillance, intelligence networks or geographic information systems. Use intelligence data to anticipate and prevent organized crime activities, such as terrorism.
33-3031	Fish and Game Wardens	Patrol assigned area to prevent fish and game law violations. Investigate reports of damage to crops or property by wildlife. Compile biological data.
33-3041	Parking Enforcement Workers	Patrol assigned area, such as public parking lot or city streets to issue tickets to overtime parking violators and illegally parked vehicles.
33-3051	Police and Sheriff's Patrol Officers	Maintain order and protect life and property by enforcing local, tribal, state, or federal laws and ordinances. Perform a combination of the following duties: patrol a specific area; direct traffic; issue traffic summonses; investigate accidents; apprehend and arrest suspects, or serve legal processes of courts. Includes police officers working at educational institutions.
33-3051	Customs and Border Protection Officers	Investigate and inspect persons, common carriers, goods, and merchandise, arriving in or departing from the United States or between states to detect violations of immigration and customs laws and regulations.
33-3052	Transit and Railroad Police	Protect and police railroad and transit property, employees, or passengers.
33-9011	Animal Control Workers	Handle animals for the purpose of investigations of mistreatment, or control of abandoned, dangerous, or unattended animals.
33-9021	Private Detectives and Investigators	Gather, analyze, compile, and report information regarding individuals or organizations to clients, or detect occurrences of unlawful acts or infractions of rules in private establishment.
33-9031	Gambling Surveillance Officers and Gambling Investigators	Observe gambling operation for irregular activities such as cheating or theft by either employees or patrons. Investigate potential threats to gambling assets such as money, chips, and gambling equipment. Act as oversight and security agent for management and customers.
33-9032	Security Guards	Guard, patrol, or monitor premises to prevent theft, violence, or infractions of rules. May operate x-ray and metal detector equipment.
33-9091	Crossing Guards and Flaggers	Guide or control vehicular or pedestrian traffic at such places as streets, schools, railroad crossings, or construction sites.
33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	Monitor recreational areas, such as pools, beaches, or ski slopes, to provide assistance and protection to participants.
33-9093	Transportation Security Screeners	Conduct screening of passengers, baggage, or cargo to ensure compliance with Transportation Security Administration (TSA) regulations. May operate basic security equipment such as x-ray machines and hand wands at screening checkpoints.
33-9094	School Bus Monitors	Maintain order among students on a school bus. Duties include helping students safely board and exit and communicating behavioral problems. May perform pretrip and posttrip inspections and prepare for and assist in emergency evacuations.
33-9099	Protective Service Workers, All Other	All protective service workers not listed separately.
33-9099	Retail Loss Prevention Specialists	Implement procedures and systems to prevent merchandise loss. Conduct audits and investigations of employee activity. May assist in developing policies, procedures, and systems for safeguarding assets.

O*NET-SOC Code	Title	Description
Food Preparation and Serving Related Occupations		
35-1011	Chefs and Head Cooks	Direct and may participate in the preparation, seasoning, and cooking of salads, soups, fish, meats, vegetables, desserts, or other foods. May plan and price menu items, order supplies, and keep records and accounts.
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	Directly supervise and coordinate activities of workers engaged in preparing and serving food.
35-2011	Cooks, Fast Food	Prepare and cook food in a fast food restaurant with a limited menu. Duties of these cooks are limited to preparation of a few basic items and normally involve operating large-volume single-purpose cooking equipment.
35-2012	Cooks, Institution and Cafeteria	Prepare and cook large quantities of food for institutions, such as schools, hospitals, or cafeterias.
35-2013	Cooks, Private Household	Prepare meals in private homes. Includes personal chefs.
35-2014	Cooks, Restaurant	Prepare, season, and cook dishes such as soups, meats, vegetables, or desserts in restaurants. May order supplies, keep records and accounts, price items on menu, or plan menu.
35-2015	Cooks, Short Order	Prepare and cook to order a variety of foods that require only a short preparation time. May take orders from customers and serve patrons at counters or tables.
35-2019	Cooks, All Other	All cooks not listed separately.
35-2021	Food Preparation Workers	Perform a variety of food preparation duties other than cooking, such as preparing cold foods and shellfish, slicing meat, and brewing coffee or tea.
35-3011	Bartenders	Mix and serve drinks to patrons, directly or through waitstaff.
35-3023	Fast Food and Counter Workers	Perform duties such as taking orders and serving food and beverages. Serve customers at counter or from a steam table. May take payment. May prepare food and beverages.
35-3023	Baristas	Prepare or serve specialty coffee or other beverages. Serve food such as baked goods or sandwiches to patrons.
35-3031	Waiters and Waitresses	Take orders and serve food and beverages to patrons at tables in dining establishment.
35-3041	Food Servers, Nonrestaurant	Serve food to individuals outside of a restaurant environment, such as in hotel rooms, hospital rooms, residential care facilities, or cars.
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	Facilitate food service. Clean tables; remove dirty dishes; replace soiled table linens; set tables; replenish supply of clean linens, silverware, glassware, and dishes; supply service bar with food; and serve items such as water, condiments, and coffee to patrons.
35-9021	Dishwashers	Clean dishes, kitchen, food preparation equipment, or utensils.
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	Welcome patrons, seat them at tables or in lounge, and help ensure quality of facilities and service.
35-9099	Food Preparation and Serving Related Workers, All Other	All food preparation and serving related workers not listed separately.

O*NET- SOC Code	Title	Description
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Building and Grounds Cleaning and Maintenance Occupations

37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	Directly supervise and coordinate work activities of cleaning personnel in hotels, hospitals, offices, and other establishments.
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	Directly supervise and coordinate activities of workers engaged in landscaping or groundskeeping activities. Work may involve reviewing contracts to ascertain service, machine, and workforce requirements; answering inquiries from potential customers regarding methods, material, and price ranges; and preparing estimates according to labor, material, and machine costs.
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	Keep buildings in clean and orderly condition. Perform heavy cleaning duties, such as cleaning floors, shampooing rugs, washing walls and glass, and removing rubbish. Duties may include tending furnace and boiler, performing routine maintenance activities, notifying management of need for repairs, and cleaning snow or debris from sidewalk.
37-2012	Maids and Housekeeping Cleaners	Perform any combination of light cleaning duties to maintain private households or commercial establishments, such as hotels and hospitals, in a clean and orderly manner. Duties may include making beds, replenishing linens, cleaning rooms and halls, and vacuuming.
37-2019	Building Cleaning Workers, All Other	All building cleaning workers not listed separately.
37-2021	Pest Control Workers	Apply or release chemical solutions or toxic gases and set traps to kill or remove pests and vermin that infest buildings and surrounding areas.
37-3011	Landscaping and Groundskeeping Workers	Landscape or maintain grounds of property using hand or power tools or equipment. Workers typically perform a variety of tasks, which may include any combination of the following: sod laying, mowing, trimming, planting, watering, fertilizing, digging, raking, sprinkler installation, and installation of mortarless segmental concrete masonry wall units.
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	Mix or apply pesticides, herbicides, fungicides, or insecticides through sprays, dusts, vapors, soil incorporation, or chemical application on trees, shrubs, lawns, or crops. Usually requires specific training and state or federal certification.
37-3013	Tree Trimmers and Pruners	Using sophisticated climbing and rigging techniques, cut away dead or excess branches from trees or shrubs to maintain right-of-way for roads, sidewalks, or utilities, or to improve appearance, health, and value of tree. Prune or treat trees or shrubs using handsaws, hand pruners, clippers, and power pruners. Works off the ground in the tree canopy and may use truck-mounted lifts.
37-3019	Grounds Maintenance Workers, All Other	All grounds maintenance workers not listed separately.

Personal Care and Service Occupations

39-1013	First-Line Supervisors of Gambling Services Workers	Directly supervise and coordinate activities of workers in assigned gambling areas. May circulate among tables, observe operations, and ensure that stations and games are covered for each shift. May verify and pay off jackpots. May reset slot machines after payoffs and make repairs or adjustments to slot machines or recommend removal of slot machines for repair. May plan and organize activities and services for guests in hotels/casinos.
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O*NET- SOC Code	Title	Description
39-1014	First-Line Supervisors of Entertainment and Recreation Workers, Except Gambling Services	Directly supervise and coordinate activities of entertainment and recreation related workers.
39-1022	First-Line Supervisors of Personal Service Workers	Supervise and coordinate activities of personal service workers.
39-2011	Animal Trainers	Train animals for riding, harness, security, performance, or obedience, or for assisting persons with disabilities. Accustom animals to human voice and contact, and condition animals to respond to commands. Train animals according to prescribed standards for show or competition. May train animals to carry pack loads or work as part of pack team.
39-2021	Animal Caretakers	Feed, water, groom, bathe, exercise, or otherwise provide care to promote and maintain the well-being of pets and other animals that are not raised for consumption, such as dogs, cats, race horses, ornamental fish or birds, zoo animals, and mice. Work in settings such as kennels, animal shelters, zoos, circuses, and aquariums. May keep records of feedings, treatments, and animals received or discharged. May clean, disinfect, and repair cages, pens, or fish tanks.
39-3011	Gambling Dealers	Operate table games. Stand or sit behind table and operate games of chance by dispensing the appropriate number of cards or blocks to players, or operating other gambling equipment. Distribute winnings or collect players' money or chips. May compare the house's hand against players' hands.
39-3012	Gambling and Sports Book Writers and Runners	Post information enabling patrons to wager on various races and sporting events. Assist in the operation of games such as keno and bingo. May operate random number-generating equipment and announce the numbers for patrons. Receive, verify, and record patrons' wagers. Scan and process winning tickets presented by patrons and pay out winnings for those wagers.
39-3019	Gambling Service Workers, All Other	All gambling service workers not listed separately.
39-3021	Motion Picture Projectionists	Set up and operate motion picture projection and related sound reproduction equipment.
39-3031	Ushers, Lobby Attendants, and Ticket Takers	Assist patrons at entertainment events by performing duties, such as collecting admission tickets and passes from patrons, assisting in finding seats, searching for lost articles, and helping patrons locate such facilities as restrooms and telephones.
39-3091	Amusement and Recreation Attendants	Perform a variety of attending duties at amusement or recreation facility. May schedule use of recreation facilities, maintain and provide equipment to participants of sporting events or recreational pursuits, or operate amusement concessions and rides.
39-3092	Costume Attendants	Select, fit, and take care of costumes for cast members, and aid entertainers. May assist with multiple costume changes during performances.
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	Provide personal items to patrons or customers in locker rooms, dressing rooms, or coatrooms.
39-3099	Entertainment Attendants and Related Workers, All Other	All entertainment attendants and related workers not listed separately.
39-4011	Embalmers	Prepare bodies for interment in conformity with legal requirements.

O*NET- SOC Code	Title	Description
39-4012	Crematory Operators	Operate crematory equipment to reduce human or animal remains to bone fragments in accordance with state and local regulations. Duties may include preparing the body for cremation and performing general maintenance on crematory equipment. May use traditional flame-based cremation, calcination, or alkaline hydrolysis.
39-4021	Funeral Attendants	Perform a variety of tasks during funeral, such as placing casket in parlor or chapel prior to service, arranging floral offerings or lights around casket, directing or escorting mourners, closing casket, and issuing and storing funeral equipment.
39-4031	Morticians, Undertakers, and Funeral Arrangers	Perform various tasks to arrange and direct individual funeral services, such as coordinating transportation of body to mortuary, interviewing family or other authorized person to arrange details, selecting pallbearers, aiding with the selection of officials for religious rites, and providing transportation for mourners.
39-5011	Barbers	Provide barbering services, such as cutting, trimming, shampooing, and styling hair; trimming beards; or giving shaves.
39-5012	Hairdressers, Hairstylists, and Cosmetologists	Provide beauty services, such as cutting, coloring, and styling hair, and massaging and treating scalp. May shampoo hair, apply makeup, dress wigs, remove hair, and provide nail and skincare services.
39-5091	Makeup Artists, Theatrical and Performance	Apply makeup to performers to reflect period, setting, and situation of their role.
39-5092	Manicurists and Pedicurists	Clean and shape customers' fingernails and toenails. May polish or decorate nails.
39-5093	Shampoosers	Shampoo and rinse customers' hair.
39-5094	Skincare Specialists	Provide skincare treatments to face and body to enhance an individual's appearance. Includes electrologists and laser hair removal specialists.
39-6011	Baggage Porters and Bellhops	Handle baggage for travelers at transportation terminals or for guests at hotels or similar establishments.
39-6012	Concierges	Assist patrons at hotel, apartment, or office building with personal services. May take messages; arrange or give advice on transportation, business services, or entertainment; or monitor guest requests for housekeeping and maintenance.
39-7011	Tour Guides and Escorts	Escort individuals or groups on sightseeing tours or through places of interest, such as industrial establishments, public buildings, and art galleries.
39-7012	Travel Guides	Plan, organize, and conduct long-distance travel, tours, and expeditions for individuals and groups.
39-9011	Childcare Workers	Attend to children at schools, businesses, private households, and childcare institutions. Perform a variety of tasks, such as dressing, feeding, bathing, and overseeing play.
39-9011	Nannies	Care for children in private households and provide support and expertise to parents in satisfying children's physical, emotional, intellectual, and social needs. Duties may include meal planning and preparation, laundry and clothing care, organization of play activities and outings, discipline, intellectual stimulation, language activities, and transportation.
39-9031	Exercise Trainers and Group Fitness Instructors	Instruct or coach groups or individuals in exercise activities for the primary purpose of personal fitness. Demonstrate techniques and form, observe participants, and explain to them corrective measures necessary to improve their skills. Develop and implement individualized approaches to exercise.

O*NET- SOC Code	Title	Description
39-9032	Recreation Workers	Conduct recreation activities with groups in public, private, or volunteer agencies or recreation facilities. Organize and promote activities, such as arts and crafts, sports, games, music, dramatics, social recreation, camping, and hobbies, taking into account the needs and interests of individual members.
39-9041	Residential Advisors	Coordinate activities in resident facilities in secondary school and college dormitories, group homes, or similar establishments. Order supplies and determine need for maintenance, repairs, and furnishings. May maintain household records and assign rooms. May assist residents with problem solving or refer them to counseling resources.
39-9099	Personal Care and Service Workers, All Other	All personal care and service workers not listed separately.

Sales and Related Occupations

41-1011	First-Line Supervisors of Retail Sales Workers	Directly supervise and coordinate activities of retail sales workers in an establishment or department. Duties may include management functions, such as purchasing, budgeting, accounting, and personnel work, in addition to supervisory duties.
41-1012	First-Line Supervisors of Non-Retail Sales Workers	Directly supervise and coordinate activities of sales workers other than retail sales workers. May perform duties such as budgeting, accounting, and personnel work, in addition to supervisory duties.
41-2011	Cashiers	Receive and disburse money in establishments other than financial institutions. May use electronic scanners, cash registers, or related equipment. May process credit or debit card transactions and validate checks.
41-2012	Gambling Change Persons and Booth Cashiers	Exchange coins, tokens, and chips for patrons' money. May issue payoffs and obtain customer's signature on receipt. May operate a booth in the slot machine area and furnish change persons with money bank at the start of the shift, or count and audit money in drawers.
41-2021	Counter and Rental Clerks	Receive orders, generally in person, for repairs, rentals, and services. May describe available options, compute cost, and accept payment.
41-2022	Parts Salespersons	Sell spare and replacement parts and equipment in repair shop or parts store.
41-2031	Retail Salespersons	Sell merchandise, such as furniture, motor vehicles, appliances, or apparel to consumers.
41-3011	Advertising Sales Agents	Sell or solicit advertising space, time, or media in publications, signage, TV, radio, or Internet establishments or public spaces.
41-3021	Insurance Sales Agents	Sell life, property, casualty, health, automotive, or other types of insurance. May refer clients to independent brokers, work as an independent broker, or be employed by an insurance company.
41-3031	Securities, Commodities, and Financial Services Sales Agents	Buy and sell securities or commodities in investment and trading firms, or provide financial services to businesses and individuals. May advise customers about stocks, bonds, mutual funds, commodities, and market conditions.
41-3041	Travel Agents	Plan and sell transportation and accommodations for customers. Determine destination, modes of transportation, travel dates, costs, and accommodations required. May also describe, plan, and arrange itineraries and sell tour packages. May assist in resolving clients' travel problems.

O*NET- SOC Code	Title	Description
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	Sell services to individuals or businesses. May describe options or resolve client problems.
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	Sell goods for wholesalers or manufacturers where technical or scientific knowledge is required in such areas as biology, engineering, chemistry, and electronics, normally obtained from at least 2 years of postsecondary education.
41-4011	Solar Sales Representatives and Assessors	Contact new or existing customers to determine their solar equipment needs, suggest systems or equipment, or estimate costs.
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	Sell goods for wholesalers or manufacturers to businesses or groups of individuals. Work requires substantial knowledge of items sold.
41-9011	Demonstrators and Product Promoters	Demonstrate merchandise and answer questions for the purpose of creating public interest in buying the product. May sell demonstrated merchandise.
41-9012	Models	Model garments or other apparel and accessories for prospective buyers at fashion shows, private showings, or retail establishments. May pose for photos to be used in magazines or advertisements. May pose as subject for paintings, sculptures, and other types of artistic expression.
41-9021	Real Estate Brokers	Operate 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	Real Estate Sales Agents	Rent, buy, or sell property for clients. Perform duties such as study property listings, interview prospective clients, accompany clients to property site, discuss conditions of sale, and draw up real estate contracts. Includes agents who represent buyer.
41-9031	Sales Engineers	Sell business goods or services, the selling of which requires a technical background equivalent to a baccalaureate degree in engineering.
41-9041	Telemarketers	Solicit donations or orders for goods or services over the telephone.
41-9091	Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	Sell goods or services door-to-door or on the street.
41-9099	Sales and Related Workers, All Other	All sales and related workers not listed separately.

Office and Administrative Support Occupations

43-1011	First-Line Supervisors of Office and Administrative Support Workers	Directly supervise and coordinate the activities of clerical and administrative support workers.
43-2011	Switchboard Operators, Including Answering Service	Operate telephone business systems equipment or switchboards to relay incoming, outgoing, and interoffice calls. May supply information to callers and record messages.
43-2021	Telephone Operators	Provide information by accessing alphabetical, geographical, or other directories. Assist customers with special billing requests, such as charges to a third party and credits or refunds for incorrectly dialed numbers or bad connections. May handle emergency calls and assist children or people with physical disabilities to make telephone calls.
43-2099	Communications Equipment Operators, All Other	All communications equipment operators not listed separately.

O*NET- SOC Code	Title	Description
43-3011	Bill and Account Collectors	Locate and notify customers of delinquent accounts by mail, telephone, or personal visit to solicit payment. Duties include receiving payment and posting amount to customer's account, preparing statements to credit department if customer fails to respond, initiating repossession proceedings or service disconnection, and keeping records of collection and status of accounts.
43-3021	Billing and Posting Clerks	Compile, compute, and record billing, accounting, statistical, and other numerical data for billing purposes. Prepare billing invoices for services rendered or for delivery or shipment of goods.
43-3031	Bookkeeping, Accounting, and Auditing Clerks	Compute, classify, and record numerical data to keep financial records complete. Perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records. May also check the accuracy of figures, calculations, and postings pertaining to business transactions recorded by other workers.
43-3041	Gambling Cage Workers	In a gambling establishment, conduct financial transactions for patrons. Accept patron's credit application and verify credit references to provide check-cashing authorization or to establish house credit accounts. May reconcile daily summaries of transactions to balance books. May sell gambling chips, tokens, or tickets to patrons, or to other workers for resale to patrons. May convert gambling chips, tokens, or tickets to currency upon patron's request. May use a cash register or computer to record transaction.
43-3051	Payroll and Timekeeping Clerks	Compile and record employee time and payroll data. May compute employees' time worked, production, and commission. May compute and post wages and deductions, or prepare paychecks.
43-3061	Procurement Clerks	Compile information and records to draw up purchase orders for procurement of materials and services.
43-3071	Tellers	Receive and pay out money. Keep records of money and negotiable instruments involved in a financial institution's various transactions.
43-3099	Financial Clerks, All Other	All financial clerks not listed separately.
43-4011	Brokerage Clerks	Perform duties related to the purchase, sale, or holding of securities. Duties include writing orders for stock purchases or sales, computing transfer taxes, verifying stock transactions, accepting and delivering securities, tracking stock price fluctuations, computing equity, distributing dividends, and keeping records of daily transactions and holdings.
43-4021	Correspondence Clerks	Compose letters or electronic correspondence in reply to requests for merchandise, damage claims, credit and other information, delinquent accounts, incorrect billings, or unsatisfactory services. Duties may include gathering data to formulate reply and preparing correspondence.
43-4031	Court, Municipal, and License Clerks	Perform clerical duties for courts of law, municipalities, or governmental licensing agencies and bureaus. May prepare docket of cases to be called; secure information for judges and court; prepare draft agendas or bylaws for town or city council; answer official correspondence; keep fiscal records and accounts; issue licenses or permits; and record data, administer tests, or collect fees.
43-4041	Credit Authorizers, Checkers, and Clerks	Authorize credit charges against customers' accounts. Investigate history and credit standing of individuals or business establishments applying for credit. May interview applicants to obtain personal and financial data, determine credit worthiness, process applications, and notify customers of acceptance or rejection of credit.

O*NET- SOC Code	Title	Description
43-4051	Customer Service Representatives	Interact with customers to provide basic or scripted information in response to routine inquiries about products and services. May handle and resolve general complaints. Excludes individuals whose duties are primarily installation, sales, repair, and technical support.
43-4061	Eligibility Interviewers, Government Programs	Determine eligibility of persons applying to receive assistance from government programs and agency resources, such as welfare, unemployment benefits, social security, and public housing.
43-4071	File Clerks	File correspondence, cards, invoices, receipts, and other records in alphabetical or numerical order or according to the filing system used. Locate and remove material from file when requested.
43-4081	Hotel, Motel, and Resort Desk Clerks	Accommodate hotel, motel, and resort patrons by registering and assigning rooms to guests, issuing room keys or cards, transmitting and receiving messages, keeping records of occupied rooms and guests' accounts, making and confirming reservations, and presenting statements to and collecting payments from departing guests.
43-4111	Interviewers, Except Eligibility and Loan	Interview persons by telephone, mail, in person, or by other means for the purpose of completing forms, applications, or questionnaires. Ask specific questions, record answers, and assist persons with completing form. May sort, classify, and file forms.
43-4121	Library Assistants, Clerical	Compile records, and sort, shelve, issue, and receive library materials such as books, electronic media, pictures, cards, slides and microfilm. Locate library materials for loan and replace material in shelving area, stacks, or files according to identification number and title. Register patrons to permit them to borrow books, periodicals, and other library materials.
43-4131	Loan Interviewers and Clerks	Interview loan applicants to elicit information; investigate applicants' backgrounds and verify references; prepare loan request papers; and forward findings, reports, and documents to appraisal department. Review loan papers to ensure completeness, and complete transactions between loan establishment, borrowers, and sellers upon approval of loan.
43-4141	New Accounts Clerks	Interview persons desiring to open accounts in financial institutions. Explain account services available to prospective customers and assist them in preparing applications.
43-4151	Order Clerks	Receive and process incoming orders for materials, merchandise, classified ads, or services such as repairs, installations, or rental of facilities. Generally receives orders via mail, phone, fax, or other electronic means. Duties include informing customers of receipt, prices, shipping dates, and delays; preparing contracts; and handling complaints.
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	Compile and keep personnel records. Record data for each employee, such as address, weekly earnings, absences, amount of sales or production, supervisory reports, and date of and reason for termination. May prepare reports for employment records, file employment records, or search employee files and furnish information to authorized persons.
43-4171	Receptionists and Information Clerks	Answer inquiries and provide information to the general public, customers, visitors, and other interested parties regarding activities conducted at establishment and location of departments, offices, and employees within the organization.
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	Make and confirm reservations for transportation or lodging, or sell transportation tickets. May check baggage and direct passengers to designated concourse, pier, or track; deliver tickets and contact individuals and groups to inform them of package tours; or provide tourists with travel or transportation information.

O*NET- SOC Code	Title	Description
43-4199	Information and Record Clerks, All Other	All information and record clerks not listed separately.
43-5011	Cargo and Freight Agents	Expedite and route movement of incoming and outgoing cargo and freight shipments in airline, train, and trucking terminals and shipping docks. Take orders from customers and arrange pickup of freight and cargo for delivery to loading platform. Prepare and examine bills of lading to determine shipping charges and tariffs.
43-5011	Freight Forwarders	Research rates, routings, or modes of transport for shipment of products. Maintain awareness of regulations affecting the international movement of cargo. Make arrangements for additional services, such as storage or inland transportation.
43-5021	Couriers and Messengers	Pick up and deliver messages, documents, packages, and other items between offices or departments within an establishment or directly to other business concerns, traveling by foot, bicycle, motorcycle, automobile, or public conveyance.
43-5031	Public Safety Telecommunicators	Operate telephone, radio, or other communication systems to receive and communicate requests for emergency assistance at 9-1-1 public safety answering points and emergency operations centers. Take information from the public and other sources regarding crimes, threats, disturbances, acts of terrorism, fires, medical emergencies, and other public safety matters. May coordinate and provide information to law enforcement and emergency response personnel. May access sensitive databases and other information sources as needed. May provide additional instructions to callers based on knowledge of and certification in law enforcement, fire, or emergency medical procedures.
43-5032	Dispatchers, Except Police, Fire, and Ambulance	Schedule and dispatch workers, work crews, equipment, or service vehicles for conveyance of materials, freight, or passengers, or for normal installation, service, or emergency repairs rendered outside the place of business. Duties may include using radio, telephone, or computer to transmit assignments and compiling statistics and reports on work progress.
43-5041	Meter Readers, Utilities	Read meter and record consumption of electricity, gas, water, or steam.
43-5051	Postal Service Clerks	Perform any combination of tasks in a United States Postal Service (USPS) post office, such as receive letters and parcels; sell postage and revenue stamps, postal cards, and stamped envelopes; fill out and sell money orders; place mail in pigeon holes of mail rack or in bags; and examine mail for correct postage. Includes postal service clerks employed by USPS contractors.
43-5052	Postal Service Mail Carriers	Sort and deliver mail for the United States Postal Service (USPS). Deliver mail on established route by vehicle or on foot. Includes postal service mail carriers employed by USPS contractors.
43-5053	Postal Service Mail Sorters, Processors, and Processing Machine Operators	Prepare incoming and outgoing mail for distribution for the United States Postal Service (USPS). Examine, sort, and route mail. Load, operate, and occasionally adjust and repair mail processing, sorting, and canceling machinery. Keep records of shipments, pouches, and sacks, and perform other duties related to mail handling within the postal service. Includes postal service mail sorters and processors employed by USPS contractors.

O*NET- SOC Code	Title	Description
43-5061	Production, Planning, and Expediting Clerks	Coordinate and expedite the flow of work and materials within or between departments of an establishment according to production schedule. Duties include reviewing and distributing production, work, and shipment schedules; conferring with department supervisors to determine progress of work and completion dates; and compiling reports on progress of work, inventory levels, costs, and production problems.
43-5071	Shipping, Receiving, and Inventory Clerks	Verify and maintain records on incoming and outgoing shipments involving inventory. Duties include verifying and recording incoming merchandise or material and arranging for the transportation of products. May prepare items for shipment.
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	Weigh, measure, and check materials, supplies, and equipment for the purpose of keeping relevant records. Duties are primarily clerical by nature. Includes workers who collect and keep record of samples of products or materials.
43-6011	Executive Secretaries and Executive Administrative Assistants	Provide high-level administrative support by conducting research, preparing statistical reports, and handling information requests, as well as performing routine administrative functions such as preparing correspondence, receiving visitors, arranging conference calls, and scheduling meetings. May also train and supervise lower-level clerical staff.
43-6012	Legal Secretaries and Administrative Assistants	Perform secretarial duties using legal terminology, procedures, and documents. Prepare legal papers and correspondence, such as summonses, complaints, motions, and subpoenas. May also assist with legal research.
43-6013	Medical Secretaries and Administrative Assistants	Perform secretarial duties using specific knowledge of medical terminology and hospital, clinic, or laboratory procedures. Duties may include scheduling appointments, billing patients, and compiling and recording medical charts, reports, and correspondence.
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	Perform routine administrative functions such as drafting correspondence, scheduling appointments, organizing and maintaining paper and electronic files, or providing information to callers.
43-9021	Data Entry Keyers	Operate data entry device, such as keyboard or photo composing perforator. Duties may include verifying data and preparing materials for printing.
43-9022	Word Processors and Typists	Use word processor, computer, or typewriter to type letters, reports, forms, or other material from rough draft, corrected copy, or voice recording. May perform other clerical duties as assigned.
43-9031	Desktop Publishers	Format typescript and graphic elements using computer software to produce publication-ready material.
43-9041	Insurance Claims and Policy Processing Clerks	Process new insurance policies, modifications to existing policies, and claims forms. Obtain information from policyholders to verify the accuracy and completeness of information on claims forms, applications and related documents, and company records. Update existing policies and company records to reflect changes requested by policyholders and insurance company representatives.
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	Prepare incoming and outgoing mail for distribution. Time-stamp, open, read, sort, and route incoming mail; and address, seal, stamp, fold, stuff, and affix postage to outgoing mail or packages. Duties may also include keeping necessary records and completed forms.

O*NET- SOC Code	Title	Description
43-9061	Office Clerks, General	Perform duties too varied and diverse to be classified in any specific office clerical occupation, requiring knowledge of office systems and procedures. Clerical duties may be assigned in accordance with the office procedures of individual establishments and may include a combination of answering telephones, bookkeeping, typing or word processing, office machine operation, and filing.
43-9071	Office Machine Operators, Except Computer	Operate one or more of a variety of office machines, such as photocopying, photographic, and duplicating machines, or other office machines.
43-9081	Proofreaders and Copy Markers	Read transcript or proof type setup to detect and mark for correction any grammatical, typographical, or compositional errors. Excludes workers whose primary duty is editing copy. Includes proofreaders of braille.
43-9111	Statistical Assistants	Compile and compute data according to statistical formulas for use in statistical studies. May perform actuarial computations and compile charts and graphs for use by actuaries. Includes actuarial clerks.
43-9199	Office and Administrative Support Workers, All Other	All office and administrative support workers not listed separately.

Farming, Fishing, and Forestry Occupations

45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	Directly supervise and coordinate the activities of agricultural, forestry, aquacultural, and related workers.
45-2011	Agricultural Inspectors	Inspect agricultural commodities, processing equipment, and facilities, and fish and logging operations, to ensure compliance with regulations and laws governing health, quality, and safety.
45-2021	Animal Breeders	Select and breed animals according to their genealogy, characteristics, and offspring. May require knowledge of artificial insemination techniques and equipment use. May involve keeping records on heats, birth intervals, or pedigree.
45-2041	Graders and Sorters, Agricultural Products	Grade, sort, or classify unprocessed food and other agricultural products by size, weight, color, or condition.
45-2091	Agricultural Equipment Operators	Drive and control equipment to support agricultural activities such as tilling soil; planting, cultivating, and harvesting crops; feeding and herding livestock; or removing animal waste. May perform tasks such as crop baling or hay bucking. May operate stationary equipment to perform post-harvest tasks such as husking, shelling, threshing, and ginning.
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	Manually plant, cultivate, and harvest vegetables, fruits, nuts, horticultural specialties, and field crops. Use hand tools, such as shovels, trowels, hoes, tampers, pruning hooks, shears, and knives. Duties may include tilling soil and applying fertilizers; transplanting, weeding, thinning, or pruning crops; applying pesticides; or cleaning, grading, sorting, packing, and loading harvested products. May construct trellises, repair fences and farm buildings, or participate in irrigation activities.

O*NET- SOC Code	Title	Description
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	Attend to live farm, ranch, open range or aquacultural animals that may include cattle, sheep, swine, goats, horses and other equines, poultry, rabbits, finfish, shellfish, and bees. Attend to animals produced for animal products, such as meat, fur, skins, feathers, eggs, milk, and honey. Duties may include feeding, watering, herding, grazing, milking, castrating, branding, de-beaking, weighing, catching, and loading animals. May maintain records on animals; examine animals to detect diseases and injuries; assist in birth deliveries; and administer medications, vaccinations, or insecticides as appropriate. May clean and maintain animal housing areas. Includes workers who shear wool from sheep and collect eggs in hatcheries.
45-2099	Agricultural Workers, All Other	All agricultural workers not listed separately.
45-3031	Fishing and Hunting Workers	Hunt, trap, catch, or gather wild animals or aquatic animals and plants. May use nets, traps, or other equipment. May haul catch onto ship or other vessel.
45-4011	Forest and Conservation Workers	Under supervision, perform manual labor necessary to develop, maintain, or protect areas such as forests, forested areas, woodlands, wetlands, and rangelands through such activities as raising and transporting seedlings; combating insects, pests, and diseases harmful to plant life; and building structures to control water, erosion, and leaching of soil. Includes forester aides, seedling pullers, tree planters, and gatherers of nontimber forestry products such as pine straw.
45-4021	Fallers	Use axes or chainsaws to fell trees using knowledge of tree characteristics and cutting techniques to control direction of fall and minimize tree damage.
45-4022	Logging Equipment Operators	Drive logging tractor or wheeled vehicle equipped with one or more accessories, such as bulldozer blade, frontal shear, grapple, logging arch, cable winches, hoisting rack, or crane boom, to fell tree; to skid, load, unload, or stack logs; or to pull stumps or clear brush. Includes operating stand-alone logging machines, such as log chippers.
45-4023	Log Graders and Scalers	Grade logs or estimate the marketable content or value of logs or pulpwood in sorting yards, millpond, log deck, or similar locations. Inspect logs for defects or measure logs to determine volume.
45-4029	Logging Workers, All Other	All logging workers not listed separately.

Construction and Extraction Occupations

47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	Directly supervise and coordinate activities of construction or extraction workers.
47-1011	Solar Energy Installation Managers	Direct work crews installing residential or commercial solar photovoltaic or thermal systems.
47-2011	Boilermakers	Construct, assemble, maintain, and repair stationary steam boilers and boiler house auxiliaries. Align structures or plate sections to assemble boiler frame tanks or vats, following blueprints. Work involves use of hand and power tools, plumb bobs, levels, wedges, dogs, or turnbuckles. Assist in testing assembled vessels. Direct cleaning of boilers and boiler furnaces. Inspect and repair boiler fittings, such as safety valves, regulators, automatic-control mechanisms, water columns, and auxiliary machines.
47-2021	Brickmasons and Blockmasons	Lay and bind building materials, such as brick, structural tile, concrete block, cinder block, glass block, and terra-cotta block, with mortar and other substances, to construct or repair walls, partitions, arches, sewers, and other structures.

O*NET- SOC Code	Title	Description
47-2022	Stonemasons	Build stone structures, such as piers, walls, and abutments. Lay walks, curbstones, or special types of masonry for vats, tanks, and floors.
47-2031	Carpenters	Construct, erect, install, or repair structures and fixtures made of wood and comparable materials, such as concrete forms; building frameworks, including partitions, joists, studding, and rafters; and wood stairways, window and door frames, and hardwood floors. May also install cabinets, siding, drywall, and batt or roll insulation. Includes brattice builders who build doors or brattices (ventilation walls or partitions) in underground passageways.
47-2041	Carpet Installers	Lay and install carpet from rolls or blocks on floors. Install padding and trim flooring materials.
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	Apply blocks, strips, or sheets of shock-absorbing, sound-deadening, or decorative coverings to floors.
47-2043	Floor Sanders and Finishers	Scrape and sand wooden floors to smooth surfaces using floor scraper and floor sanding machine, and apply coats of finish.
47-2044	Tile and Stone Setters	Apply hard tile, stone, and comparable materials to walls, floors, ceilings, countertops, and roof decks.
47-2051	Cement Masons and Concrete Finishers	Smooth and finish surfaces of poured concrete, such as floors, walks, sidewalks, roads, or curbs using a variety of hand and power tools. Align forms for sidewalks, curbs, or gutters; patch voids; and use saws to cut expansion joints.
47-2053	Terrazzo Workers and Finishers	Apply a mixture of cement, sand, pigment, or marble chips to floors, stairways, and cabinet fixtures to fashion durable and decorative surfaces.
47-2061	Construction Laborers	Perform tasks involving physical labor at construction sites. May operate hand and power tools of all types: air hammers, earth tampers, cement mixers, small mechanical hoists, surveying and measuring equipment, and a variety of other equipment and instruments. May clean and prepare sites, dig trenches, set braces to support the sides of excavations, erect scaffolding, and clean up rubble, debris, and other waste materials. May assist other craft workers.
47-2071	Paving, Surfacing, and Tamping Equipment Operators	Operate equipment used for applying concrete, asphalt, or other materials to road beds, parking lots, or airport runways and taxiways or for tamping gravel, dirt, or other materials. Includes concrete and asphalt paving machine operators, form tampers, tamping machine operators, and stone spreader operators.
47-2072	Pile Driver Operators	Operate pile drivers mounted on skids, barges, crawler treads, or locomotive cranes to drive pilings for retaining walls, bulkheads, and foundations of structures such as buildings, bridges, and piers.
47-2073	Operating Engineers and Other Construction Equipment Operators	Operate one or several types of power construction equipment, such as motor graders, bulldozers, scrapers, compressors, pumps, derricks, shovels, tractors, or front-end loaders to excavate, move, and grade earth, erect structures, or pour concrete or other hard surface pavement. May repair and maintain equipment in addition to other duties.
47-2081	Drywall and Ceiling Tile Installers	Apply plasterboard or other wallboard to ceilings or interior walls of buildings. Apply or mount acoustical tiles or blocks, strips, or sheets of shock-absorbing materials to ceilings and walls of buildings to reduce or reflect sound. Materials may be of decorative quality. Includes lathers who fasten wooden, metal, or rockboard lath to walls, ceilings, or partitions of buildings to provide support base for plaster, fireproofing, or acoustical material.

O*NET- SOC Code	Title	Description
47-2082	Tapers	Seal joints between plasterboard or other wallboard to prepare wall surface for painting or papering.
47-2111	Electricians	Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems.
47-2121	Glaziers	Install glass in windows, skylights, store fronts, and display cases, or on surfaces, such as building fronts, interior walls, ceilings, and tabletops.
47-2131	Insulation Workers, Floor, Ceiling, and Wall	Line and cover structures with insulating materials. May work with batt, roll, or blown insulation materials.
47-2132	Insulation Workers, Mechanical	Apply insulating materials to pipes or ductwork, or other mechanical systems in order to help control and maintain temperature.
47-2141	Painters, Construction and Maintenance	Paint walls, equipment, buildings, bridges, and other structural surfaces, using brushes, rollers, and spray guns. May remove old paint to prepare surface prior to painting. May mix colors or oils to obtain desired color or consistency.
47-2142	Paperhangers	Cover interior walls or ceilings of rooms with decorative wallpaper or fabric, or attach advertising posters on surfaces such as walls and billboards. May remove old materials or prepare surfaces to be papered.
47-2151	Pipelayers	Lay pipe for storm or sanitation sewers, drains, and water mains. Perform any combination of the following tasks: grade trenches or culverts, position pipe, or seal joints.
47-2152	Plumbers, Pipefitters, and Steamfitters	Assemble, install, alter, and repair pipelines or pipe systems that carry water, steam, air, or other liquids or gases. May install heating and cooling equipment and mechanical control systems. Includes sprinkler fitters.
47-2152	Solar Thermal Installers and Technicians	Install or repair solar energy systems designed to collect, store, and circulate solar-heated water for residential, commercial or industrial use.
47-2161	Plasterers and Stucco Masons	Apply interior or exterior plaster, cement, stucco, or similar materials. May also set ornamental plaster.
47-2171	Reinforcing Iron and Rebar Workers	Position and secure steel bars or mesh in concrete forms in order to reinforce concrete. Use a variety of fasteners, rod-bending machines, blowtorches, and hand tools. Includes rod busters.
47-2181	Roofers	Cover roofs of structures with shingles, slate, asphalt, aluminum, wood, or related materials. May spray roofs, sidings, and walls with material to bind, seal, insulate, or soundproof sections of structures.
47-2211	Sheet Metal Workers	Fabricate, assemble, install, and repair sheet metal products and equipment, such as ducts, control boxes, drainpipes, and furnace casings. Work may involve any of the following: setting up and operating fabricating machines to cut, bend, and straighten sheet metal; shaping metal over anvils, blocks, or forms using hammer; operating soldering and welding equipment to join sheet metal parts; or inspecting, assembling, and smoothing seams and joints of burred surfaces. Includes sheet metal duct installers who install prefabricated sheet metal ducts used for heating, air conditioning, or other purposes.
47-2221	Structural Iron and Steel Workers	Raise, place, and unite iron or steel girders, columns, and other structural members to form completed structures or structural frameworks. May erect metal storage tanks and assemble prefabricated metal buildings.

O*NET- SOC Code	Title	Description
47-2231	Solar Photovoltaic Installers	Assemble, install, or maintain solar photovoltaic (PV) systems on roofs or other structures in compliance with site assessment and schematics. May include measuring, cutting, assembling, and bolting structural framing and solar modules. May perform minor electrical work such as current checks.
47-3011	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	Help brickmasons, blockmasons, stonemasons, or tile and marble setters by performing duties requiring less skill. Duties include using, supplying, or holding materials or tools, and cleaning work area and equipment.
47-3012	Helpers--Carpenters	Help carpenters by performing duties requiring less skill. Duties include using, supplying, or holding materials or tools, and cleaning work area and equipment.
47-3013	Helpers--Electricians	Help electricians by performing duties requiring less skill. Duties include using, supplying, or holding materials or tools, and cleaning work area and equipment.
47-3014	Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons	Help painters, paperhangers, plasterers, or stucco masons by performing duties requiring less skill. Duties include using, supplying, or holding materials or tools, and cleaning work area and equipment.
47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	Help plumbers, pipefitters, steamfitters, or pipelayers by performing duties requiring less skill. Duties include using, supplying, or holding materials or tools, and cleaning work area and equipment.
47-3016	Helpers--Roofers	Help roofers by performing duties requiring less skill. Duties include using, supplying, or holding materials or tools, and cleaning work area and equipment.
47-3019	Helpers, Construction Trades, All Other	All construction trades helpers not listed separately.
47-4011	Construction and Building Inspectors	Inspect structures using engineering skills to determine structural soundness and compliance with specifications, building codes, and other regulations. Inspections may be general in nature or may be limited to a specific area, such as electrical systems or plumbing.
47-4011	Energy Auditors	Conduct energy audits of buildings, building systems, or process systems. May also conduct investment grade audits of buildings or systems.
47-4021	Elevator and Escalator Installers and Repairers	Assemble, install, repair, or maintain electric or hydraulic freight or passenger elevators, escalators, or dumbwaiters.
47-4031	Fence Erectors	Erect and repair fences and fence gates, using hand and power tools.
47-4041	Hazardous Materials Removal Workers	Identify, remove, pack, transport, or dispose of hazardous materials, including asbestos, lead-based paint, waste oil, fuel, transmission fluid, radioactive materials, or contaminated soil. Specialized training and certification in hazardous materials handling or a confined entry permit are generally required. May operate earth-moving equipment or trucks.
47-4051	Highway Maintenance Workers	Maintain highways, municipal and rural roads, airport runways, and rights-of-way. Duties include patching broken or eroded pavement and repairing guard rails, highway markers, and snow fences. May also mow or clear brush from along road, or plow snow from roadway.
47-4061	Rail-Track Laying and Maintenance Equipment Operators	Lay, repair, and maintain track for standard or narrow-gauge railroad equipment used in regular railroad service or in plant yards, quarries, sand and gravel pits, and mines. Includes ballast cleaning machine operators and railroad bed tamping machine operators.

O*NET- SOC Code	Title	Description
47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	Clean and repair septic tanks, sewer lines, or drains. May patch walls and partitions of tank, replace damaged drain tile, or repair breaks in underground piping.
47-4091	Segmental Pavers	Lay out, cut, and place segmental paving units. Includes installers of bedding and restraining materials for the paving units.
47-4099	Construction and Related Workers, All Other	All construction and related workers not listed separately.
47-4099	Weatherization Installers and Technicians	Perform a variety of activities to weatherize homes and make them more energy efficient. Duties include repairing windows, insulating ducts, and performing heating, ventilating, and air-conditioning (HVAC) work. May perform energy audits and advise clients on energy conservation measures.
47-5011	Derrick Operators, Oil and Gas	Rig derrick equipment and operate pumps to circulate mud or fluid through drill hole.
47-5012	Rotary Drill Operators, Oil and Gas	Set up or operate a variety of drills to remove underground oil and gas, or remove core samples for testing during oil and gas exploration.
47-5013	Service Unit Operators, Oil and Gas	Operate equipment to increase oil flow from producing wells or to remove stuck pipe, casing, tools, or other obstructions from drilling wells. Includes fishing-tool technicians.
47-5022	Excavating and Loading Machine and Dragline Operators, Surface Mining	Operate or tend machinery at surface mining site, equipped with scoops, shovels, or buckets to excavate and load loose materials.
47-5023	Earth Drillers, Except Oil and Gas	Operate a variety of drills such as rotary, churn, and pneumatic to tap subsurface water and salt deposits, to remove core samples during mineral exploration or soil testing, and to facilitate the use of explosives in mining or construction. Includes horizontal and earth boring machine operators.
47-5032	Explosives Workers, Ordnance Handling Experts, and Blasters	Place and detonate explosives to demolish structures or to loosen, remove, or displace earth, rock, or other materials. May perform specialized handling, storage, and accounting procedures.
47-5041	Continuous Mining Machine Operators	Operate self-propelled mining machines that rip coal, metal and nonmetal ores, rock, stone, or sand from the mine face and load it onto conveyors, shuttle cars, or trucks in a continuous operation.
47-5043	Roof Bolters, Mining	Operate machinery to install roof support bolts in underground mine.
47-5044	Loading and Moving Machine Operators, Underground Mining	Operate underground loading or moving machine to load or move coal, ore, or rock using shuttle or mine car or conveyors. Equipment may include power shovels, hoisting engines equipped with cable-drawn scraper or scoop, or machines equipped with gathering arms and conveyor.
47-5049	Underground Mining Machine Operators, All Other	All underground mining machine operators not listed separately.
47-5051	Rock Splitters, Quarry	Separate blocks of rough dimension stone from quarry mass using jackhammers, wedges, or chop saws.
47-5071	Roustabouts, Oil and Gas	Assemble or repair oil field equipment using hand and power tools. Perform other tasks as needed.
47-5081	Helpers--Extraction Workers	Help extraction craft workers, such as earth drillers, blasters and explosives workers, derrick operators, and mining machine operators, by performing duties requiring less skill. Duties include supplying equipment or cleaning work area.
47-5099	Extraction Workers, All Other	All extraction workers not listed separately.

O*NET-SOC Code	Title	Description
Installation, Maintenance, and Repair Occupations		
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	Directly supervise and coordinate the activities of mechanics, installers, and repairers. May also advise customers on recommended services. Excludes team or work leaders.
49-2011	Computer, Automated Teller, and Office Machine Repairers	Repair, maintain, or install computers, word processing systems, automated teller machines, and electronic office machines, such as duplicating and fax machines.
49-2021	Radio, Cellular, and Tower Equipment Installers and Repairers	Repair, install, or maintain mobile or stationary radio transmitting, broadcasting, and receiving equipment, and two-way radio communications systems used in cellular telecommunications, mobile broadband, ship-to-shore, aircraft-to-ground communications, and radio equipment in service and emergency vehicles. May test and analyze network coverage.
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	Install, set up, rearrange, or remove switching, distribution, routing, and dialing equipment used in central offices or headends. Service or repair telephone, cable television, Internet, and other communications equipment on customers' property. May install communications equipment or communications wiring in buildings.
49-2091	Avionics Technicians	Install, inspect, test, adjust, or repair avionics equipment, such as radar, radio, navigation, and missile control systems in aircraft or space vehicles.
49-2092	Electric Motor, Power Tool, and Related Repairers	Repair, maintain, or install electric motors, wiring, or switches.
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	Install, adjust, or maintain mobile electronics communication equipment, including sound, sonar, security, navigation, and surveillance systems on trains, watercraft, or other mobile equipment.
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	Repair, test, adjust, or install electronic equipment, such as industrial controls, transmitters, and antennas.
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	Inspect, test, repair, or maintain electrical equipment in generating stations, substations, and in-service relays.
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	Install, diagnose, or repair communications, sound, security, or navigation equipment in motor vehicles.
49-2097	Audiovisual Equipment Installers and Repairers	Install, repair, or adjust audio or television receivers, stereo systems, camcorders, video systems, or other electronic entertainment equipment in homes or other venues. May perform routine maintenance.
49-2098	Security and Fire Alarm Systems Installers	Install, program, maintain, and repair security and fire alarm wiring and equipment. Ensure that work is in accordance with relevant codes.
49-3011	Aircraft Mechanics and Service Technicians	Diagnose, adjust, repair, or overhaul aircraft engines and assemblies, such as hydraulic and pneumatic systems.
49-3021	Automotive Body and Related Repairers	Repair and refinish automotive vehicle bodies and straighten vehicle frames.
49-3022	Automotive Glass Installers and Repairers	Replace or repair broken windshields and window glass in motor vehicles.
49-3023	Automotive Service Technicians and Mechanics	Diagnose, adjust, repair, or overhaul automotive vehicles.
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	Diagnose, adjust, repair, or overhaul buses and trucks, or maintain and repair any type of diesel engines. Includes mechanics working primarily with automobile or marine diesel engines.

O*NET- SOC Code	Title	Description
49-3041	Farm Equipment Mechanics and Service Technicians	Diagnose, adjust, repair, or overhaul farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	Diagnose, adjust, repair, or overhaul mobile mechanical, hydraulic, and pneumatic equipment, such as cranes, bulldozers, graders, and conveyors, used in construction, logging, and mining.
49-3043	Rail Car Repairers	Diagnose, adjust, repair, or overhaul railroad rolling stock, mine cars, or mass transit rail cars.
49-3051	Motorboat Mechanics and Service Technicians	Repair and adjust electrical and mechanical equipment of inboard or inboard-outboard boat engines.
49-3052	Motorcycle Mechanics	Diagnose, adjust, repair, or overhaul motorcycles, scooters, mopeds, dirt bikes, or similar motorized vehicles.
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	Diagnose, adjust, repair, or overhaul small engines used to power lawn mowers, chain saws, recreational sporting equipment, and related equipment.
49-3091	Bicycle Repairers	Repair and service bicycles.
49-3092	Recreational Vehicle Service Technicians	Diagnose, inspect, adjust, repair, or overhaul recreational vehicles including travel trailers. May specialize in maintaining gas, electrical, hydraulic, plumbing, or chassis/towing systems as well as repairing generators, appliances, and interior components. Includes workers who perform customized van conversions.
49-3093	Tire Repairers and Changers	Repair and replace tires.
49-9011	Mechanical Door Repairers	Install, service, or repair automatic door mechanisms and hydraulic doors. Includes garage door mechanics.
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	Install, repair, and maintain mechanical regulating and controlling devices, such as electric meters, gas regulators, thermostats, safety and flow valves, and other mechanical governors.
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Install or repair heating, central air conditioning, HVAC, or refrigeration systems, including oil burners, hot-air furnaces, and heating stoves.
49-9031	Home Appliance Repairers	Repair, adjust, or install all types of electric or gas household appliances, such as refrigerators, washers, dryers, and ovens.
49-9041	Industrial Machinery Mechanics	Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems. May also install, dismantle, or move machinery and heavy equipment according to plans.
49-9043	Maintenance Workers, Machinery	Lubricate machinery, change parts, or perform other routine machinery maintenance.
49-9044	Millwrights	Install, dismantle, or move machinery and heavy equipment according to layout plans, blueprints, or other drawings.
49-9045	Refractory Materials Repairers, Except Brickmasons	Build or repair equipment such as furnaces, kilns, cupolas, boilers, converters, ladles, soaking pits, and ovens, using refractory materials.
49-9051	Electrical Power-Line Installers and Repairers	Install or repair cables or wires used in electrical power or distribution systems. May erect poles and light or heavy duty transmission towers.
49-9052	Telecommunications Line Installers and Repairers	Install and repair telecommunications cable, including fiber optics.
49-9061	Camera and Photographic Equipment Repairers	Repair and adjust cameras and photographic equipment, including commercial video and motion picture camera equipment.
49-9062	Medical Equipment Repairers	Test, adjust, or repair biomedical or electromedical equipment.
49-9063	Musical Instrument Repairers and Tuners	Repair percussion, stringed, reed, or wind instruments. May specialize in one area, such as piano tuning.

O*NET- SOC Code	Title	Description
49-9064	Watch and Clock Repairers	Repair, clean, and adjust mechanisms of timing instruments, such as watches and clocks. Includes watchmakers, watch technicians, and mechanical timepiece repairers.
49-9069	Precision Instrument and Equipment Repairers, All Other	All precision instrument and equipment repairers not listed separately.
49-9071	Maintenance and Repair Workers, General	Perform work involving the skills of two or more maintenance or craft occupations to keep machines, mechanical equipment, or the structure of a building in repair. Duties may involve pipe fitting; HVAC maintenance; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs.
49-9081	Wind Turbine Service Technicians	Inspect, diagnose, adjust, or repair wind turbines. Perform maintenance on wind turbine equipment including resolving electrical, mechanical, and hydraulic malfunctions.
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	Install, service, adjust, or repair coin, vending, or amusement machines including video games, juke boxes, pinball machines, or slot machines.
49-9092	Commercial Divers	Work below surface of water, using surface-supplied air or scuba equipment to inspect, repair, remove, or install equipment and structures. May use a variety of power and hand tools, such as drills, sledgehammers, torches, and welding equipment. May conduct tests or experiments, rig explosives, or photograph structures or marine life.
49-9094	Locksmiths and Safe Repairers	Repair and open locks, make keys, change locks and safe combinations, and install and repair safes.
49-9095	Manufactured Building and Mobile Home Installers	Move or install mobile homes or prefabricated buildings.
49-9096	Riggers	Set up or repair rigging for construction projects, manufacturing plants, logging yards, ships and shipyards, or for the entertainment industry.
49-9097	Signal and Track Switch Repairers	Install, inspect, test, maintain, or repair electric gate crossings, signals, signal equipment, track switches, section lines, or intercommunications systems within a railroad system.
49-9098	Helpers--Installation, Maintenance, and Repair Workers	Help installation, maintenance, and repair workers in maintenance, parts replacement, and repair of vehicles, industrial machinery, and electrical and electronic equipment. Perform duties such as furnishing tools, materials, and supplies to other workers; cleaning work area, machines, and tools; and holding materials or tools for other workers.
49-9099	Installation, Maintenance, and Repair Workers, All Other	All installation, maintenance, and repair workers not listed separately.
49-9099	Geothermal Technicians	Perform technical activities at power plants or individual installations necessary for the generation of power from geothermal energy sources. Monitor and control operating activities at geothermal power generation facilities and perform maintenance and repairs as necessary. Install, test, and maintain residential and commercial geothermal heat pumps.

Production Occupations

51-1011	First-Line Supervisors of Production and Operating Workers	Directly supervise and coordinate the activities of production and operating workers, such as inspectors, precision workers, machine setters and operators, assemblers, fabricators, and plant and system operators. Excludes team or work leaders.
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O*NET- SOC Code	Title	Description
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	Assemble, fit, fasten, and install parts of airplanes, space vehicles, or missiles, such as tails, wings, fuselage, bulkheads, stabilizers, landing gear, rigging and control equipment, or heating and ventilating systems.
51-2021	Coil Winders, Tapers, and Finishers	Wind wire coils used in electrical components, such as resistors and transformers, and in electrical equipment and instruments, such as field cores, bobbins, armature cores, electrical motors, generators, and control equipment.
51-2022	Electrical and Electronic Equipment Assemblers	Assemble or modify electrical or electronic equipment, such as computers, test equipment telemetering systems, electric motors, and batteries.
51-2023	Electromechanical Equipment Assemblers	Assemble or modify electromechanical equipment or devices, such as servomechanisms, gyros, dynamometers, magnetic drums, tape drives, brakes, control linkage, actuators, and appliances.
51-2031	Engine and Other Machine Assemblers	Construct, assemble, or rebuild machines, such as engines, turbines, and similar equipment used in such industries as construction, extraction, textiles, and paper manufacturing.
51-2041	Structural Metal Fabricators and Fitters	Fabricate, position, align, and fit parts of structural metal products.
51-2051	Fiberglass Laminators and Fabricators	Laminate layers of fiberglass on molds to form boat decks and hulls, bodies for golf carts, automobiles, or other products.
51-2061	Timing Device Assemblers and Adjusters	Perform precision assembling or adjusting, within narrow tolerances, of timing devices such as digital clocks or timing devices with electrical or electronic components.
51-2092	Team Assemblers	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. Includes team leaders who work as part of the team.
51-2099	Assemblers and Fabricators, All Other	All assemblers and fabricators not listed separately.
51-3011	Bakers	Mix and bake ingredients to produce breads, rolls, cookies, cakes, pies, pastries, or other baked goods.
51-3021	Butchers and Meat Cutters	Cut, trim, or prepare consumer-sized portions of meat for use or sale in retail establishments.
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	Use hands or hand tools to perform routine cutting and trimming of meat, poultry, and seafood.
51-3023	Slaughterers and Meat Packers	Perform nonroutine or precision functions involving the preparation of large portions of meat. Work may include specialized slaughtering tasks, cutting standard or premium cuts of meat for marketing, making sausage, or wrapping meats. Work typically occurs in slaughtering, meat packing, or wholesale establishments.
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	Operate or tend food or tobacco roasting, baking, or drying equipment, including hearth ovens, kiln driers, roasters, char kilns, and vacuum drying equipment.
51-3092	Food Batchmakers	Set up and operate equipment that mixes or blends ingredients used in the manufacturing of food products. Includes candy makers and cheese makers.
51-3093	Food Cooking Machine Operators and Tenders	Operate or tend cooking equipment, such as steam cooking vats, deep fry cookers, pressure cookers, kettles, and boilers, to prepare food products.
51-3099	Food Processing Workers, All Other	All food processing workers not listed separately.

O*NET- SOC Code	Title	Description
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend machines to extrude or draw thermoplastic or metal materials into tubes, rods, hoses, wire, bars, or structural shapes.
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend forging machines to taper, shape, or form metal or plastic parts.
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend machines to roll steel or plastic forming bends, beads, knurls, rolls, or plate, or to flatten, temper, or reduce gauge of material.
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend machines to saw, cut, shear, slit, punch, crimp, notch, bend, or straighten metal or plastic material.
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend drilling machines to drill, bore, ream, mill, or countersink metal or plastic work pieces.
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend grinding and related tools that remove excess material or burrs from surfaces, sharpen edges or corners, or buff, hone, or polish metal or plastic work pieces.
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend lathe and turning machines to turn, bore, thread, form, or face metal or plastic materials, such as wire, rod, or bar stock.
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend milling or planing machines to mill, plane, shape, groove, or profile metal or plastic work pieces.
51-4041	Machinists	Set up and operate a variety of machine tools to produce precision parts and instruments out of metal. Includes precision instrument makers who fabricate, modify, or repair mechanical instruments. May also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, mathematics, metal properties, layout, and machining procedures.
51-4051	Metal-Refining Furnace Operators and Tenders	Operate or tend furnaces, such as gas, oil, coal, electric-arc or electric induction, open-hearth, or oxygen furnaces, to melt and refine metal before casting or to produce specified types of steel.
51-4052	Pourers and Casters, Metal	Operate hand-controlled mechanisms to pour and regulate the flow of molten metal into molds to produce castings or ingots.
51-4061	Model Makers, Metal and Plastic	Set up and operate machines, such as lathes, milling and engraving machines, and jig borers to make working models of metal or plastic objects. Includes template makers.
51-4062	Patternmakers, Metal and Plastic	Lay out, machine, fit, and assemble castings and parts to metal or plastic foundry patterns, core boxes, or match plates.
51-4071	Foundry Mold and Coremakers	Make or form wax or sand cores or molds used in the production of metal castings in foundries.
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend metal or plastic molding, casting, or coremaking machines to mold or cast metal or thermoplastic parts or products.
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend more than one type of cutting or forming machine tool or robot.
51-4111	Tool and Die Makers	Analyze specifications, lay out metal stock, set up and operate machine tools, and fit and assemble parts to make and repair dies, cutting tools, jigs, fixtures, gauges, and machinists' hand tools.

O*NET- SOC Code	Title	Description
51-4121	Welders, Cutters, Solderers, and Brazers	Use hand-welding, flame-cutting, hand-soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	Set up, operate, or tend welding, soldering, or brazing machines or robots that weld, braze, solder, or heat treat metal products, components, or assemblies. Includes workers who operate laser cutters or laser-beam machines.
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend heating equipment, such as heat-treating furnaces, flame-hardening machines, induction machines, soaking pits, or vacuum equipment to temper, harden, anneal, or heat treat metal or plastic objects.
51-4192	Layout Workers, Metal and Plastic	Lay out reference points and dimensions on metal or plastic stock or workpieces, such as sheets, plates, tubes, structural shapes, castings, or machine parts, for further processing. Includes shipfitters.
51-4193	Plating Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend plating machines to coat metal or plastic products with chromium, zinc, copper, cadmium, nickel, or other metal to protect or decorate surfaces. Typically, the product being coated is immersed in molten metal or an electrolytic solution.
51-4194	Tool Grinders, Filers, and Sharpeners	Perform precision smoothing, sharpening, polishing, or grinding of metal objects.
51-4199	Metal Workers and Plastic Workers, All Other	All metal workers and plastic workers not listed separately.
51-5111	Prepress Technicians and Workers	Format and proof text and images submitted by designers and clients into finished pages that can be printed. Includes digital and photo typesetting. May produce printing plates.
51-5112	Printing Press Operators	Set up and operate digital, letterpress, lithographic, flexographic, gravure, or other printing machines. Includes short-run offset printing presses.
51-5113	Print Binding and Finishing Workers	Bind books and other publications or finish printed products by hand or machine. May set up binding and finishing machines.
51-6011	Laundry and Dry-Cleaning Workers	Operate or tend washing or dry-cleaning machines to wash or dry-clean industrial or household articles, such as cloth garments, suede, leather, furs, blankets, draperies, linens, rugs, and carpets. Includes spotters and dyers of these articles.
51-6021	Pressers, Textile, Garment, and Related Materials	Press or shape articles by hand or machine.
51-6031	Sewing Machine Operators	Operate or tend sewing machines to join, reinforce, decorate, or perform related sewing operations in the manufacture of garment or nongarment products.
51-6041	Shoe and Leather Workers and Repairers	Construct, decorate, or repair leather and leather-like products, such as luggage, shoes, and saddles. May use hand tools.
51-6042	Shoe Machine Operators and Tenders	Operate or tend a variety of machines to join, decorate, reinforce, or finish shoes and shoe parts.
51-6051	Sewers, Hand	Sew, join, reinforce, or finish, usually with needle and thread, a variety of manufactured items. Includes weavers and stitchers.
51-6052	Tailors, Dressmakers, and Custom Sewers	Design, make, alter, repair, or fit garments.
51-6061	Textile Bleaching and Dyeing Machine Operators and Tenders	Operate or tend machines to bleach, shrink, wash, dye, or finish textiles or synthetic or glass fibers.
51-6062	Textile Cutting Machine Setters, Operators, and Tenders	Set up, operate, or tend machines that cut textiles.

O*NET- SOC Code	Title	Description
51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders	Set up, operate, or tend machines that knit, loop, weave, or draw in textiles.
51-6064	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders	Set up, operate, or tend machines that wind or twist textiles; or draw out and combine sliver, such as wool, hemp, or synthetic fibers. Includes slubber machine and drawing frame operators.
51-6091	Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers	Set up, operate, or tend machines that extrude and form continuous filaments from synthetic materials, such as liquid polymer, rayon, and fiberglass.
51-6092	Fabric and Apparel Patternmakers	Draw and construct sets of precision master fabric patterns or layouts. May also mark and cut fabrics and apparel.
51-6093	Upholsterers	Make, repair, or replace upholstery for household furniture or transportation vehicles.
51-6099	Textile, Apparel, and Furnishings Workers, All Other	All textile, apparel, and furnishings workers not listed separately.
51-7011	Cabinetmakers and Bench Carpenters	Cut, shape, and assemble wooden articles or set up and operate a variety of woodworking machines, such as power saws, jointers, and mortisers to surface, cut, or shape lumber or to fabricate parts for wood products.
51-7021	Furniture Finishers	Shape, finish, and refinish damaged, worn, or used furniture or new high-grade furniture to specified color or finish.
51-7031	Model Makers, Wood	Construct full-size and scale wooden precision models of products. Includes wood jig builders and loft workers.
51-7032	Patternmakers, Wood	Plan, lay out, and construct wooden unit or sectional patterns used in forming sand molds for castings.
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	Set up, operate, or tend wood sawing machines. May operate computer numerically controlled (CNC) equipment. Includes lead sawyers.
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	Set up, operate, or tend woodworking machines, such as drill presses, lathes, shapers, routers, sanders, planers, and wood nailing machines. May operate computer numerically controlled (CNC) equipment.
51-7099	Woodworkers, All Other	All woodworkers not listed separately.
51-8011	Nuclear Power Reactor Operators	Operate or control nuclear reactors. Move control rods, start and stop equipment, monitor and adjust controls, and record data in logs. Implement emergency procedures when needed. May respond to abnormalities, determine cause, and recommend corrective action.
51-8012	Power Distributors and Dispatchers	Coordinate, regulate, or distribute electricity or steam.
51-8013	Power Plant Operators	Control, operate, or maintain machinery to generate electric power. Includes auxiliary equipment operators.
51-8013	Biomass Plant Technicians	Control and monitor biomass plant activities and perform maintenance as needed.
51-8013	Hydroelectric Plant Technicians	Monitor and control activities associated with hydropower generation. Operate plant equipment, such as turbines, pumps, valves, gates, fans, electric control boards, and battery banks. Monitor equipment operation and performance and make necessary adjustments to ensure optimal performance. Perform equipment maintenance and repair as necessary.
51-8021	Stationary Engineers and Boiler Operators	Operate or maintain stationary engines, boilers, or other mechanical equipment to provide utilities for buildings or industrial processes. Operate equipment such as steam engines, generators, motors, turbines, and steam boilers.
51-8031	Water and Wastewater Treatment Plant and System Operators	Operate or control an entire process or system of machines, often through the use of control boards, to transfer or treat water or wastewater.

O*NET- SOC Code	Title	Description
51-8091	Chemical Plant and System Operators	Control or operate entire chemical processes or system of machines.
51-8092	Gas Plant Operators	Distribute or process gas for utility companies and others by controlling compressors to maintain specified pressures on main pipelines.
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	Operate or control petroleum refining or processing units. May specialize in controlling manifold and pumping systems, gauging or testing oil in storage tanks, or regulating the flow of oil into pipelines.
51-8099	Plant and System Operators, All Other	All plant and system operators not listed separately.
51-8099	Biofuels Processing Technicians	Calculate, measure, load, mix, and process refined feedstock with additives in fermentation or reaction process vessels and monitor production process. Perform, and keep records of, plant maintenance, repairs, and safety inspections.
51-9011	Chemical Equipment Operators and Tenders	Operate or tend equipment to control chemical changes or reactions in the processing of industrial or consumer products. Equipment used includes devulcanizers, steam-jacketed kettles, and reactor vessels.
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	Set up, operate, or tend continuous flow or vat-type equipment; filter presses; shaker screens; centrifuges; condenser tubes; precipitating, fermenting, or evaporating tanks; scrubbing towers; or batch stills. These machines extract, sort, or separate liquids, gases, or solids from other materials to recover a refined product. Includes dairy processing equipment operators.
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	Set up, operate, or tend machines to crush, grind, or polish materials, such as coal, glass, grain, stone, food, or rubber.
51-9022	Grinding and Polishing Workers, Hand	Grind, sand, or polish, using hand tools or hand-held power tools, a variety of metal, wood, stone, clay, plastic, or glass objects. Includes chippers, buffers, and finishers.
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	Set up, operate, or tend machines to mix or blend materials, such as chemicals, tobacco, liquids, color pigments, or explosive ingredients.
51-9031	Cutters and Trimmers, Hand	Use hand tools or hand-held power tools to cut and trim a variety of manufactured items, such as carpet, fabric, stone, glass, or rubber.
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	Set up, operate, or tend machines that cut or slice materials, such as glass, stone, cork, rubber, tobacco, food, paper, or insulating material.
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	Set up, operate, or tend machines, such as glass-forming machines, plodder machines, and tuber machines, to shape and form products such as glassware, food, rubber, soap, brick, tile, clay, wax, tobacco, or cosmetics.
51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	Operate or tend heating equipment other than basic metal, plastic, or food processing equipment. Includes activities such as annealing glass, drying lumber, curing rubber, removing moisture from materials, or boiling soap.
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	Inspect, test, sort, sample, or weigh nonagricultural raw materials or processed, machined, fabricated, or assembled parts or products for defects, wear, and deviations from specifications. May use precision measuring instruments and complex test equipment.
51-9071	Jewelers and Precious Stone and Metal Workers	Design, fabricate, adjust, repair, or appraise jewelry, gold, silver, other precious metals, or gems.
51-9071	Gem and Diamond Workers	Fabricate, finish, or evaluate the quality of gems and diamonds used in jewelry or industrial tools.
51-9081	Dental Laboratory Technicians	Construct and repair full or partial dentures or dental appliances.

O*NET- SOC Code	Title	Description
51-9082	Medical Appliance Technicians	Construct, maintain, or repair medical supportive devices such as braces, orthotics and prosthetic devices, joints, arch supports, and other surgical and medical appliances.
51-9083	Ophthalmic Laboratory Technicians	Cut, grind, and polish eyeglasses, contact lenses, or other precision optical elements. Assemble and mount lenses into frames or process other optical elements. Includes precision lens polishers or grinders, centerer-edgers, and lens mounters.
51-9111	Packaging and Filling Machine Operators and Tenders	Operate or tend machines to prepare industrial or consumer products for storage or shipment. Includes cannery workers who pack food products.
51-9123	Painting, Coating, and Decorating Workers	Paint, coat, or decorate articles, such as furniture, glass, plateware, pottery, jewelry, toys, books, or leather.
51-9124	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	Set up, operate, or tend spraying or rolling machines to coat or paint any of a wide variety of products, including glassware, cloth, ceramics, metal, plastic, paper, or wood, with lacquer, silver, copper, rubber, varnish, glaze, enamel, oil, or rust-proofing materials. Includes painters of transportation vehicles such as painters in auto body repair facilities.
51-9141	Semiconductor Processing Technicians	Perform any or all of the following functions in the manufacture of electronic semiconductors: load semiconductor material into furnace; saw formed ingots into segments; load individual segment into crystal growing chamber and monitor controls; locate crystal axis in ingot using x-ray equipment and saw ingots into wafers; and clean, polish, and load wafers into series of special purpose furnaces, chemical baths, and equipment used to form circuitry and change conductive properties.
51-9151	Photographic Process Workers and Processing Machine Operators	Perform work involved in developing and processing photographic images from film or digital media. May perform precision tasks such as editing photographic negatives and prints.
51-9161	Computer Numerically Controlled Tool Operators	Operate computer-controlled tools, machines, or robots to machine or process parts, tools, or other work pieces made of metal, plastic, wood, stone, or other materials. May also set up and maintain equipment.
51-9162	Computer Numerically Controlled Tool Programmers	Develop programs to control machining or processing of materials by automatic machine tools, equipment, or systems. May also set up, operate, or maintain equipment.
51-9191	Adhesive Bonding Machine Operators and Tenders	Operate or tend bonding machines that use adhesives to join items for further processing or to form a completed product. Processes include joining veneer sheets into plywood; gluing paper; or joining rubber and rubberized fabric parts, plastic, simulated leather, or other materials.
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	Operate or tend machines to wash or clean products, such as barrels or kegs, glass items, tin plate, food, pulp, coal, plastic, or rubber, to remove impurities.
51-9193	Cooling and Freezing Equipment Operators and Tenders	Operate or tend equipment such as cooling and freezing units, refrigerators, batch freezers, and freezing tunnels, to cool or freeze products, food, blood plasma, and chemicals.
51-9194	Etchers and Engravers	Engrave or etch metal, wood, rubber, or other materials. Includes such workers as etcher-circuit processors, pantograph engravers, and silk screen etchers.
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	Mold, shape, form, cast, or carve products such as food products, figurines, tile, pipes, and candles consisting of clay, glass, plaster, concrete, stone, or combinations of materials.
51-9195	Stone Cutters and Carvers, Manufacturing	Cut or carve stone according to diagrams and patterns.
51-9195	Glass Blowers, Molders, Benders, and Finishers	Shape molten glass according to patterns.

O*NET- SOC Code	Title	Description
51-9195	Potters, Manufacturing	Operate production machines such as pug mill, jigger machine, or potter's wheel to process clay in manufacture of ceramic, pottery and stoneware products.
51-9196	Paper Goods Machine Setters, Operators, and Tenders	Set up, operate, or tend paper goods machines that perform a variety of functions, such as converting, sawing, corrugating, banding, wrapping, boxing, stitching, forming, or sealing paper or paperboard sheets into products.
51-9197	Tire Builders	Operate machines to build tires.
51-9198	Helpers--Production Workers	Help production workers by performing duties requiring less skill. Duties include supplying or holding materials or tools, and cleaning work area and equipment.
51-9199	Production Workers, All Other	All production workers not listed separately.

Transportation and Material Moving Occupations

53-1041	Aircraft Cargo Handling Supervisors	Supervise and coordinate the activities of ground crew in the loading, unloading, securing, and staging of aircraft cargo or baggage. May determine the quantity and orientation of cargo and compute 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. Includes loadmasters.
53-1042	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	Directly supervise and coordinate the activities of helpers, laborers, or material movers, hand.
53-1042	Recycling Coordinators	Supervise curbside and drop-off recycling programs for municipal governments or private firms.
53-1043	First-Line Supervisors of Material-Moving Machine and Vehicle Operators	Directly supervise and coordinate activities of material-moving machine and vehicle operators and helpers.
53-1044	First-Line Supervisors of Passenger Attendants	Supervise and coordinate activities of passenger attendants.
53-1049	First-Line Supervisors of Transportation Workers, All Other	All first-line supervisors of transportation workers not listed separately.
53-2011	Airline Pilots, Copilots, and Flight Engineers	Pilot and navigate the flight of fixed-wing aircraft, usually on scheduled air carrier routes, for the transport of passengers and cargo. Requires Federal Air Transport certificate and rating for specific aircraft type used. Includes regional, national, and international airline pilots and flight instructors of airline pilots.
53-2012	Commercial Pilots	Pilot and navigate the flight of fixed-wing aircraft on nonscheduled air carrier routes, or helicopters. Requires Commercial Pilot certificate. Includes charter pilots with similar certification, and air ambulance and air tour pilots. Excludes regional, national, and international airline pilots.
53-2021	Air Traffic Controllers	Control air traffic on and within vicinity of airport, and movement of air traffic between altitude sectors and control centers, according to established procedures and policies. Authorize, regulate, and control commercial airline flights according to government or company regulations to expedite and ensure flight safety.

O*NET- SOC Code	Title	Description
53-2022	Airfield Operations Specialists	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.
53-2031	Flight Attendants	Monitor safety of the aircraft cabin. Provide services to airline passengers, explain safety information, serve food and beverages, and respond to emergency incidents.
53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	Drive ambulance or assist ambulance driver in transporting sick, injured, or convalescent persons. Assist in lifting patients.
53-3031	Driver/Sales Workers	Drive truck or other vehicle over established routes or within an established territory and sell or deliver goods, such as food products, including restaurant take-out items, or pick up or deliver items such as commercial laundry. May also take orders, collect payment, or stock merchandise at point of delivery.
53-3032	Heavy and Tractor-Trailer Truck Drivers	Drive a tractor-trailer combination or a truck with a capacity of at least 26,001 pounds Gross Vehicle Weight (GVW). May be required to unload truck. Requires commercial drivers' license. Includes tow truck drivers.
53-3033	Light Truck Drivers	Drive a light vehicle, such as a truck or van, with a capacity of less than 26,001 pounds Gross Vehicle Weight (GVW), primarily to pick up merchandise or packages from a distribution center and deliver. May load and unload vehicle.
53-3051	Bus Drivers, School	Drive a school bus to transport students. Ensure adherence to safety rules. May assist students in boarding or exiting.
53-3052	Bus Drivers, Transit and Intercity	Drive bus or motor coach, including regular route operations, charters, and private carriage. May assist passengers with baggage. May collect fares or tickets.
53-3053	Shuttle Drivers and Chauffeurs	Drive a motor vehicle to transport passengers on a planned or scheduled basis. May collect a fare. Includes nonemergency medical transporters and hearse drivers.
53-3054	Taxi Drivers	Drive a motor vehicle to transport passengers on an unplanned basis and charge a fare, usually based on a meter.
53-3099	Motor Vehicle Operators, All Other	All motor vehicle operators not listed separately.
53-4011	Locomotive Engineers	Drive electric, diesel-electric, steam, or gas-turbine-electric locomotives to transport passengers or freight. Interpret train orders, electronic or manual signals, and railroad rules and regulations.
53-4013	Rail Yard Engineers, Dinkey Operators, and Hostlers	Drive switching or other locomotive or dinkey engines within railroad yard, industrial plant, quarry, construction project, or similar location.
53-4022	Railroad Brake, Signal, and Switch Operators and Locomotive Firers	Operate or monitor railroad track switches or locomotive instruments. May couple or uncouple rolling stock to make up or break up trains. Watch for and relay traffic signals. May inspect couplings, air hoses, journal boxes, and hand brakes. May watch for dragging equipment or obstacles on rights-of-way.
53-4031	Railroad Conductors and Yardmasters	Coordinate activities of switch-engine crew within railroad yard, industrial plant, or similar location. Conductors coordinate activities of train crew on passenger or freight trains. Yardmasters review train schedules and switching orders and coordinate activities of workers engaged in railroad traffic operations, such as the makeup or breakup of trains and yard switching.

O*NET- SOC Code	Title	Description
53-4041	Subway and Streetcar Operators	Operate subway or elevated suburban trains with no separate locomotive, or electric-powered streetcar, to transport passengers. May handle fares.
53-4099	Rail Transportation Workers, All Other	All rail transportation workers not listed separately.
53-5011	Sailors and Marine Oilers	Stand watch to look for obstructions in path of vessel, measure water depth, turn wheel on bridge, or use emergency equipment as directed by captain, mate, or pilot. Break out, rig, overhaul, and store cargo-handling gear, stationary rigging, and running gear. Perform a variety of maintenance tasks to preserve the painted surface of the ship and to maintain line and ship equipment. Must hold government-issued certification and tankerman certification when working aboard liquid-carrying vessels. Includes able seamen and ordinary seamen.
53-5021	Captains, Mates, and Pilots of Water Vessels	Command or supervise operations of ships and water vessels, such as tugboats and ferryboats. Required to hold license issued by U.S. Coast Guard.
53-5022	Motorboat Operators	Operate small motor-driven boats. May assist in navigational activities.
53-5031	Ship Engineers	Supervise and coordinate activities of crew engaged in operating and maintaining engines, boilers, deck machinery, and electrical, sanitary, and refrigeration equipment aboard ship.
53-6011	Bridge and Lock Tenders	Operate and tend bridges, canal locks, and lighthouses to permit marine passage on inland waterways, near shores, and at danger points in waterway passages. May supervise such operations. Includes drawbridge operators, lock operators, and slip bridge operators.
53-6021	Parking Attendants	Park vehicles or issue tickets for customers in a parking lot or garage. May park or tend vehicles in environments such as a car dealership or rental car facility. May collect fee.
53-6031	Automotive and Watercraft Service Attendants	Service automobiles, buses, trucks, boats, and other automotive or marine vehicles with fuel, lubricants, and accessories. Collect payment for services and supplies. May lubricate vehicle, change motor oil, refill antifreeze, or replace lights or other accessories, such as windshield wiper blades or fan belts. May repair or replace tires.
53-6032	Aircraft Service Attendants	Service aircraft with fuel. May de-ice aircraft, refill water and cooling agents, empty sewage tanks, service air and oxygen systems, or clean and polish exterior.
53-6041	Traffic Technicians	Conduct field studies to determine traffic volume, speed, effectiveness of signals, adequacy of lighting, and other factors influencing traffic conditions, under direction of traffic engineer.
53-6051	Transportation Inspectors	Inspect equipment or goods in connection with the safe transport of cargo or people. Includes rail transportation inspectors, such as freight inspectors, rail inspectors, and other inspectors of transportation vehicles not elsewhere classified.
53-6051	Aviation Inspectors	Inspect aircraft, maintenance procedures, air navigational aids, air traffic controls, and communications equipment to ensure conformance with Federal safety regulations.
53-6051	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	Inspect and monitor transportation equipment, vehicles, or systems to ensure compliance with regulations and safety standards.
53-6061	Passenger Attendants	Provide services to ensure the safety of passengers aboard ships, buses, trains, or within the station or terminal. Perform duties such as explaining the use of safety equipment, serving meals or beverages, or answering questions related to travel.
53-6099	Transportation Workers, All Other	All transportation workers not listed separately.

O*NET- SOC Code	Title	Description
53-7011	Conveyor Operators and Tenders	Control or tend conveyors or conveyor systems that move materials or products to and from stockpiles, processing stations, departments, or vehicles. May control speed and routing of materials or products.
53-7021	Crane and Tower Operators	Operate mechanical boom and cable or tower and cable equipment to lift and move materials, machines, or products in many directions.
53-7031	Dredge Operators	Operate dredge to remove sand, gravel, or other materials in order to excavate and maintain navigable channels in waterways.
53-7041	Hoist and Winch Operators	Operate or tend hoists or winches to lift and pull loads using power-operated cable equipment.
53-7051	Industrial Truck and Tractor Operators	Operate industrial trucks or tractors equipped to move materials around a warehouse, storage yard, factory, construction site, or similar location.
53-7061	Cleaners of Vehicles and Equipment	Wash or otherwise clean vehicles, machinery, and other equipment. Use such materials as water, cleaning agents, brushes, cloths, and hoses.
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	Manually move freight, stock, luggage, or other materials, or perform other general labor. Includes all manual laborers not elsewhere classified.
53-7062	Recycling and Reclamation Workers	Prepare and sort materials or products for recycling. Identify and remove hazardous substances. Dismantle components of products such as appliances.
53-7063	Machine Feeders and Offbearers	Feed materials into or remove materials from machines or equipment that is automatic or tended by other workers.
53-7064	Packers and Packagers, Hand	Pack or package by hand a wide variety of products and materials.
53-7065	Stockers and Order Fillers	Receive, store, and issue merchandise, materials, equipment, and other items from stockroom, warehouse, or storage yard to fill shelves, racks, tables, or customers' orders. May operate power equipment to fill orders. May mark prices on merchandise and set up sales displays.
53-7071	Gas Compressor and Gas Pumping Station Operators	Operate steam-, gas-, electric motor-, or internal combustion-engine driven compressors. Transmit, compress, or recover gases, such as butane, nitrogen, hydrogen, and natural gas.
53-7072	Pump Operators, Except Wellhead Pumpers	Tend, control, or operate power-driven, stationary, or portable pumps and manifold systems to transfer gases, oil, other liquids, slurries, or powdered materials to and from various vessels and processes.
53-7073	Wellhead Pumpers	Operate power pumps and auxiliary equipment to produce flow of oil or gas from wells in oil field.
53-7081	Refuse and Recyclable Material Collectors	Collect and dump refuse or recyclable materials from containers into truck. May drive truck.
53-7121	Tank Car, Truck, and Ship Loaders	Load and unload chemicals and bulk solids, such as coal, sand, and grain, into or from tank cars, trucks, or ships, using material moving equipment. May perform a variety of other tasks relating to shipment of products. May gauge or sample shipping tanks and test them for leaks.
53-7199	Material Moving Workers, All Other	All material moving workers not listed separately.

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