

15-2031 Operations Research Analysts



Formulate and apply mathematical modeling and other optimizing methods using a computer to develop and interpret information that assists management with decision making, policy formulation, or other managerial functions. May develop related software, service, or products. Frequently concentrates on collecting and analyzing data and developing decision support software. May develop and supply optimal time, cost, or logistics networks for program evaluation, review, or implementation. *Examples: Method Consultant; Standards Analyst*

Training Category: Bachelor's | none | none

2017 Average Wage:	n/a
2016 Estimated Employment:	n
2026 Projected Employment:	n
Growth Rate, 2016-2026:	n
Annual Openings:	n

Industry	2016 Share	2026 Share
425 Wholesale Electronic Markets and Agents/Brokers	n	n
523 Financial Investment and Related Activities	n	n
524 Insurance Carriers and Related Activities	n	n
551 Management of Companies and Enterprises	n	n
6113 Colleges and Universities	n	n
622 Hospitals	n	n

15-2041 Statisticians



Engage in the development of mathematical theory or apply statistical theory and methods to collect, organize, interpret, and summarize numerical data to provide usable information. May specialize in fields, such as bio-statistics, agricultural statistics, business statistics, economic statistics, or other fields. Include mathematical statisticians. *Examples: Biometrician; Sampling Expert; Statistical Analyst*

Training Category: Master's | none | none

2017 Average Wage:	\$34.97
2016 Estimated Employment:	131
2026 Projected Employment:	176
Growth Rate, 2016-2026:	34.4%
Annual Openings:	15

Industry	2016 Share	2026 Share
5417 Scientific Research and Development Services	36.6%	35.8%
524 Insurance Carriers and Related Activities	32.8%	34.7%
6113 Colleges and Universities	13.7%	12.5%
State Government, excl. Education and Hospitals	3.8%	3.4%
Self-employed Workers	2.3%	2.3%
5416 Management and Technical Consulting Services	n	n

15-2091 Mathematical Technicians



Apply standardized mathematical formulas, principles, and methodology to technological problems in engineering and physical sciences in relation to specific industrial and research objectives, processes, equipment, and products. *Example: Harmonic Analyst*

Training Category: Bachelor's | none | none

2017 Average Wage:	n/a
2016 Estimated Employment:	n
2026 Projected Employment:	n
Growth Rate, 2016-2026:	n
Annual Openings:	n

Industry	2016 Share	2026 Share
5417 Scientific Research and Development Services	n	n
6113 Colleges and Universities	n	n

17-1011 Architects, Except Landscape and Naval



Plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property. *Examples: Architectural Designer; Building Consultant; Site Planner*

Training Category: Bachelor's | none | Intern/Residency

2017 Average Wage:	\$40.13
2016 Estimated Employment:	221
2026 Projected Employment:	229
Growth Rate, 2016-2026:	3.6%
Annual Openings:	17

Industry	2016 Share	2026 Share
5413 Architectural and Engineering Services	67.9%	66.8%
Self-employed Workers	18.1%	18.8%
236 Construction of Buildings	n	n
321 Wood Product Manufacturing	n	n
5613 Employment Services	n	n
6113 Colleges and Universities	n	n

17-1012 Landscape Architects



Plan and design land areas for such projects as parks and other recreational facilities, airports, highways, hospitals, schools, land subdivisions, and commercial, industrial, and residential sites. *Examples: Environmental Planner; Land Planner; Landscape Designer*

Training Category: Bachelor's | none | Intern/Residency

2017 Average Wage:	n/a
2016 Estimated Employment:	83
2026 Projected Employment:	88
Growth Rate, 2016-2026:	6.0%
Annual Openings:	6

Industry		2016 Share	2026 Share
5413	Architectural and Engineering Services	68.7%	67.1%
	Self-employed Workers	16.9%	18.2%
5617	Services to Buildings and Dwellings	13.3%	13.6%
	Federal Government, Excluding Post Office	1.2%	1.1%

17-1021 Cartographers and Photogrammetrists



Collect, analyze, and interpret geographic information provided by geodetic surveys, aerial photographs, and satellite data. Research, study, and prepare maps and other spatial data in digital or graphic form for 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. *Examples: Field Map Editor; Mapper*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$22.94
2016 Estimated Employment:	124
2026 Projected Employment:	137
Growth Rate, 2016-2026:	10.5%
Annual Openings:	10

Industry		2016 Share	2026 Share
5413	Architectural and Engineering Services	63.7%	64.2%
	State Government, excl. Education and Hospitals	9.7%	8.8%
	Local Government, Excluding Education	6.5%	7.3%
238	Specialty Trade Contractors	n	n
813	Membership Organizations	n	n

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. *Examples: Geodetic Surveyor; Land Examiner; Mineral Surveyor*

Training Category: Bachelor's | none | Intern/Residency

2017 Average Wage:	\$27.97
2016 Estimated Employment:	250
2026 Projected Employment:	279
Growth Rate, 2016-2026:	11.6%
Annual Openings:	22

Industry		2016 Share	2026 Share
5413	Architectural and Engineering Services	88.4%	88.2%
	Self-employed Workers	2.0%	2.2%
	State Government, excl. Education and Hospitals	1.6%	1.4%
	Local Government, Excluding Education	2.0%	2.2%
236	Construction of Buildings	n	n
551	Management of Companies and Enterprises	n	n

17-2011 Aerospace Engineers



Perform a variety of engineering work 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. *Examples: Aeronautical Engineer; Aircraft Design Engineer; Flight Test Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$48.39
2016 Estimated Employment:	64
2026 Projected Employment:	72
Growth Rate, 2016-2026:	12.5%
Annual Openings:	5

Industry		2016 Share	2026 Share
332	Fabricated Metal Product Manufacturing	n	n
334	Computer and Electronic Product Manufacturing	n	n
336	Transportation Equipment Manufacturing	n	n
423	Merchant Wholesalers, Durable Goods	n	n
5416	Management and Technical Consulting Services	n	n
5417	Scientific Research and Development Services	n	n

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. *Examples: Agricultural Production Engineer, Farm Equipment Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	n/a
2016 Estimated Employment:	n
2026 Projected Employment:	n
Growth Rate, 2016-2026:	n
Annual Openings:	n

Industry	2016 Share	2026 Share
Federal Government, Excluding Post Office	n	n

17-2031 Biomedical Engineers



Apply knowledge of engineering, biology, and biomechanical principles to the design, development, and evaluation of biological and health systems and products, such as artificial organs, prostheses, instrumentation, medical information systems, and health management and care delivery systems. *Example: Orthopedic Designer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$43.42
2016 Estimated Employment:	90
2026 Projected Employment:	95
Growth Rate, 2016-2026:	5.6%
Annual Openings:	6

Industry	2016 Share	2026 Share
339 Miscellaneous Manufacturing	n	n
425 Wholesale Electronic Markets and Agents/Brokers	n	n
551 Management of Companies and Enterprises	n	n
5413 Architectural and Engineering Services	n	n
5417 Scientific Research and Development Services	n	n
6113 Colleges and Universities	n	n

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. *Examples: Adsorption and Adsorption Engineer; Explosives Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$46.46
2016 Estimated Employment:	n
2026 Projected Employment:	n
Growth Rate, 2016-2026:	n
Annual Openings:	n

Industry	2016 Share	2026 Share
325 Chemical Manufacturing	n	n
326 Plastics and Rubber Products Manufacturing	n	n
334 Computer and Electronic Product Manufacturing	n	n
425 Wholesale Electronic Markets and Agents/Brokers	n	n
5413 Architectural and Engineering Services	n	n
5417 Scientific Research and Development Services	n	n

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, water and sewage systems, and waste disposal units. Include architectural, structural, traffic, ocean, and geo-technical engineers. *Examples: Bridge Engineer; Construction Engineer; Concrete Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$38.36
2016 Estimated Employment:	1,441
2026 Projected Employment:	1,582
Growth Rate, 2016-2026:	9.8%
Annual Openings:	121

Industry	2016 Share	2026 Share
5413 Architectural and Engineering Services	64.7%	66.1%
State Government, excl. Education and Hospitals	18.8%	17.5%
Self-employed Workers	2.9%	2.8%
5416 Management and Technical Consulting Services	2.6%	3.0%
Local Government, Excluding Education	2.4%	2.3%
Federal Government, Excluding Post Office	1.9%	1.8%

17-2061 Computer Hardware Engineers



Research, design, develop, and 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. *Examples: Computer Hardware Designer, Computer Hardware Developer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$64.97
2016 Estimated Employment:	272
2026 Projected Employment:	301
Growth Rate, 2016-2026:	10.7%
Annual Openings:	21

Industry	2016 Share	2026 Share
5415 Computer Systems Design and Related Services	40.8%	45.5%
334 Computer and Electronic Product Manufacturing	25.4%	20.6%
5417 Scientific Research and Development Services	12.1%	12.6%
5613 Employment Services	12.1%	12.0%
6113 Colleges and Universities	5.5%	5.3%
5413 Architectural and Engineering Services	n	n

17-2071 Electrical Engineers



Design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use. *Examples: Power Distribution Engineer; Illuminating Engineer; Relay Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$49.87
2016 Estimated Employment:	1,730
2026 Projected Employment:	1,805
Growth Rate, 2016-2026:	4.3%
Annual Openings:	119

Industry	2016 Share	2026 Share
334 Computer and Electronic Product Manufacturing	42.8%	39.5%
5413 Architectural and Engineering Services	12.8%	15.0%
551 Management of Companies and Enterprises	8.9%	9.4%
333 Machinery Manufacturing	6.0%	5.8%
335 Electrical Equipment and Appliance Manufacturing	5.8%	5.6%
425 Wholesale Electronic Markets and Agents/Brokers	5.7%	5.8%

17-2072 Electronics Engineers, Except Computer



Research, design, develop, and test electronic components and systems for commercial, industrial, military, or scientific use utilizing 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. *Examples: Communications Engineer; Circuit Design Engineer; Guidance and Control Systems Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$52.17
2016 Estimated Employment:	504
2026 Projected Employment:	514
Growth Rate, 2016-2026:	2.0%
Annual Openings:	33

Industry	2016 Share	2026 Share
334 Computer and Electronic Product Manufacturing	53.4%	50.8%
423 Merchant Wholesalers, Durable Goods	19.3%	20.8%
517 Telecommunications	7.5%	7.6%
333 Machinery Manufacturing	5.2%	5.3%
5414 Specialized Design Services	n	n
5416 Management and Technical Consulting Services	n	n

17-2081 Environmental Engineers



Design, plan, or perform engineering duties in the prevention, control, and remediation of environmental health hazards utilizing various engineering disciplines. Work may include waste treatment, site remediation, or pollution control technology. *Examples: Soil Engineer; Industrial Hygiene Engineer; Pollution Control Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$39.35
2016 Estimated Employment:	151
2026 Projected Employment:	162
Growth Rate, 2016-2026:	7.3%
Annual Openings:	11

Industry	2016 Share	2026 Share
5413 Architectural and Engineering Services	43.7%	43.2%
5416 Management and Technical Consulting Services	25.2%	28.4%
State Government, excl. Education and Hospitals	9.9%	9.3%
6113 Colleges and Universities	6.0%	5.6%
Local Government, Excluding Education	4.6%	4.3%
326 Plastics and Rubber Products Manufacturing	n	n

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. *Examples: Fire-Protection Engineer; Product Safety Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$49.43
2016 Estimated Employment:	71
2026 Projected Employment:	74
Growth Rate, 2016-2026:	4.2%
Annual Openings:	5

Industry		2016 Share	2026 Share
312	Beverage and Tobacco Product Manufacturing	n	n
333	Machinery Manufacturing	n	n
334	Computer and Electronic Product Manufacturing	n	n
524	Insurance Carriers and Related Activities	n	n
5416	Management and Technical Consulting Services	n	n
551	Management of Companies and Enterprises	n	n

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. *Examples: Packaging Engineer; Time Study Engineer; Plant Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$40.53
2016 Estimated Employment:	1,320
2026 Projected Employment:	1,439
Growth Rate, 2016-2026:	9.0%
Annual Openings:	99

Industry		2016 Share	2026 Share
334	Computer and Electronic Product Manufacturing	25.9%	24.3%
332	Fabricated Metal Product Manufacturing	12.7%	12.1%
333	Machinery Manufacturing	10.6%	12.2%
336	Transportation Equipment Manufacturing	6.2%	7.2%
339	Miscellaneous Manufacturing	5.4%	5.1%
326	Plastics and Rubber Products Manufacturing	5.3%	4.7%

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.

Training Category: Bachelor's | none | none

2017 Average Wage:	n/a
2016 Estimated Employment:	n
2026 Projected Employment:	n
Growth Rate, 2016-2026:	n
Annual Openings:	n

Industry		2016 Share	2026 Share
336	Transportation Equipment Manufacturing	n	n

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. Include those 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. *Example: Corrosion Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$44.17
2016 Estimated Employment:	72
2026 Projected Employment:	73
Growth Rate, 2016-2026:	1.4%
Annual Openings:	5

Industry		2016 Share	2026 Share
326	Plastics and Rubber Products Manufacturing	n	n
334	Computer and Electronic Product Manufacturing	n	n
335	Electrical Equipment and Appliance Manufacturing	n	n
336	Transportation Equipment Manufacturing	n	n
5417	Scientific Research and Development Services	n	n
551	Management of Companies and Enterprises	n	n

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 such equipment as centralized heat, gas, water, and steam systems. *Examples: Combustion Engineer; Plant Equipment Engineer; Hydraulic Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$42.74
2016 Estimated Employment:	1,687
2026 Projected Employment:	1,767
Growth Rate, 2016-2026:	4.7%
Annual Openings:	115

Industry	2016 Share	2026 Share
332 Fabricated Metal Product Manufacturing	20.0%	19.2%
334 Computer and Electronic Product Manufacturing	19.1%	16.9%
333 Machinery Manufacturing	15.4%	16.4%
5413 Architectural and Engineering Services	9.4%	10.8%
5417 Scientific Research and Development Services	7.2%	8.0%
326 Plastics and Rubber Products Manufacturing	5.5%	4.9%

17-2151 Mining and Geological Engineers, Including Mining Safety Engineers 

Determine the location and plan the extraction of coal, metallic ores, nonmetallic minerals, and building materials, such as stone and gravel. Work involves conducting preliminary surveys of deposits or undeveloped mines and planning their development; examining deposits or mines to determine whether they can be worked at a profit; making geological and topographical surveys; evolving methods of mining best suited to character, type, and size of deposits; and supervising mining operations. *Examples: Geophysical Engineer, Mineral Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	n/a
2016 Estimated Employment:	n
2026 Projected Employment:	n
Growth Rate, 2016-2026:	n
Annual Openings:	n

Industry	2016 Share	2026 Share
5413 Architectural and Engineering Services	n	n

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. *Examples: Atomic Process Engineer, Nuclear Radiation Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	n/a
2016 Estimated Employment:	n
2026 Projected Employment:	n
Growth Rate, 2016-2026:	n
Annual Openings:	n

Industry	2016 Share	2026 Share
221 Utilities	n	n
5416 Management and Technical Consulting Services	n	n
Federal Government, Excluding Post Office	n	n

17-2199 Engineers, All Other 

All engineers not listed separately. *Examples: Optical Engineer; Salvage Engineer; Ordnance Engineer*

Training Category: Bachelor's | none | none

2017 Average Wage:	\$44.15
2016 Estimated Employment:	702
2026 Projected Employment:	737
Growth Rate, 2016-2026:	5.0%
Annual Openings:	50

Industry	2016 Share	2026 Share
334 Computer and Electronic Product Manufacturing	14.1%	12.5%
5413 Architectural and Engineering Services	13.7%	14.3%
333 Machinery Manufacturing	12.7%	12.8%
339 Miscellaneous Manufacturing	6.4%	5.8%
551 Management of Companies and Enterprises	5.8%	6.1%
332 Fabricated Metal Product Manufacturing	4.6%	4.3%

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. Utilize knowledge of building materials, engineering practices, and mathematics to complete drawings. *Example: Structural Drafter*

Training Category: Associate | none | none

2017 Average Wage:	\$25.70
2016 Estimated Employment:	538
2026 Projected Employment:	575
Growth Rate, 2016-2026:	6.9%
Annual Openings:	50

Industry	2016 Share	2026 Share
5413 Architectural and Engineering Services	63.2%	63.3%
321 Wood Product Manufacturing	7.1%	6.4%
425 Wholesale Electronic Markets and Agents/Brokers	6.5%	6.4%
238 Specialty Trade Contractors	4.5%	4.7%
236 Construction of Buildings	n	n
444 Building Material and Garden Supply Stores	n	n

17-3012 Electrical and Electronics Drafters



Prepare wiring diagrams, circuit board assembly diagrams, and layout drawings used for manufacture, installation, and repair of electrical equipment in factories, power plants, and buildings. *Example: Electrical Systems Drafter*

Training Category: Associate | none | none

2017 Average Wage:	\$33.29
2016 Estimated Employment:	299
2026 Projected Employment:	313
Growth Rate, 2016-2026:	4.7%
Annual Openings:	26

Industry	2016 Share	2026 Share
5413 Architectural and Engineering Services	38.1%	41.2%
334 Computer and Electronic Product Manufacturing	30.4%	26.5%
551 Management of Companies and Enterprises	8.7%	9.0%
335 Electrical Equipment and Appliance Manufacturing	5.7%	5.4%
238 Specialty Trade Contractors	4.4%	4.5%
333 Machinery Manufacturing	2.3%	2.2%

17-3013 Mechanical Drafters



Prepare detailed working diagrams of machinery and mechanical devices, including dimensions, fastening methods, and other engineering information. *Example: Aeronautical Drafter*

Training Category: Associate | none | none

2017 Average Wage:	\$30.56
2016 Estimated Employment:	351
2026 Projected Employment:	369
Growth Rate, 2016-2026:	5.1%
Annual Openings:	32

Industry	2016 Share	2026 Share
5413 Architectural and Engineering Services	24.8%	26.3%
334 Computer and Electronic Product Manufacturing	15.1%	13.3%
332 Fabricated Metal Product Manufacturing	13.7%	13.0%
423 Merchant Wholesalers, Durable Goods	13.1%	14.4%
333 Machinery Manufacturing	6.3%	6.2%
339 Miscellaneous Manufacturing	5.1%	4.6%

17-3019 Drafters, All Other



All drafters not listed separately. *Examples: Geological Drafter; Hull Drafter*

Training Category: Associate | none | none

2017 Average Wage:	\$27.10
2016 Estimated Employment:	115
2026 Projected Employment:	126
Growth Rate, 2016-2026:	9.6%
Annual Openings:	11

Industry	2016 Share	2026 Share
5413 Architectural and Engineering Services	27.0%	27.0%
238 Specialty Trade Contractors	21.7%	23.0%
327 Nonmetallic Mineral Product Manufacturing	n	n
333 Machinery Manufacturing	n	n
444 Building Material and Garden Supply Stores	n	n
551 Management of Companies and Enterprises	n	n

17-3022 Civil Engineering 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. *Example: Highway Technician*

Training Category: Associate | none | none

2017 Average Wage:	\$23.98
2016 Estimated Employment:	169
2026 Projected Employment:	188
Growth Rate, 2016-2026:	11.2%
Annual Openings:	17

Industry	2016 Share	2026 Share
5413 Architectural and Engineering Services	85.2%	85.6%
Local Government, Excluding Education	13.0%	12.2%
Self-employed Workers	n	n
551 Management of Companies and Enterprises	n	n

17-3023 Electrical and Electronics Engineering Technicians



Apply electrical and electronic theory and related knowledge, usually under the direction of engineering staff, to design, build, repair, calibrate, and modify electrical components, circuitry, controls, and machinery for subsequent evaluation and use by engineering staff in making engineering design decisions. *Examples: Calibration Laboratory Technician; Semiconductor Development Technician; Instrumentation Technician*

Training Category: Associate | none | none

2017 Average Wage:	\$27.90
2016 Estimated Employment:	1,092
2026 Projected Employment:	1,094
Growth Rate, 2016-2026:	0.2%
Annual Openings:	93

Industry	2016 Share	2026 Share
334 Computer and Electronic Product Manufacturing	51.2%	46.8%
5415 Computer Systems Design and Related Services	12.6%	15.4%
335 Electrical Equipment and Appliance Manufacturing	7.1%	6.9%
551 Management of Companies and Enterprises	5.3%	5.9%
423 Merchant Wholesalers, Durable Goods	4.3%	4.8%
5413 Architectural and Engineering Services	3.7%	4.1%

17-3024 Electro-Mechanical Technicians



Operate, test, and maintain unmanned, automated, servo-mechanical, or electromechanical equipment. May operate unmanned submarines, aircraft, or other equipment at worksites, such as oil rigs, deep ocean exploration, or hazardous waste removal. May assist engineers in testing and designing robotics equipment. *Example: Robotics Testing Technician*

Training Category: Associate | none | none

2017 Average Wage:	\$26.92
2016 Estimated Employment:	157
2026 Projected Employment:	163
Growth Rate, 2016-2026:	3.8%
Annual Openings:	14

Industry	2016 Share	2026 Share
5613 Employment Services	35.7%	38.0%
334 Computer and Electronic Product Manufacturing	31.9%	28.2%
327 Nonmetallic Mineral Product Manufacturing	n	n
333 Machinery Manufacturing	n	n
336 Transportation Equipment Manufacturing	n	n
551 Management of Companies and Enterprises	n	n

17-3025 Environmental Engineering 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 pollution, including waste treatment and site remediation. May assist in the development of environmental pollution remediation devices under direction of engineer. *Examples: Air Analysis Technician; Soil Technician*

Training Category: Associate | none | none

2017 Average Wage:	n/a
2016 Estimated Employment:	n
2026 Projected Employment:	n
Growth Rate, 2016-2026:	n
Annual Openings:	n

Industry	2016 Share	2026 Share
334 Computer and Electronic Product Manufacturing	n	n
5413 Architectural and Engineering Services	n	n
5416 Management and Technical Consulting Services	n	n
551 Management of Companies and Enterprises	n	n
Local Government, Excluding Education	n	n

17-3026 Industrial Engineering Technicians



Apply engineering theory and principles to problems of industrial layout or manufacturing production, usually under the direction of engineering staff. May study and record time, motion, method, and speed involved in performance of production, maintenance, clerical, and other worker operations for such purposes as establishing standard production rates or improving efficiency. *Examples: Methods Study Analyst; Quality Control Technician; Time Study Analyst*

Training Category: Associate | none | none

2017 Average Wage:	\$27.40
2016 Estimated Employment:	423
2026 Projected Employment:	422
Growth Rate, 2016-2026:	-0.2%
Annual Openings:	36

Industry	2016 Share	2026 Share
333 Machinery Manufacturing	23.4%	24.4%
334 Computer and Electronic Product Manufacturing	22.7%	21.1%
332 Fabricated Metal Product Manufacturing	19.9%	20.1%
326 Plastics and Rubber Products Manufacturing	n	n
335 Electrical Equipment and Appliance Manufacturing	n	n
339 Miscellaneous Manufacturing	n	n

17-3027 Mechanical Engineering Technicians



Apply theory and principles of mechanical engineering to modify, develop, and test machinery and equipment under direction of engineering staff or physical scientists. *Examples: Heat Transfer Technician; Optomechanical Technician; Tool Analyst*

Training Category: Associate | none | none

2017 Average Wage:	\$25.81
2016 Estimated Employment:	359
2026 Projected Employment:	368
Growth Rate, 2016-2026:	2.5%
Annual Openings:	32

Industry	2016 Share	2026 Share
332 Fabricated Metal Product Manufacturing	22.3%	21.7%
333 Machinery Manufacturing	22.3%	23.1%
334 Computer and Electronic Product Manufacturing	15.0%	13.9%
5417 Scientific Research and Development Services	9.2%	10.3%
326 Plastics and Rubber Products Manufacturing	n	n
336 Transportation Equipment Manufacturing	n	n

17-3029 Engineering Technicians, Except Drafters, All Other



All engineering technicians, except drafters, not listed separately. *Examples: Laser Specialist; Metallurgical Technician; Material Stress Tester*

Training Category: Associate | none | none

2017 Average Wage:	\$25.37
2016 Estimated Employment:	415
2026 Projected Employment:	425
Growth Rate, 2016-2026:	2.4%
Annual Openings:	36

Industry	2016 Share	2026 Share
State Government, excl. Education and Hospitals	34.5%	34.4%
333 Machinery Manufacturing	12.3%	12.7%
334 Computer and Electronic Product Manufacturing	10.8%	9.9%
Federal Government, Excluding Post Office	6.8%	6.6%
336 Transportation Equipment Manufacturing	n	n
339 Miscellaneous Manufacturing	n	n

17-3031 Surveying and Mapping Technicians



Perform surveying and mapping duties, usually under the direction of a 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 topographical maps. *Examples: Cartographic Technician; Map Drafter; Stereo Map Plotter Operator*

Training Category: High School | none | Moderate OJT

2017 Average Wage:	\$21.69
2016 Estimated Employment:	301
2026 Projected Employment:	329
Growth Rate, 2016-2026:	9.3%
Annual Openings:	35

Industry	2016 Share	2026 Share
5413 Architectural and Engineering Services	73.8%	75.1%
State Government, excl. Education and Hospitals	12.3%	11.3%
Self-employed Workers	8.0%	7.9%
221 Utilities	n	n
813 Membership Organizations	n	n
Local Government, Excluding Education	n	n