

# CAREER GUIDE

# 2012



**easyuni**

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# Accountant

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**Analyze financial information and prepare financial reports to determine or maintain record of assets, liabilities, profit and loss, tax liability, or other financial activities within an organization.**

## *Common Tasks*

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1. Prepare, examine, or analyze accounting records, financial statements, or other financial reports to assess accuracy, completeness, and conformance to reporting and procedural standards.
2. Report to management regarding the finances of establishment.
3. Establish tables of accounts and assign entries to proper accounts.
4. Develop, implement, modify, and document recordkeeping and accounting systems, making use of current computer technology.
5. Compute taxes owed and prepare tax returns, ensuring compliance with payment, reporting or other tax requirements.
6. Maintain or examine the records of government agencies.
7. Advise clients in areas such as compensation, employee health care benefits, the design of accounting or data processing systems, or long-range tax or estate plans.
8. Develop, maintain, and analyze budgets, preparing periodic reports that compare budgeted costs to actual costs.
9. Provide internal and external auditing services for businesses or individuals.
10. Analyze business operations, trends, costs, revenues, financial commitments, and obligations, to project future revenues and expenses or to provide advice.

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### *Skills Required*

---

1. Mathematics: Using mathematics to solve problems.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
5. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
8. Systems Analysis: Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
9. Systems Evaluation Identifying: Measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
10. Coordination: Adjusting actions in relation to others' actions.

### *Abilities Required*

---

1. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
6. Near Vision: The ability to see details at close range (within a few feet of the observer).



7. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
8. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
9. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
10. Written Expression: The ability to communicate information and ideas in writing so others will understand.

### *Work Activities*

---

1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
5. Coordination: Adjusting specific goals and plans to prioritize, organize, and accomplish your work.
6. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
7. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
9. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
10. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work

tasks.

2. Integrity Job requires being honest and ethical.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
5. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Persistence Job requires persistence in the face of obstacles.
10. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.



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### Work Values

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.



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YOUR  
CREATIVE  
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**K**

**I focus on  
accumulating a  
wealth of ideas.  
It's my choice.**





# Actuary

---

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 premium rates required and cash reserves necessary to ensure payment of future benefits.

**Sample of reported job titles: Actuary, Actuarial Analyst, Pricing Actuary, Product Development Actuary, Actuarial Assistant, Actuarial Associate, Actuarial Consultant, Consulting Actuary, Health Actuary, Pricing Analyst.**



## *Common Tasks*

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1. Ascertain premium rates required and cash reserves and liabilities necessary to ensure payment of future benefits.
2. Determine or help determine company policy, and explain complex technical matters to company executives, government officials, shareholders, policyholders, or the public.
3. Design, review and help administer insurance, annuity and pension plans, determining financial soundness and calculating premiums.
4. Analyze statistical information to estimate mortality, accident, sickness, disability, and retirement rates.
5. Provide advice to clients on a contract basis, working as a consultant.
6. Collaborate with programmers, underwriters, accounts, claims experts, and senior management to help companies develop plans for new lines of business or improving existing business.
7. Provide expertise to help financial institutions manage risks and maximize returns associated with investment products or credit offerings.
8. Construct probability tables for events such as fires, natural disasters, and unemployment, based on analysis of statistical data and other pertinent information.
9. Determine equitable basis for distributing surplus earnings under participating insurance and annuity contracts in mutual companies.
10. Testify before public agencies on proposed legislation affecting businesses.

### *Skills Required*

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1. Mathematics: Using mathematics to solve problems.
2. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
3. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
7. Time Management: Managing one's own time and the time of others.
8. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. Coordination: Adjusting actions in relation to others' actions.
10. Speaking: Talking to others to convey information effectively.

### *Abilities Required*

---

1. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
2. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
6. Near Vision: The ability to see details at close range (within a few feet of the observer).
7. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It



does not involve solving the problem, only recognizing there is a problem.

8. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
9. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
10. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.

### *Work Activities*

---

1. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
5. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
7. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
9. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
10. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.



### *Work Styles*

---

1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Integrity Job requires being honest and ethical.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Persistence Job requires persistence in the face of obstacles.
8. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

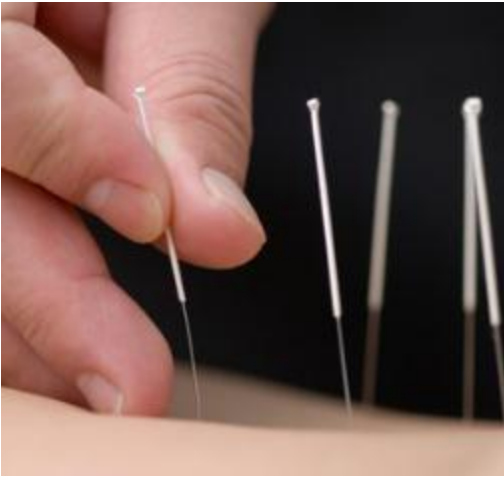
### *Work Values*

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1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions.
2. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
4. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Acupuncturist

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**Provide treatment of symptoms and disorders using needles and small electrical currents. May provide massage treatment, and also provide preventive treatments.**

## *Common Tasks*

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1. Identify correct anatomical and proportional point locations based on patients' anatomy and positions, contraindications, and precautions related to treatments such as intradermal needles, moxibustion, electricity, guasha, and bleeding.
2. Insert needles to provide acupuncture treatment.
3. Treat medical conditions using techniques such as acupressure, shiatsu, and tuina.
4. Develop individual treatment plans and strategies.
5. Analyze physical findings and medical histories to make diagnoses according to Oriental medicine traditions.
6. Apply heat or cold therapy to patients using materials such as heat pads, hydrocollator packs, warm compresses, cold compresses, heat lamps, and vapor coolants.
7. Apply moxibustion directly or indirectly to patients using Chinese, non-scarring, stick, or pole moxa.
8. Assess patients' general physical appearance to make diagnoses.
9. Collect medical histories and general health and life style information from patients.
10. Evaluate treatment outcomes and recommend new or altered treatments as necessary to further promote, restore, or maintain health.

## *Work Values*

---

1. Achievement Occupations that satisfy this work value are results oriented and allow

employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy
3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

### *Tools*

---

1. Bandage scissors or its supplies Bandage scissors; Scissor pincettes
2. Electric vibrators for rehabilitation or therapy Ultrasound massagers; Vibration massagers
3. Floor grade forceps or hemostats Angle tip forceps; Hemostat clamps; Lockable forceps; Splinter forceps
4. Hypodermic needles Filiform acupuncture needles; Intradermal acupuncture needles; Press needles; Seven-star needles (see all 5 examples)
5. Ion exchange apparatus Ionizers
6. Lancets Lancet needles; Three-edged bloodletting needles
7. Lasers Crystal probes; Laser pens
8. Mats or platforms for rehabilitation or therapy Massage chairs; Massage tables
9. Medical heat lamps or accessories Digital heat lamps; Infrared heat lamps; Mineral wave lamps; Portable heat lamps
10. Needle guides Acupuncture needle guide tubes; Needle inserters; Needle plungers
11. Neuromuscular stimulators or kits Digital electronic acupunctoscopes; Electroacupuncture stimulation units; Pen probes; Pulsed magnetic field generators (see all 7 examples)
12. Reflex hammers or mallets Babinski hammers; Buck neurological hammers; Taylor-type percussion hammers
13. Surgical clamps or clips or forceps or accessories Adson forceps; Dressing forceps
14. Therapeutic balls or accessories Gua sha tools; Manaka hammers; Rolling drums
15. Therapeutic heating or cooling pads or compresses or packs Magnetic cupping sets; Moxa extinguishers; Moxa spoons; Plastic cupping sets
16. Therapeutic heating or cooling units or systems Moxa boxes; Moxa burners; Moxa cans; Tiger

warmers (see all 5 examples)

17. Tweezers Tack tweezers; Wide grip tweezers
18. Vacuum pumps Ion pumps
19. Wrist exercisers for rehabilitation or therapy  
Hand exercise balls; Hand rollers; Magnetic finger rings

### *Interest*

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1. **Social:** Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.
2. **Realistic:** Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.
3. **Investigative:** Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.

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# Advertising and Promotions Manager

**Plan and direct 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.**



## *Common Tasks*

1. Prepare budgets and submit estimates for program costs as part of campaign plan development.
2. Plan and prepare advertising and promotional material to increase sales of products or services, working with customers, company officials, sales departments and advertising agencies.
3. Assist with annual budget development.
4. Inspect layouts and advertising copy and edit scripts, audio and video tapes, and other promotional material for adherence to specifications.
5. Coordinate activities of departments, such as sales, graphic arts, media, finance, and research.
6. Prepare and negotiate advertising and sales contracts.
7. Identify and develop contacts for promotional campaigns and industry programs that meet identified buyer targets such as dealers, distributors, or consumers.
8. Gather and organize information to plan advertising campaigns.
9. Confer with department heads or staff to discuss topics such as contracts, selection of advertising media, or product to be advertised.
10. Confer with clients to provide marketing or technical advice.





### *Skills Required*

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1. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
2. Service Orientation: Actively looking for ways to help people.
3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Time Management: Managing one's own time and the time of others.
6. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
7. Speaking: Talking to others to convey information effectively.
8. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
9. Persuasion: Persuading others to change their minds or behavior.
10. Management of Financial Resources: Determining how money will be spent to get the work done, and accounting for these expenditures.

### *Abilities Required*

---

1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Speech Clarity: The ability to speak clearly so others can understand you.
4. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
6. Speech Recognition: The ability to identify and understand the speech of another person.
7. Written Expression: The ability to communicate information and ideas in writing so others will understand.



8. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
9. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
10. **Originality:** The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

### *Work Activities*

---

1. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
4. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
5. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
6. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
7. **Performing Administrative Activities:** Performing day-to-day administrative tasks such as maintaining information files and processing paperwork.
8. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
9. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
10. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.

### *Work Styles*

---

1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Integrity Job requires being honest and ethical.
4. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

---

1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employes to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.



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# Aerospace Engineer



**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.**

## *Common Tasks*

1. Direct and coordinate activities of engineering or technical personnel designing, fabricating, modifying, or testing of aircraft or aerospace products.
2. Formulate conceptual design of aeronautical or aerospace products or systems to meet customer requirements.
3. Plan and coordinate activities concerned with investigating and resolving customers' reports of technical problems with aircraft or aerospace vehicles.
4. Plan and conduct experimental, environmental, operational and stress tests on models and prototypes of aircraft and aerospace systems and equipment.
5. Analyze project requests and proposals and engineering data to determine feasibility, productivity, cost, and production time of aerospace or aeronautical product.
6. Evaluate product data and design from inspections and reports for conformance to engineering principles, customer requirements, and quality standards.
7. Maintain records of performance reports for future reference.
8. Develop design criteria for aeronautical or aerospace products or systems, including testing methods, production costs, quality standards, and completion dates.
9. Write technical reports and other documentation such as handbooks and bulletins, for use by engineering staff, management, and customers.
10. Review performance reports and documentation from customers and field engineers, and inspect malfunctioning or damaged products to determine problem.



### *Skills Required*

---

1. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
2. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
3. **Time Management:** Managing one's own time and the time of others.
4. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
5. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
6. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
8. **Speaking:** Talking to others to convey information effectively.
9. **Management of Personnel Resources:** Motivating, developing, and directing people as they work, identifying the best people for the job.
10. **Systems Evaluation Identifying:** Measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.

### *Abilities Required*

---

1. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
2. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
3. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
6. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas to solve a problem.



7. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
8. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
9. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
10. **Near Vision:** The ability to see details at close range (within a few feet of the observer).

### *Work Activities*

---

1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
5. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
6. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
7. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
8. **Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment:** Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
9. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
10. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.



### *Work Styles*

---

1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
5. Persistence Job requires persistence in the face of obstacles.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Integrity Job requires being honest and ethical.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

### *Work Values*

---

1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.



# Agricultural Engineer

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**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.**

## *Common Tasks*

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1. Visit sites to observe environmental problems, to consult with contractors, or to monitor construction activities.
2. Design agricultural machinery components and equipment using computer-aided design (CAD) technology.
3. Test agricultural machinery and equipment to ensure adequate performance.
4. Design structures for crop storage, animal shelter and loading, and animal and crop processing, and supervise their construction.
5. Provide advice on water quality and issues related to pollution management, river control, and ground and surface water resources.
6. Conduct educational programs that provide farmers or farm cooperative members with information that can help them improve agricultural productivity.
7. Discuss plans with clients, contractors, consultants, and other engineers so that they can be evaluated and necessary changes made.
8. Supervise food processing or manufacturing plant operations.
9. Design and supervise environmental and land reclamation projects in agriculture and related industries.
10. Plan and direct construction of rural electric-power distribution systems, and irrigation, drainage, and flood control systems for soil and water conservation.



### *Skills Required*

---

1. Mathematics: Using mathematics to solve problems.
2. Science: Using scientific rules and methods to solve problems.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Technology Design: Generating or adapting equipment and technology to serve user needs.
5. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
6. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
7. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
8. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. Equipment Selection: Determining the kind of tools and equipment needed to do a job.
10. Operations Analysis: Analyzing needs and product requirements to create a design.

### *Abilities Required*

---

1. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
2. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
6. Written Comprehension: The ability to read and understand information and ideas presented in writing.
7. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures,



mathematical operations).

8. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
9. **Far Vision:** The ability to see details at a distance.
10. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).

### *Work Activities*

---

1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
3. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
4. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
5. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
6. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
7. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
9. **Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment:** Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
10. **Provide Consultation and Advice to Others:** Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.



### *Work Styles*

---

1. Integrity Job requires being honest and ethical.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
7. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.

### *Work Values*

---

1. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.



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# Agricultural Inspector

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**Inspect agricultural commodities, processing equipment, and facilities, and fish and logging operations, to ensure compliance with regulations and laws governing health, quality, and safety. Sample of reported job titles: Seed and Fertilizer Specialist, Grain Inspector, Meat and Poultry Inspector, Plant Protection Specialist, Apiary Inspector, Food Regulatory Field Supervisor, Plant Pest Inspector**

## *Common Tasks*

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1. Inspect agricultural commodities and related operations, as well as fish and logging operations for compliance with laws and regulations governing health, quality, and safety.
2. Inspect and test horticultural products or livestock to detect harmful diseases, chemical residues, and infestations, and to determine the quality of products or animals.
3. Verify that transportation and handling procedures meet regulatory requirements.
4. Collect samples from animals, plants, or products, and route them to laboratories for microbiological assessment, ingredient verification, and other testing.
5. Interpret and enforce government acts and regulations and explain required standards to agricultural workers.  
Write reports of findings and recommendations, and advise farmers, growers, or processors of corrective action to be taken.
6. Inspect the cleanliness and practices of establishment employees.
7. Monitor the operations and sanitary conditions of slaughtering and meat processing plants.
8. Inspect food products and processing procedures to determine whether products are safe to eat.
9. Take emergency actions such as closing production facilities if product safety is compromised.



### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Time Management:** Managing one's own time and the time of others.
4. **Quality Control Analysis:** Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
5. **Speaking:** Talking to others to convey information effectively.
6. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
7. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
8. **Instructing:** Teaching others how to do something.
9. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
10. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

### *Abilities Required*

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1. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
3. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
5. **Flexibility of Closure:** The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
6. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.



7. Far Vision: The ability to see details at a distance.
8. Speech Clarity: The ability to speak clearly so others can understand you.
9. Speech Recognition: The ability to identify and understand the speech of another person.
10. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.

### *Work Activities*

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.  
Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
2. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
3. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. Scheduling Work and Activities: Scheduling events, programs, and activities, as well as the work of others.
5. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
6. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
7. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
8. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.  
Inspecting Equipment, Structures, or Material: Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.

### *Work Styles*

---

1. Integrity Job requires being honest and ethical.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.



3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
5. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.  
Initiative Job requires a willingness to take on responsibilities and challenges.
7. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.  
Persistence Job requires persistence in the face of obstacles.

### Work Values

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.



# Aircraft Mechanic

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**Diagnose, adjust, repair, or overhaul aircraft engines and assemblies, such as hydraulic and pneumatic systems.**



## *Common Tasks*

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1. Read and interpret maintenance manuals, service bulletins, and other specifications to determine the feasibility and method of repairing or replacing malfunctioning or damaged components.
2. Inspect completed work to certify that maintenance meets standards and that aircraft are ready for operation.
3. Maintain repair logs, documenting all preventive and corrective aircraft maintenance.
4. Conduct routine and special inspections as required by regulations.
5. Examine and inspect aircraft components, including landing gear, hydraulic systems, and deicers to locate cracks, breaks, leaks, or other problems.
6. Inspect airframes for wear or other defects.
7. Maintain, repair, and rebuild aircraft structures, functional components, and parts such as wings and fuselage, rigging, hydraulic units, oxygen systems, fuel systems, electrical systems, gaskets, and seals.
8. Measure the tension of control cables.
9. Replace or repair worn, defective, or damaged components, using hand tools, gauges, and testing equipment.
10. Measure parts for wear, using precision instruments.

## *Skills Required*

---

1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Coordination:** Adjusting actions in relation to others' actions.



3. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. **Speaking:** Talking to others to convey information effectively.
5. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
6. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
8. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
10. **Instructing:** Teaching others how to do something.

### *Abilities Required*

---

1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. **Flexibility of Closure:** The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
5. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
6. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
7. **Selective Attention:** The ability to concentrate on a task over a period of time without being distracted.
8. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
9. **Speech Clarity:** The ability to speak clearly so others can understand you.



10. Speed of Closure: The ability to quickly make sense of, combine, and organize information into meaningful patterns.

#### *Work Activities*

---

1. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
2. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
6. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
7. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
8. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
9. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
10. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate

#### *Work Styles*

---

1. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.

4. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
5. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
6. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
7. Persistence Job requires persistence in the face of obstacles.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.

**Work Values**

1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

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# Airline Pilot

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**Pilot and navigate the flight of multi-engine aircraft in regularly scheduled service for the transport of passengers and cargo. Requires Federal Air Transport rating and certification in specific aircraft type used.**

## *Common Tasks*

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1. Use instrumentation to guide flights when visibility is poor.
2. Respond to and report in-flight emergencies and malfunctions.
3. Work as part of a flight team with other crew members, especially during takeoffs and landings.
4. Contact control towers for takeoff clearances, arrival instructions, and other information, using radio equipment.
5. Steer aircraft along planned routes, using autopilot and flight management computers.
6. Monitor gauges, warning devices, and control panels to verify aircraft performance and to regulate engine speed.
7. Start engines; operate controls, and pilot airplanes to transport passengers, mail, or freight, adhering to flight plans, regulations, and procedures.
8. Inspect aircraft for defects and malfunctions, according to pre-flight checklists.
9. Check passenger and cargo distributions and fuel amounts to ensure that weight and balance specifications are met.
10. Monitor engine operation, fuel consumption, and functioning of aircraft systems during flights.



### *Skills Required*

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1. Operation Monitoring: Watching gauges, dials, or other indicators to make sure a machine is working properly.
2. Operation and Control: Controlling operations of equipment or systems.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
5. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
8. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
9. Troubleshooting: Determining causes of operating errors and deciding what to do about it.
10. Speaking: Talking to others to convey information effectively.

### *Abilities Required*

---

1. Control Precision: The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
2. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. Response Orientation The ability to choose quickly between two or more movements in response to two or more different signals (lights, sounds, pictures). It includes the speed with which the correct response is started with the hand, foot, or other body part.
4. Depth Perception The ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object.
5. Spatial Orientation The ability to know your location in relation to the environment or to know where other objects are in relation to you.



6. Far Vision: The ability to see details at a distance.
7. Multilimb Coordination: The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.
8. Rate Control the ability to time your movements or the movement of a piece of equipment in anticipation of changes in the speed and/or direction of a moving object or scene.
9. Reaction Time The ability to quickly respond (with the hand, finger, or foot) to a signal (sound, light, picture) when it appears.
10. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.

### *Work Activities*

---

1. Operating Vehicles, Mechanized Devices, or Equipment Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.
2. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Controlling Machines and Processes Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
5. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
6. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
7. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
8. Inspecting Equipment, Structures, or Material: Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.





9. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
10. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

### *Work Styles*

---

1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
4. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
8. Integrity Job requires being honest and ethical.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

---

1. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security,

Variety and Working Conditions.

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# Air Traffic Controller

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**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.**



## *Common Tasks*

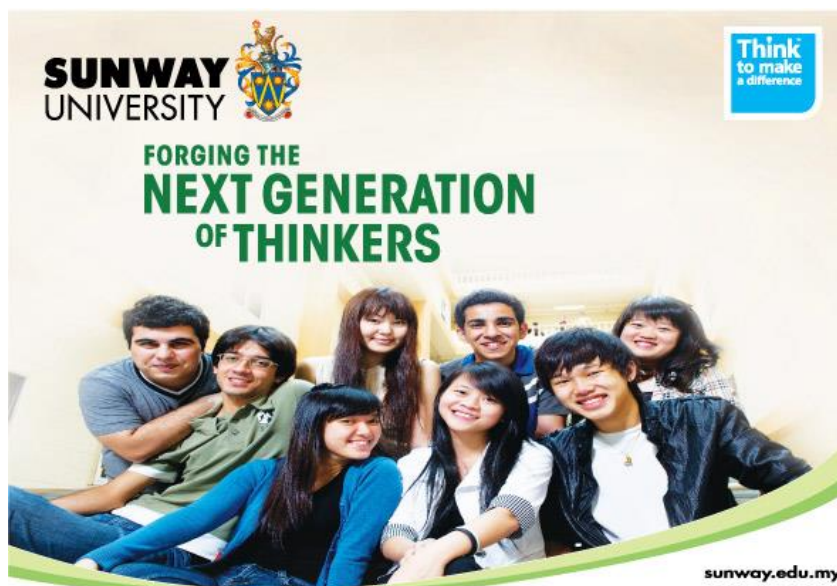
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1. Issue landing and take-off authorizations and instructions.
2. Monitor and direct the movement of aircraft within an assigned air space and on the ground at airports to minimize delays and maximize safety.
3. Monitor aircraft within a specific airspace, using radar, computer equipment, and visual references.
4. Inform pilots about nearby planes as well as potentially hazardous conditions such as weather, speed and direction of wind, and visibility problems.
5. Provide flight path changes or directions to emergency landing fields for pilots traveling in bad weather or in emergency situations.
6. Alert airport emergency services in cases of emergency and when aircraft are experiencing difficulties.
7. Direct pilots to runways when space is available, or direct them to maintain a traffic pattern until there is space for them to land.
8. Transfer control of departing flights to traffic control centers and accept control of arriving flights.
9. Direct ground traffic, including taxiing aircraft, maintenance and baggage vehicles, and airport workers.
10. Determine the timing and procedures for flight vector changes.

### *Skills Required*

---

1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Coordination: Adjusting actions in relation to others' actions.
3. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. Speaking: Talking to others to convey information effectively.
5. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
6. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
8. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
10. Instructing: Teaching others how to do something.





### *Abilities Required*

---

1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. Flexibility of Closure: The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
6. Near Vision: The ability to see details at close range (within a few feet of the observer).
7. Selective Attention: The ability to concentrate on a task over a period of time without being distracted.
8. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
9. Speech Clarity: The ability to speak clearly so others can understand you.
10. Speed of Closure: The ability to quickly make sense of, combine, and organize information into meaningful patterns.

### *Work Activities*

---

1. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
2. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
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6. Communicating with Persons outside Organization: Communicating with people outside the



organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.

7. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
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9. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
10. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate

### *Work Styles*

---

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5. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
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7. Persistence Job requires persistence in the face of obstacles.
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9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.

Work Values

1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

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# Allergist and Immunologist

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**Diagnose, treat, and help prevent allergic diseases and disease processes affecting the immune system.**

## *Common Tasks*

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1. Diagnose or treat allergic or immunologic conditions.
2. Perform allergen provocation tests such as nasal, conjunctival, bronchial, oral, food, and medication challenges.
3. Provide therapies, such as allergen immunotherapy and immunoglobulin therapy, to treat immune conditions.
4. Assess the risks and benefits of therapies for allergic and immunologic disorders.
5. Coordinate the care of patients with other health care professionals or support staff.
6. Develop individualized treatment plans for patients, considering patient preferences, clinical data, or the risks and benefits of therapies.
7. Educate patients about diagnoses, prognoses, or treatments.
8. Interpret diagnostic test results to make appropriate differential diagnoses.
9. Order or perform diagnostic tests such as skin pricks and intradermal, patch, or delayed hypersensitivity tests.  
Conduct physical examinations of patients.

### *Skills Required*

---

1. **Investigative:** Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.
2. **Social:** Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.
3. **Realistic:** Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.

### *Work Values*

---

1. **Recognition** Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
2. **Independence** Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.



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# Anesthesiologist

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**Administer anesthetics during surgery or other medical procedures.**

## *Common Tasks*

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1. Administer anesthetic or sedation during medical procedures, using local, intravenous, spinal, or caudal methods.
2. Monitor patient before, during, and after anesthesia and counteract adverse reactions or complications.
3. Provide and maintain life support and airway management and help prepare patients for emergency surgery.
4. Record type and amount of anesthesia and patient condition throughout procedure.
5. Examine patient, obtain medical history, and use diagnostic tests to determine risk during surgical, obstetrical, and other medical procedures.
6. Position patient on operating table to maximize patient comfort and surgical accessibility.
7. Decide when patients have recovered or stabilized enough to be sent to another room or ward or to be sent home following outpatient surgery.
8. Coordinate administration of anesthetics with surgeons during operation.
9. Confer with other medical professionals to determine type and method of anesthetic or sedation to render patient insensible to pain.
10. Coordinate and direct work of nurses, medical technicians, and other health care providers.



### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Operation Monitoring: Watching gauges, dials, or other indicators to make sure a machine is working properly.
5. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. Science: Using scientific rules and methods to solve problems.
8. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
9. Operation and Control: Controlling operations of equipment or systems.
10. Equipment Selection: Determining the kind of tools and equipment needed to do a job.

### *Abilities Required*

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1. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. Near Vision: The ability to see details at close range (within a few feet of the observer).
6. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.



7. Speech Clarity: The ability to speak clearly so others can understand you.
8. Written Comprehension: The ability to read and understand information and ideas presented in writing.
9. Speech Recognition: The ability to identify and understand the speech of another person.
10. Flexibility of Closure: The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.

### *Work Activities*

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1. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
2. Assisting and Caring for Others: Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
3. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
4. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
5. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
6. Inspecting Equipment, Structures, or Material: Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
7. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
8. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
9. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
10. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.



### *Work Styles*

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1. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Integrity Job requires being honest and ethical.
5. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
6. Persistence Job requires persistence in the face of obstacles.
7. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
8. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

### *Work Values*

---

1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Animal Scientist

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**Conduct research in the genetics, nutrition, reproduction, growth, and development of domestic farm animals.**

## *Common Tasks*

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1. Communicate research findings to the scientific community, producers, and the public.
2. Study effects of management practices, processing methods, feed, or environmental conditions on quality and quantity of animal products, such as eggs and milk.
3. Conduct research concerning animal nutrition, breeding, or management to improve products or processes.
4. Study nutritional requirements of animals and nutritive values of animal feed materials.
5. Advise producers about improved products and techniques that could enhance their animal production efforts.
6. Research and control animal selection and breeding practices to increase production efficiency and improve animal quality.
7. Develop improved practices in feeding, housing, sanitation, or parasite and disease control of animals.
8. Crossbreed animals with existing strains or cross strains to obtain new combinations of desirable characteristics.
9. Determine genetic composition of animal populations and heritability of traits, utilizing principles of genetics.

## *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.





2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Writing: Communicating effectively in writing as appropriate for the needs of the audience.  
Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Speaking: Talking to others to convey information effectively.
6. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
7. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
8. Science: Using scientific rules and methods to solve problems.
9. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.

### *Abilities Required*

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1. Written Comprehension: The ability to read and understand information and ideas presented in writing.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
5. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
6. Written Expression: The ability to communicate information and ideas in writing so others will understand.
7. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. Near Vision: The ability to see details at close range (within a few feet of the observer).



9. **Speech Clarity:** The ability to speak clearly so others can understand you.
10. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.

### *Work Activities*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
3. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.  
**Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
4. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
5. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
7. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
9. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.

### *Work Styles*

---

1. **Integrity Job** requires being honest and ethical.
2. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.
3. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.

4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
7. Persistence Job requires persistence in the face of obstacles.
8. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### Work Values

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

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The graphic features a collage of images related to hospitality and business, including chefs in a kitchen, a person in a suit, a golfer, and a group of people in a meeting. The background is a colorful geometric pattern.

# Animal Trainer

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**Train animals for riding, harness, security, performance, or obedience, or 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.**



**Sample of reported job titles: Trainer, Dog Trainer, Horse Trainer, Guide Dog Instructor, Guide Dog Trainer, Agility Instructor, Cutting Horse Trainer, Dog and Cat Behavior Specialist, Guide Dog Mobility Instructor, Licensed Guide Dog Instructor**

## *Common Tasks*

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1. Observe animals' physical conditions in order to detect illness or unhealthy conditions requiring medical care.  
Cue or signal animals during performances.
2. Administer prescribed medications to animals.
3. Evaluate animals in order to determine their temperaments, abilities, and aptitude for training.
4. Feed and exercise animals, and provide other general care such as cleaning and maintaining holding and performance areas.
5. Talk to and interact with animals in order to familiarize them to human voices and contact.
6. Conduct training programs in order to develop and maintain desired animal behaviors for competition, entertainment, obedience, security, riding and related areas.
7. Keep records documenting animal health, diet, and behavior.
8. Advise animal owners regarding the purchase of specific animals.
9. Train horses or other equines for riding, harness, show, racing, or other work, using knowledge of breed characteristics, training methods, performance standards, and the peculiarities of each animal.

## *Abilities Required*

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1. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
4. **Speech Clarity:** The ability to speak clearly so others can understand you.
5. **Far Vision:** The ability to see details at a distance.
6. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
7. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
10. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.

### *Work Activities*

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1. **Performing General Physical Activities:** Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
2. **Handling and Moving Objects** Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
3. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
4. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
5. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
6. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.



7. Judging the Qualities of Things, Services, or People Assessing the value, importance, or quality of things or people.
8. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. Training and Teaching Others: Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.
10. Developing Objectives and Strategies: Establishing long-range objectives and specifying the strategies and actions to achieve them.

### *Work Styles*

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1. Freedom to Make Decisions How much decision making freedom, without supervision, does the job offer?
2. Structured versus Unstructured Work To what extent is this job structured for the worker, rather than allowing the worker to determine tasks, priorities, and goals?
3. Face-to-Face Discussions How often do you have to have face-to-face discussions with individuals or teams in this job?
4. Spend Time Standing How much does this job require standing?
5. Telephone How often do you have telephone conversations in this job?
6. Contact With Others How much does this job require the worker to be in contact with others (face-to-face, by telephone, or otherwise) in order to perform it?
7. Outdoors, Exposed to Weather How often does this job require working outdoors, exposed to all weather conditions?
8. Spend Time Walking and Running How much does this job require walking and running?
9. Impact of Decisions on Co-workers or Company Results How do the decisions an employee makes impact the results of co-workers, clients or the company?
10. Indoors, Not Environmentally Controlled How often does this job require working indoors in non-controlled environmental conditions (e.g., warehouse without heat)?

### *Work Styles*

---

1. Integrity Job requires being honest and ethical.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger,



and avoiding aggressive behavior, even in very difficult situations.

4. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
5. Persistence Job requires persistence in the face of obstacles.
6. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
10. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.

### *Work Values*

---

1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Anthropologist

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**Research, evaluate, and establish public policy concerning the origins of humans; their physical, social, linguistic, and cultural development; and their behavior, as well as the cultures, organizations, and institutions they have created. Sample of reported job titles: American Indian Policy Specialist, Anthropology Instructor, Applied Anthropologist, Behavioral Scientist, Medical Anthropology Director, Principal Investigator, Program Review Director, Research Anthropologist, Research Director, Research Fellow**

## *Common Tasks*

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1. Collect information and make judgments through observation, interviews, and the review of documents.
2. Plan and direct research to characterize and compare the economic, demographic, health care, social, political, linguistic, and religious institutions of distinct cultural groups, communities, and organizations.
3. Write about and present research findings for a variety of specialized and general audiences.
4. Advise government agencies, private organizations, and communities regarding proposed programs, plans, and policies and their potential impacts on cultural institutions, organizations, and communities.
5. Build and use text-based database management systems to support the analysis of detailed firsthand observational records or "field notes."
6. Identify culturally specific beliefs and practices affecting health status and access to services for distinct populations and communities, in collaboration with medical and public health officials.
7. Develop intervention procedures, using techniques such as individual and focus group interviews, consultations, and participant observation of social interaction.
8. Construct and test data collection methods.





9. Explain the origins and physical, social, or cultural development of humans, including physical attributes, cultural traditions, beliefs, languages, resource management practices, and settlement patterns.
10. Conduct participatory action research in communities and organizations to assess how work is done and to design work systems, technologies, and environments.

### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
5. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
6. Speaking: Talking to others to convey information effectively.
7. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
8. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
9. Science: Using scientific rules and methods to solve problems.
10. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.

### *Abilities Required*

---

1. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
2. Written Comprehension: The ability to read and understand information and ideas presented in writing.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.



4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Written Expression: The ability to communicate information and ideas in writing so others will understand.
6. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
7. Near Vision: The ability to see details at close range (within a few feet of the observer).
8. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
9. Speech Clarity: The ability to speak clearly so others can understand you.
10. Speech Recognition: The ability to identify and understand the speech of another person.

### *Work Activities*

---

1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.  
Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.
2. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
3. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
4. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
6. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
7. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
8. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
9. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.

### *Work Styles*

---

1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
3. Integrity Job requires being honest and ethical.
4. Initiative Job requires a willingness to take on responsibilities and challenges.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
7. Persistence Job requires persistence in the face of obstacles.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
10. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.

### *Work Values*

---

1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

# Appraiser, Real Estate

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**Appraise real property to determine its value for purchase, sales, and investment, mortgage, or loan purposes. Sample of reported job titles: Real Estate Appraiser, Appraiser, Staff Appraiser, Certified Real Estate Appraiser, Residential Real Estate Appraiser, Commercial Real Estate Appraiser, Engagement Director, Residential Fee Appraiser, Certified Residential Real Estate Appraiser, Real Property Appraiser**

## *Common Tasks*

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1. Prepare written reports that estimate property values, outline methods by which the estimations were made, and meet appraisal standards.
2. Compute final estimation of property values, taking into account such factors as depreciation, replacement costs, value comparisons of similar properties, and income potential.
3. Search public records for transactions such as sales, leases, and assessments.
4. Inspect properties to evaluate construction, condition, special features, and functional design, and to take property measurements.
5. Photograph interiors and exteriors of properties to assist in estimating property value, substantiate findings, and complete appraisal reports.
6. Evaluate land and neighborhoods where properties are situated, considering locations and trends or impending changes that could influence future values.
7. Obtain county land values and sales information about nearby properties to aid in establishment of property values.
8. Verify legal descriptions of properties by comparing them to county records.
9. Check building codes and zoning bylaws to determine any effects on the properties being appraised.
10. Estimate building replacement costs using building valuation manuals and professional cost estimators.



### *Skills Required*

---

1. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
2. Mathematics: Using mathematics to solve problems.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Time Management: Managing one's own time and the time of others.
6. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
7. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
8. Speaking: Talking to others to convey information effectively.
9. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
10. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.

### *Abilities Required*

---

1. Written Comprehension: The ability to read and understand information and ideas presented in writing.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Written Expression: The ability to communicate information and ideas in writing so others will understand.
4. Near Vision: The ability to see details at close range (within a few feet of the observer).
5. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
6. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.



7. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. Speech Clarity: The ability to speak clearly so others can understand you.
9. Speech Recognition: The ability to identify and understand the speech of another person.
10. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### *Work Activities*

---

1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
4. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
5. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
6. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
7. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
8. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
9. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
10. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.

### *Work Styles*

---



1. Integrity Job requires being honest and ethical.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
5. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

### *Work Values*

---

1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Arbitrator, Mediator, and Conciliator

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**Facilitate negotiation and conflict resolution through dialogue. Resolve conflicts outside of the court system by mutual consent of parties involved. Sample of reported job titles: Mediator, Arbitrator, Commissioner, Labor Arbitrator, Alternative Dispute Resolution Coordinator (ADR Coordinator), Federal Mediator, Public Employment Mediator, Alternative Dispute Resolution Mediator (ADR Mediator), Arbiter, Community Relations Representative**

## *Common Tasks*

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1. Confer with disputants to clarify issues, identify underlying concerns, and develop an understanding of their respective needs and interests.
2. Use mediation techniques to facilitate communication between disputants, to further parties' understanding of different perspectives, and to guide parties toward mutual agreement.
3. Set up appointments for parties to meet for mediation.
4. Prepare settlement agreements for disputants to sign.
5. Organize and deliver public presentations about mediation to organizations such as community agencies and schools.
6. Analyze evidence and apply relevant laws, regulations, policies, and precedents in order to reach conclusions.
7. Prepare written opinions and decisions regarding cases.
8. Arrange and conduct hearings to obtain information and evidence relative to disposition of claims.
9. Rule on exceptions, motions, and admissibility of evidence.
10. Determine existence and amount of liability, according to evidence, laws, and administrative and judicial precedents.





### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
4. **Speaking:** Talking to others to convey information effectively.
5. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
6. **Negotiation:** Bringing others together and trying to reconcile differences.
7. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
8. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
10. **Persuasion:** Persuading others to change their minds or behavior.

### *Abilities Required*

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1. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
2. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
3. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
4. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
6. **Speech Clarity:** The ability to speak clearly so others can understand you.



7. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
8. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
9. **Near Vision:** The ability to see details at close range (within a few feet of the observer).  
**Speech Recognition:** The ability to identify and understand the speech of another person.

### *Work Activities*

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1. **Resolving Conflicts and Negotiating with Others:** Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.
2. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.  
**Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
4. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
5. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
7. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
8. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
9. **Judging the Qualities of Things, Services, or People** Assessing the value, importance, or quality of things or people.

### *Work Styles*

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1. **Integrity Job** requires being honest and ethical.
2. **Concern for Others Job** requires being sensitive to others' needs and feelings and being understanding and helpful on the job.



3. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
4. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
5. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
6. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
7. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Persistence Job requires persistence in the face of obstacles.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Architect

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**Plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property.**

## *Common Tasks*

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1. Consult with client to determine functional and spatial requirements of structure.
2. Prepare scale drawings.
3. Plan layout of project.
4. Prepare information regarding design, structure specifications, materials, color, equipment, estimated costs, or construction time.
5. Integrate engineering element into unified design.
6. Prepare contract documents for building contractors.
7. Direct activities of workers engaged in preparing drawings and specification documents.
8. Conduct periodic on-site observation of work during construction to monitor compliance with plans.
9. Seek new work opportunities through marketing, writing proposals, or giving presentations.
10. Administer construction contracts.

## *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.



2. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. **Time Management:** Managing one's own time and the time of others.
5. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
6. **Management of Personnel Resources:** Motivating, developing, and directing people as they work, identifying the best people for the job.
7. **Coordination:** Adjusting actions in relation to others' actions.
8. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
9. **Speaking:** Talking to others to convey information effectively.
10. **Operations Analysis:** Analyzing needs and product requirements to create a design.

### *Abilities Required*

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1. **Visualization** The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
2. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
3. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
4. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
5. **Originality:** The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
6. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
7. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. **Oral Comprehension:** The ability to listen to and understand information and ideas presented



through spoken words and sentences.

10. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.

### *Work Activities*

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1. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
2. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
3. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
4. Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment: Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
5. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
6. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
7. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
8. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
10. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Analytical Thinking Job requires analyzing information and using logic to address work-related



issues and problems.

3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Initiative Job requires a willingness to take on responsibilities and challenges.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Persistence Job requires persistence in the face of obstacles.
7. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
8. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
9. Integrity Job requires being honest and ethical.
10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Archivist

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**Appraise, edit, and direct safekeeping of permanent records and historically valuable documents. Participate in research activities based on archival materials.**

## *Common Tasks*

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1. Create and maintain accessible, retrievable computer archives and databases, incorporating current advances in electric information storage technology.
2. Organize archival records and develop classification systems to facilitate access to archival materials.
3. Authenticate and appraise historical documents and archival materials.
4. Provide reference services and assistance for users needing archival materials.
5. Direct activities of workers who assist in arranging, cataloguing, exhibiting, and maintaining collections of valuable materials.
6. Prepare archival records, such as document descriptions, to allow easy access to information.
7. Preserve records, documents, and objects, copying records to film, videotape, audiotape, disk, or computer formats as necessary.
8. Establish and administer policy guidelines concerning public access and use of materials.
9. Locate new materials and direct their acquisition and display.
10. Research and record the origins and historical significance of archival materials.





### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
5. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
6. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. Speaking: Talking to others to convey information effectively.
8. Instructing: Teaching others how to do something.
9. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
10. Operations Analysis: Analyzing needs and product requirements to create a design.

### *Abilities Required*

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1. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
2. Written Comprehension: The ability to read and understand information and ideas presented in writing.
3. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
4. Near Vision: The ability to see details at close range (within a few feet of the observer).
5. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
6. Written Expression: The ability to communicate information and ideas in writing so others will understand.



7. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
8. Speech Clarity: The ability to speak clearly so others can understand you.
9. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
10. Speech Recognition: The ability to identify and understand the speech of another person.

### *Work Activities*

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
3. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
4. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
5. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
6. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
7. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
8. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
9. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
10. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.



2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Initiative Job requires a willingness to take on responsibilities and challenges.
4. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.  
Integrity Job requires being honest and ethical.
6. Persistence Job requires persistence in the face of obstacles.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
9. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Assessor

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**Appraise real and personal property to determine its fair value. May assess taxes in accordance with prescribed schedules.**

## *Common Tasks*

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1. Determine taxability and value of properties, using methods such as field inspection, structural measurement, calculation, sales analysis, market trend studies, and income and expense analysis.
2. Inspect new construction and major improvements to existing structures to determine values.
3. Explain assessed values to property owners and defend appealed assessments at public hearings.
4. Inspect properties, considering factors such as market value, location, and building or replacement costs to determine appraisal value.
5. Prepare and maintain current data on each parcel assessed, including maps of boundaries, inventories of land and structures, property characteristics, and any applicable exemptions.
6. Identify the ownership of each piece of taxable property.
7. Conduct regular reviews of property within jurisdictions to determine changes in property due to construction or demolition.
8. Complete and maintain assessment rolls that show the assessed values and status of all property in a municipality.  
Issue notices of assessments and taxes.
9. Review information about transfers of property to ensure its accuracy, checking basic information on buyers, sellers, and sales prices and making corrections as necessary.



### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.  
**Speaking:** Talking to others to convey information effectively.
3. **Mathematics:** Using mathematics to solve problems.
4. **Time Management:** Managing one's own time and the time of others.
5. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
6. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
7. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.  
**Coordination:** Adjusting actions in relation to others' actions.

### *Abilities Required*

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1. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
2. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
3. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
5. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
6. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
7. **Speech Clarity:** The ability to speak clearly so others can understand you.
8. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern



according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

9. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
10. **Speech Recognition:** The ability to identify and understand the speech of another person.

### *Work Activities*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
3. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
5. **Judging the Qualities of Things, Services, or People Assessing the value, importance, or quality of things or people.**
6. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
7. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
9. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
10. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

### *Work Styles*

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1. **Integrity Job** requires being honest and ethical.
2. **Attention to Detail Job** requires being careful about detail and thorough in completing work



tasks.

3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
5. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
6. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Initiative Job requires a willingness to take on responsibilities and challenges.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Astronomer

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**Observe, research, and interpret celestial and astronomical phenomena to increase basic knowledge and apply such information to practical problems.**

**Sample of reported job titles: Astronomer, Research Scientist, Astrophysicist, Lunar and Planetary Institute Director, National Radio Astronomy Observatory Director, Observatory Director, Space Sciences Director.**

## *Common Tasks*

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1. Study celestial phenomena, using a variety of ground-based and space-borne telescopes and scientific instruments.  
Analyze research data to determine its significance, using computers.
2. Present research findings at scientific conferences and in papers written for scientific journals.
3. Measure radio, infrared, gamma, and x-ray emissions from extraterrestrial sources.
4. Develop theories based on personal observations or on observations and theories of other astronomers.
5. Raise funds for scientific research.
6. Collaborate with other astronomers to carry out research projects.
7. Develop instrumentation and software for astronomical observation and analysis.
8. Teach astronomy or astrophysics.
9. Develop and modify astronomy-related programs for public presentation.



### *Skills Required*

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1. Science: Using scientific rules and methods to solve problems.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. Mathematics: Using mathematics to solve problems.
4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
8. Programming: Writing computer programs for various purposes.
9. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
10. Speaking: Talking to others to convey information effectively.

### *Abilities Required*

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1. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
2. Written Comprehension: The ability to read and understand information and ideas presented in writing.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Written Expression: The ability to communicate information and ideas in writing so others will understand.
5. Near Vision: The ability to see details at close range (within a few feet of the observer).
6. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
7. Oral Expression: The ability to communicate information and ideas in speaking so others will



understand.

8. Flexibility of Closure: The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
9. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
10. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
5. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
7. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
8. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
9. Estimating the Quantifiable Characteristics of Products, Events, or Information: Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
10. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.

### *Work Styles*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.



2. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
3. Initiative Job requires a willingness to take on responsibilities and challenges.
4. Persistence Job requires persistence in the face of obstacles.
5. Integrity Job requires being honest and ethical.
6. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
7. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
8. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
9. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
10. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Atmospheric and Space Scientist

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**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. Sample of reported job titles: Meteorologist, Forecaster, General Forecaster, Science and Operations Officer (SOO), Warning Coordination Meteorologist, Broadcast Meteorologist, Hydro meteorological Technician, Meteorologist-in-Charge, Weather Forecaster**

## *Common Tasks*

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1. Study and interpret data, reports, maps, photographs, and charts to predict long- and short-range weather conditions, using computer models and knowledge of climate theory, physics, and mathematics.
2. Broadcast weather conditions, forecasts, and severe weather warnings to the public via television, radio, and the Internet, or provide this information to the news media.
3. Gather data from sources such as surface and upper air stations, satellites, weather bureaus, and radar for use in meteorological reports and forecasts.
4. Prepare forecasts and briefings to meet the needs of industry, business, government, and other groups.
5. Apply meteorological knowledge to problems in areas including agriculture, pollution control, and water management, and to issues such as global warming or ozone depletion.
6. Conduct basic or applied meteorological research into the processes and determinants of atmospheric phenomena, weather, and climate.



7. Operate computer graphic equipment to produce weather reports and maps for analysis, distribution, or use in weather broadcasts.
8. Measure wind, temperature, and humidity in the upper atmosphere, using weather balloons.
9. Develop and use weather forecasting tools, such as mathematical and computer models.
10. Direct forecasting services at weather stations, or at radio or television broadcasting facilities.

### *Skills Required*

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1. Science: Using scientific rules and methods to solve problems.
2. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Time Management: Managing one's own time and the time of others.
8. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
9. Coordination: Adjusting actions in relation to others' actions.  
Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

### *Abilities Required*

---

1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Written Comprehension: The ability to read and understand information and ideas presented in writing.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.



4. **Speech Clarity:** The ability to speak clearly so others can understand you.
5. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
6. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
7. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
8. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
9. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
10. **Near Vision:** The ability to see details at close range (within a few feet of the observer).

### *Work Activities*

---

1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.  
**Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
3. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
6. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
7. **Estimating the Quantifiable Characteristics of Products, Events, or Information:** Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.



8. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.

### *Work Styles*

---

1. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Integrity Job requires being honest and ethical.
4. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
5. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
6. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
7. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. Social Orientation Job requires preferring to work with others rather than alone, and being personally connected with others on the job.
9. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values*

---

1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.



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# Audiologist

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**Assess and treat persons with hearing and related disorders. May fit hearing aids and provide auditory training. May perform research related to hearing problems. Sample of reported job titles: Audiologist, Clinical Audiologist, Audiology Doctor (AUD), Dispensing Audiologist, Audiology Director, Certificate of Clinical Competence in Audiology Licensed Audiologist (CCC-A Licensed Audiologist), Clinical Director, Educational Audiologist, Hearing Instrument Specialist, Pediatric Audiologist**

## *Common Tasks*

---

1. Evaluate hearing and speech/language disorders to determine diagnoses and courses of treatment.
2. Administer hearing or speech/language evaluations, tests, or examinations to patients to collect information on type and degree of impairment, using specialized instruments and electronic equipment.
3. Fit and dispense assistive devices, such as hearing aids.
4. Maintain client records at all stages, including initial evaluation and discharge.
5. Refer clients to additional medical or educational services if needed.
6. Counsel and instruct clients in techniques to improve hearing or speech impairment, including sign language or lip-reading.
7. Monitor clients' progress and discharge them from treatment when goals have been attained.
8. Plan and conduct treatment programs for clients' hearing or speech problems, consulting



with physicians, nurses, psychologists, and other health care personnel as necessary.

9. Recommend assistive devices according to clients' needs or nature of impairments.
10. Participate in conferences or training to update or share knowledge of new hearing or speech disorder treatment methods or technologies.

### *Skills Required*

---

1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Speaking:** Talking to others to convey information effectively.
4. **Service Orientation:** Actively looking for ways to help people.
5. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
6. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
7. **Instructing:** Teaching others how to do something.
8. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
9. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
10. **Time Management:** Managing one's own time and the time of others.

### *Abilities Required*

---

1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Speech Clarity:** The ability to speak clearly so others can understand you.
4. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.



5. Speech Recognition: The ability to identify and understand the speech of another person.
6. Written Comprehension: The ability to read and understand information and ideas presented in writing.
7. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
8. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
9. Written Expression: The ability to communicate information and ideas in writing so others will understand.
10. Auditory Attention: The ability to focus on a single source of sound in the presence of other distracting sounds.

### *Work Activities*

---

1. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
2. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
3. Assisting and Caring for Others: Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
4. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
5. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
7. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
8. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.
9. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating,



recognizing differences or similarities, and detecting changes in circumstances or events.

### *Work Styles*

---

1. Integrity Job requires being honest and ethical.
2. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
5. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

# Auditor

**Examine and analyze accounting records to determine financial status of establishment and prepare financial reports concerning operating procedures.**



## *Common Tasks*

1. Collect and analyze data to detect deficient controls, duplicated effort, extravagance, fraud, or non-compliance with laws, regulations, and management policies.
2. Prepare detailed reports on audit findings.
3. Supervise auditing of establishments, and determine scope of investigation required.
4. Report to management about asset utilization and audit results, and recommend changes in operations and financial activities.
5. Inspect account books and accounting systems for efficiency, effectiveness, and use of accepted accounting procedures to record transactions.
6. Examine records and interview workers to ensure recording of transactions and compliance with laws and regulations.
7. Examine and evaluate financial and information systems, recommending controls to ensure system reliability and data integrity.
8. Review data about material assets, net worth, liabilities, capital stock, surplus, income, and expenditures.
9. Confer with company officials about financial and regulatory matters.
10. Examine whether the organization's objectives are reflected in its management activities, and whether employees understand the objectives.

## *Skills Required*

1. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Active Listening:** Giving full attention to what other people are saying, taking time to



understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

4. Speaking: Talking to others to convey information effectively.
5. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
6. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
7. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
9. Mathematics: Using mathematics to solve problems.
10. Coordination: Adjusting actions in relation to others' actions.

### *Abilities Required*

---

1. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
6. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
7. Speech Clarity: The ability to speak clearly so others can understand you.
8. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.



10. Near Vision: The ability to see details at close range (within a few feet of the observer).

### *Work Activities*

---

1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
3. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
5. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
6. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
7. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
8. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
9. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
10. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.

### *Work Styles*

---

1. Integrity Job requires being honest and ethical.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.



5. Persistence Job requires persistence in the face of obstacles.
6. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
7. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

### *Work Values*

---

1. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.





## Automotive Engineer

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**Develop new or improved designs for vehicle structural members, engines, transmissions and other vehicle systems, using computer-assisted design technology. Direct building modification and testing of vehicle and components.**

### *Common Tasks*

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1. Conduct or direct system-level automotive testing.
2. Design control systems or algorithms for purposes such as automotive energy management, emissions management, and increased operational safety or performance.
3. Design or analyze automobile systems in areas such as aerodynamics, alternate fuels, ergonomics, hybrid power, brakes, transmissions, steering, calibration, safety, and diagnostics.
4. Alter or modify designs to obtain specified functional and operational performance.
5. Build models for algorithm and control feature verification testing.
6. Calibrate vehicle systems, including control algorithms and other software systems.
7. Conduct automotive design reviews.
8. Develop calibration methodologies, test methodologies, or tools.
9. Develop engineering specifications and cost estimates for automotive design concepts.
10. Develop or integrate control feature requirements.

### *Tools & Technology*

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#### **Tools used in this occupation:**

1. Lathes Computerized numerical control CNC lathes; Multitasking lathes
2. Milling machines Five-axis machining centers; Three-axis vertical mills
3. Power grinders Bench grinders; Disc finishing machines



4. Pressure indicators Pressure gauges
5. Workshop presses Bench drill presses; Floor drill presses
6. Technology used in this occupation:
7. Analytical or scientific software Gamma Technologies GT-SUITE; Maplesoft Maple; somat edaq; The mathworks Simulink
8. Computer aided design CAD software Autodesk autocad software; Dassault Systemes solidworks software; Think3 think design Engineering; Vector cantech software
9. Development environment software C; Digital Equipment Corporation DIGITAL Fortran 90; Very high speed integrated circuit VHSIC hardware description language VHDL
10. Graphics or photo imaging software Adobe Systems Adobe Photoshop software; Ambient Design artrage; Corel Painter Sketch Pad; Portalgraphics opencanvas
11. Object or component oriented development software C++; Microsoft Visual C#

### *Wages & Employment Trends*

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#### **National**

1. Median wages data collected from Mechanical Engineers.
2. Employment data collected from Mechanical Engineers.
3. Industry data collected from Mechanical Engineers.

#### **Median wages (2009)**

\$37.03 hourly, \$77,020 annual

#### **Employment (2008)**

239,000 employees

#### **Projected growth (2008-2018)**

Slower than average (3% to 6%)

#### **Projected job openings (2008-2018)**

75,700

#### **Top industries (2008)**

Manufacturing, Professional, Scientific, and Technical Services

# Baker

---

**Mix and bake ingredients according to recipes to produce breads, rolls, cookies, cakes, pies, pastries, or other baked goods.**



## *Common Tasks*

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1. Observe color of products being baked, and adjust oven temperatures, humidity, and conveyor speeds accordingly.
2. Set oven temperatures and place items into hot ovens for baking.
3. Combine measured ingredients in bowls of mixing, blending, or cooking machinery.
4. Measure and weigh flour and other ingredients to prepare batters, doughs, fillings, and icings, using scales and graduated containers.
5. Roll, knead, cut, and shape dough to form sweet rolls, pie crusts, tarts, cookies, and other products.
6. Place dough in pans, molds, or on sheets, and bake in production ovens or on grills.
7. Check the quality of raw materials to ensure that standards and specifications are met.
8. Adapt the quantity of ingredients to match the amount of items to be baked.
9. Apply glazes, icings, or other toppings to baked goods, using spatulas or brushes.
10. Check equipment to ensure that it meets health and safety regulations and perform maintenance or cleaning, as necessary.

## *Skills Required*

---



1. Instructing: Teaching others how to do something.
2. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
3. Time Management: Managing one's own time and the time of others.
4. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
5. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
6. Speaking: Talking to others to convey information effectively.
7. Quality Control Analysis: Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
8. Mathematics: Using mathematics to solve problems.
9. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
10. Coordination: Adjusting actions in relation to others' actions.

### *Abilities Required*

---

1. Near Vision: The ability to see details at close range (within a few feet of the observer).
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Speech Clarity: The ability to speak clearly so others can understand you.
5. Visual Color Discrimination The ability to match or detect differences between colors, including shades of color and brightness.
6. Arm-Hand Steadiness The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
7. Speech Recognition: The ability to identify and understand the speech of another person.
8. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.



9. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
10. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### *Work Activities*

---

1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
3. Inspecting Equipment, Structures, or Material: Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
4. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
5. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
6. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
7. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
8. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. Estimating the Quantifiable Characteristics of Products, Events, or Information: Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
10. Judging the Qualities of Things, Services, or People Assessing the value, importance, or quality of things or people.

### *Work Styles*

---

1. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.



3. Integrity Job requires being honest and ethical.
4. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
5. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
10. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.

### *Work Values*

---

1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.

# Biochemical Engineer

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**Apply knowledge of biology, chemistry, and engineering to develop usable, tangible products. Solve problems related to materials, systems and processes that interact with humans, plants, animals, microorganisms, and biological materials.**

## *Common Tasks*

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1. Design or conduct follow-up experimentation, based on generated data, to meet established process objectives.
2. Design or conduct studies to determine optimal conditions for cell growth, protein production, or protein and virus expression and recovery, using chromatography, separation, and filtration equipment, such as centrifuges and bioreactors.
3. Design or direct bench or pilot production experiments to determine the scale of production methods that optimize product yield and minimize production costs.
4. Develop methodologies for transferring procedures or biological processes from laboratories to commercial-scale manufacturing production.
5. Devise scalable recovery, purification, or fermentation processes for producing proteins or other biological substances for human or animal therapeutic use, food production and processing, biofuels, or effluent treatment.
6. Recommend process formulas, instrumentation, or equipment specifications, based on results of bench and pilot experimentation.
7. Review existing manufacturing processes to identify opportunities for yield improvement or reduced process variation.



8. Advise manufacturing staff regarding problems with fermentation, filtration, or other production processes.
9. Collaborate with manufacturing or quality assurance staff to prepare product specification and safety sheets, standard operating procedures, user manuals, or qualification and validation reports.
10. Confer with research and manufacturing personnel to ensure the compatibility of design and production.

### *Work Values*

---

1. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

### *Tools & Technology*

---

Tools used in this occupation:

1. Calorimeters Bomb calorimeters; Differential scanning calorimeters
2. Electronic counters Automated particle counters; Condensation nuclei counters CNC; Optical particle counters
3. Gel documentation systems Protein gel electrophoresis
4. Microplate readers Enzyme-linked immunosorbent assay ELISA plate readers
5. Optical diffraction apparatus Low-pressure impactors; Particle size classifiers

**Technology used in this occupation:**

1. Analytical or scientific software aspentech HYSYS; Intelligen superpro Designer; The mathworks MATLAB; Wolfram Research Mathematica
2. Computer aided design CAD software Bioreactor Design
3. Presentation software Microsoft powerpoint



4. Spreadsheet software Microsoft Excel
5. Word processing software Microsoft Word

## Education

This occupation may require a background in the following science, technology, engineering, and mathematics (STEM) educational disciplines:

- Chemistry Chemical Engineering

**PRE-UNIVERSITY**  
 Australian Matriculation (AUSMAT)  
 Cambridge International Examinations GCE A Level (Arts/Science/Pre-Law)  
 KDU Foundation Studies (Business/Science)  
 University of New South Wales (UNSW) Foundation Year (Commerce/Science)

**AMERICAN DEGREE PROGRAM**  
 Business | Liberal Arts/Humanities | Science

**BUSINESS**  
 Accounting | Business Administration | Business Management | Economics | Finance | Human Resource Management | Logistics | Management | Marketing

**COMMUNICATION & MEDIA STUDIES**  
 Advertising Media Management | Corporate Communication | Journalism | Media Marketing | Visual Communication | Entertainment Art

**COMPUTING & CREATIVE MEDIA**  
 Business Computing | Computer Studies | Computer Security | Mobile Computing | Multimedia Technology | Networking

**GAME DEVELOPMENT**  
 Game Art | Game Design | Game Technology

**ENGINEERING**  
 Electrical & Electronic Engineering  
 Communication Engineering | Electronic Engineering | Electrical Power Engineering

**HOSPITALITY, TOURISM & CULINARY ARTS**  
 Corporate Communication | Golf Resort Management | Hotel & Tourism Management | Baking and Pastry | Culinary Arts | Culinary Operations | European Culinary Management | Italian Culinary Major | Professional Chef Training

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# Biofuels Production Manager

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**Manage operations at biofuels power generation facilities. Collect and process information on plant performance, diagnose problems, and design corrective procedures.**

## *Common Tasks*

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1. Manage operations at biofuels power generation facilities, including production, shipping, maintenance, or quality assurance activities.
2. Adjust temperature, pressure, vacuum, level, flow rate, or transfer of biofuels to maintain processes at required levels.
3. Approve proposals for the acquisition, replacement, or repair of biofuels processing equipment or the implementation of new production processes.
4. Conduct cost, material, and efficiency studies for biofuels production plants or operations.
5. Monitor meters, flow gauges, or other real-time data to ensure proper operation of biofuels production equipment, implementing corrective measures as needed.
6. Prepare and manage biofuels plant or unit budgets.
7. Review logs, datasheets, or reports to ensure adequate production levels or to identify abnormalities with biofuels production equipment or processes.
8. Shut down and restart biofuels plant or equipment in emergency situations or for equipment maintenance, repairs, or replacements.
9. Supervise production employees in the manufacturing of biofuels, such as biodiesel or ethanol.
10. Confer with technical and supervisory personnel to report or resolve conditions affecting biofuels plant safety, operational efficiency, and product quality.

# Bioinformatics Technician

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**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.**

## *Common Tasks*

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1. Develop or maintain applications that process biologically based data into searchable databases for purposes of analysis, calculation, or presentation.
2. Enter or retrieve information from structural databases, protein sequence motif databases, mutation databases, genomic databases or gene expression databases.
3. Monitor database performance and perform any necessary maintenance, upgrades, or repairs.
4. Analyze or manipulate bioinformatics data using software packages, statistical applications, or data mining techniques.
5. Confer with researchers, clinicians, or information technology staff to determine data needs and programming requirements and to provide assistance with database-related research activities.
6. Create data management or error-checking procedures and user manuals.
7. Design or implement web-based tools for querying large-scale biological databases.
8. Develop or apply data mining and machine learning algorithms.



9. Document all database changes, modifications, or problems.
10. Extend existing software programs, web-based interactive tools, or database queries as sequence management and analysis needs evolve.

### *Work Values*

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1. **Independence** Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. **Support** Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. **Working Conditions** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

### *Interest*

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1. **Investigative:** Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.
2. **Realistic:** Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.
3. **Conventional** Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.

# Biological Technician

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**Assist biological and medical scientists in laboratories. Set up, operate, and maintain laboratory instruments and equipment, monitor experiments, make observations, and calculate and record results. May analyze organic substances, such as blood, food, and drugs.**



**Sample of reported job titles: Biological Technician, Research Associate, Laboratory Technician, Biological Science Laboratory Technician, Research Specialist, Research Assistant, Research Technician, Environmental Technician, Resource Biologist, Wildlife Biology Technician**

## *Common Tasks*

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1. Conduct research or assist in the conduct of research, including the collection of information and samples, such as blood, water, soil, plants and animals.
2. Analyze experimental data and interpret results to write reports and summaries of findings. Keep detailed logs of all work-related activities.
3. Use computers, computer-interfaced equipment, robotics or high-technology industrial applications to perform work duties.
4. Clean, maintain and prepare supplies and work areas.
5. Set up, adjust, calibrate, clean, maintain, and troubleshoot laboratory and field equipment.
6. Measure or weigh compounds and solutions for use in testing or animal feed.
7. Isolate, identify and prepare specimens for examination.
8. Conduct standardized biological, microbiological or biochemical tests and laboratory analyses to evaluate the quantity or quality of physical or chemical substances in food or other products.
9. Examine animals and specimens to detect the presence of disease or other problems.

## *Skills Required*

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1. Science: Using scientific rules and methods to solve problems.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Instructing: Teaching others how to do something.
4. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
5. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
6. Time Management: Managing one's own time and the time of others.
7. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
8. Mathematics: Using mathematics to solve problems.
9. Quality Control Analysis: Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
10. Speaking: Talking to others to convey information effectively.

### ***Abilities Required***

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1. Near Vision: The ability to see details at close range (within a few feet of the observer).
2. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
3. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
4. Selective Attention: The ability to concentrate on a task over a period of time without being distracted.
5. Written Expression: The ability to communicate information and ideas in writing so others will understand.
6. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
7. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.



8. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
9. Speech Clarity: The ability to speak clearly so others can understand you.
10. Speech Recognition: The ability to identify and understand the speech of another person.

### *Work Activities*

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1. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
2. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
3. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
4. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
5. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.  
Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
7. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
8. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
9. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Integrity Job requires being honest and ethical.



4. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Persistence Job requires persistence in the face of obstacles.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

### *Work Values*

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1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.



# Biomedical Engineer

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.

## *Common Tasks*

1. Evaluate the safety, efficiency, and effectiveness of biomedical equipment.
2. Install, adjust, maintain, and/or repair biomedical equipment.
3. Advise hospital administrators on the planning, acquisition, and use of medical equipment.
4. Advise and assist in the application of instrumentation in clinical environments.
5. Research new materials to be used for products, such as implanted artificial organs.
6. Develop models or computer simulations of human biobehavioral systems to obtain data for measuring or controlling life processes.
7. Design and develop medical diagnostic and clinical instrumentation, equipment, and procedures, using the principles of engineering and biobehavioral sciences.
8. Conduct research, along with life scientists, chemists, and medical scientists, on the engineering aspects of the biological systems of humans and animals.
9. Teach biomedical engineering or disseminate knowledge about field through writing or consulting.
10. Design and deliver technology to assist people with disabilities.



### *Skills Required*

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1. Science: Using scientific rules and methods to solve problems.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Speaking: Talking to others to convey information effectively.
4. Time Management: Managing one's own time and the time of others.
5. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
7. Technology Design: Generating or adapting equipment and technology to serve user needs.
8. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
10. Quality Control Analysis: Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

### *Abilities Required*

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1. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
6. Visualization The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.



7. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
8. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas to solve a problem.
9. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
10. **Originality:** The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

### *Work Activities*

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1. **Inspecting Equipment, Structures, or Material:** Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
4. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
5. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
7. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
9. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
10. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.

### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.



2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
7. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
10. Integrity Job requires being honest and ethical.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Biostatistician



**Develop and apply biostatistical theory and methods to the study of life sciences.**

## Common Tasks

1. Analyze clinical or survey data using statistical approaches such as longitudinal analysis, mixed effect modeling, logistic regression analyses, and model building techniques.
2. Apply research or simulation results to extend biological theory or recommend new research projects.
3. Provide bio statistical consultation to clients or colleagues.
4. Review clinical or other medical research protocols and recommend appropriate statistical analyses.
5. Analyze archival data such as birth, death, and disease records.
6. Collect data through surveys or experimentation.
7. Design or maintain databases of biological data.
8. Design research studies in collaboration with physicians, life scientists, or other professionals.
9. Design surveys to assess health issues.
10. Develop or implement data analysis algorithms.

## Work Values

1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

### *Knowledge*

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1. Mathematics Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
2. English Language Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
3. Computers and Electronics Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
4. Medicine and Dentistry Knowledge of the information and techniques needed to diagnose and treat human injuries, diseases, and deformities. This includes symptoms, treatment alternatives, drug properties and interactions, and preventive health-care measures.

### *Skills*

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1. Mathematics: Using mathematics to solve problems.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
5. Science: Using scientific rules and methods to solve problems.
6. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
7. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
8. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
9. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.



10. Programming: Writing computer programs for various purposes.

### *Abilities*

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1. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas to solve a problem.
2. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
3. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
5. **Number Facility:** The ability to add, subtract, multiply, or divide quickly and correctly.
6. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
7. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
8. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
9. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
10. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.

### *Work Activities*

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1. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
2. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
4. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.



5. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
6. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
7. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
9. Provide Consultation and Advice to Others: Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.
10. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.

### *Work Context*

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1. Electronic Mail how often do you use electronic mail in this job?
2. Importance of Being Exact or Accurate How important is being very exact or highly accurate in performing this job?
3. Spend Time Sitting how much does this job require sitting?
4. Freedom to Make Decisions how much decision making freedom, without supervision, does the job offer?
5. Indoors, Environmentally Controlled how often does this job require working indoors in environmentally controlled conditions?
6. Face-to-Face Discussions how often do you have to have face-to-face discussions with individuals or teams in this job?
7. Structured versus Unstructured Work to what extent is this job structured for the worker, rather than allowing the worker to determine tasks, priorities, and goals?
8. Telephone how often do you have telephone conversations in this job?
9. Duration of Typical Work Week Number of hours typically worked in one week.
10. Work With Work Group or Team How important is it to work with others in a group or team in this job?

### *Work Style*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Integrity Job requires being honest and ethical.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Persistence Job requires persistence in the face of obstacles.
8. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

# Broadcast News Analyst

Analyze, interpret, and broadcast news received from various sources. Sample of reported job titles: News Anchor, News Director, Anchor, Broadcast Meteorologist, Television News Anchor (TV News Anchor), Sports Director, Weekend Anchor



## *Common Tasks*

1. Analyze and interpret news and information received from various sources in order to be able to broadcast the information.
2. Write commentaries, columns, or scripts, using computers.
3. Examine news items of local, national, and international significance in order to determine topics to address, or obtain assignments from editorial staff members.
4. Coordinate and serve as an anchor on news broadcast programs.
5. Edit news material to ensure that it fits within available time or space.
6. Select material most pertinent to presentation, and organize this material into appropriate formats.
7. Gather information and develop perspectives about news subjects through research, interviews, observation, and experience.
8. Present news stories, and introduce in-depth videotaped segments or live transmissions from on-the-scene reporters.

## *Skills Required*

1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Speaking: Talking to others to convey information effectively.
3. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
4. Time Management: Managing one's own time and the time of others.
5. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.



6. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
7. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
8. **Coordination:** Adjusting actions in relation to others' actions.
9. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

### *Abilities Required*

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1. **Speech Clarity:** The ability to speak clearly so others can understand you.
2. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. **Speech Recognition:** The ability to identify and understand the speech of another person.
4. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
5. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
6. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
7. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
8. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
9. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
10. **Originality:** The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

### *Work Activities*

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1. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.



2. **Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.**  
**Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
3. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
4. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
5. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
6. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
7. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.  
**Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.

### *Work Styles*

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1. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
2. **Stress Tolerance Job** requires accepting criticism and dealing calmly and effectively with high stress situations.
3. **Persistence Job** requires persistence in the face of obstacles.
4. **Achievement/Effort Job** requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
5. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.
6. **Concern for Others Job** requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
7. **Cooperation Job** requires being pleasant with others on the job and displaying a good-



natured, cooperative attitude.

8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
10. Integrity Job requires being honest and ethical.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.



## Budget Analyst

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**Examine budget estimates for completeness, accuracy, and conformance with procedures and regulations. Analyze budgeting and accounting reports for the purpose of maintaining expenditure controls.**

### *Common Tasks*

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1. Direct the preparation of regular and special budget reports.
2. Analyze monthly department budgeting and accounting reports to maintain expenditure controls.
3. Provide advice and technical assistance with cost analysis, fiscal allocation, and budget preparation.
4. Examine budget estimates for completeness, accuracy, and conformance with procedures and regulations.
5. Summarize budgets and submit recommendations for the approval or disapproval of funds requests.
6. Review operating budgets to analyze trends affecting budget needs.
7. Consult with managers to ensure that budget adjustments are made in accordance with program changes.
8. Compile and analyze accounting records and other data to determine the financial resources required to implement a program.
9. Perform cost-benefit analyses to compare operating programs, review financial requests, or explore alternative financing methods.
10. Interpret budget directives and establish policies for carrying out directives.

### *Skills Required*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Speaking: Talking to others to convey information effectively.
4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
6. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
7. Mathematics: Using mathematics to solve problems.
8. Time Management: Managing one's own time and the time of others.
9. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
10. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.

### *Abilities Required*

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1. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
2. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
6. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
7. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.



8. Near Vision: The ability to see details at close range (within a few feet of the observer).
9. Written Expression: The ability to communicate information and ideas in writing so others will understand.
10. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

### *Work Activities*

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
4. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
7. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
8. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.
10. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Integrity Job requires being honest and ethical.
3. Analytical Thinking Job requires analyzing information and using logic to address work-related





issues and problems.

4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
8. Persistence Job requires persistence in the face of obstacles.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.

### *Work Values*

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1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Business Intelligence Analyst

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**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.**

## *Common Tasks*

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1. Generate standard or custom reports summarizing business, financial, or economic data for review by executives, managers, clients, and other stakeholders.
2. Synthesize current business intelligence or trend data to support recommendations for action.
3. Analyze competitive market strategies through analysis of related product, market, or share trends.
4. Analyze technology trends to identify markets for future product development or to improve sales of existing products.
5. Collect business intelligence data from available industry reports, public information, field reports, or purchased sources.
6. Conduct or coordinate tests to ensure that intelligence is consistent with defined needs.
7. Create business intelligence tools or systems, including design of related databases, spreadsheets, or outputs.
8. Disseminate information regarding tools, reports, or metadata enhancements.
9. Document specifications for business intelligence or information technology (IT) reports, dashboards, or other outputs.



10. Identify and analyze industry or geographic trends with business strategy implications.

### *Education*

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This occupation may require a background in the following science, technology, engineering, and mathematics (STEM) educational disciplines:

- Computer Science Computer Programming, Specific Applications

### *Wages & Employment Trends*

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National

- Median wages data collected from Computer Specialists, All Other.
- Employment data collected from Computer Specialists, All Other.
- Industry data collected from Computer Specialists, All Other.

#### **Median wages (2009)**

\$37.02 hourly, \$77,010 annual

#### **Employment (2008)**

209,000 employees

#### **Projected growth (2008-2018) Average**

(7% to 13%)

#### **Projected job openings (2008-2018)**

72,600

#### **Top industries (2008)**

Government (37% employed in this sector)

Professional, Scientific, and Technical Services (16%)

# Cardiovascular Technologist and Technician

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**Conduct tests on pulmonary or cardiovascular systems of patients for diagnostic purposes. May conduct or assist in electrocardiograms, cardiac catheterizations, pulmonary-functions, lung capacity, and similar tests.**

## *Common Tasks*

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1. Monitor patients' blood pressure and heart rate using electrocardiogram (EKG) equipment during diagnostic and therapeutic procedures to notify the physician if something appears wrong.
2. Explain testing procedures to patient to obtain cooperation and reduce anxiety.
3. Observe gauges, recorder, and video screens of data analysis system during imaging of cardiovascular system.
4. Monitor patients' comfort and safety during tests, alerting physicians to abnormalities or changes in patient responses.
5. Obtain and record patient identification, medical history or test results.
6. Attach electrodes to the patients' chests, arms, and legs, connect electrodes to leads from the electrocardiogram (EKG) machine, and operate the EKG machine to obtain a reading.
7. Adjust equipment and controls according to physicians' orders or established protocol. Prepare and position patients for testing.
8. Check, test, and maintain cardiology equipment, making minor repairs when necessary, to ensure proper operation.
9. Supervise and train other cardiology technologists and students.

## *Skills Required*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Operation Monitoring: Watching gauges, dials, or other indicators to make sure a machine is working properly.
5. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
6. Speaking: Talking to others to convey information effectively.
7. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
8. Service Orientation: Actively looking for ways to help people.
9. Time Management: Managing one's own time and the time of others.
10. Writing: Communicating effectively in writing as appropriate for the needs of the audience.

### *Abilities Required*

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1. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Near Vision: The ability to see details at close range (within a few feet of the observer).
5. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
6. Speech Clarity: The ability to speak clearly so others can understand you.
7. Speech Recognition: The ability to identify and understand the speech of another person.
8. Written Comprehension: The ability to read and understand information and ideas presented



in writing.

9. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
10. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

### *Work Activities*

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1. Assisting and Caring for Others: Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
2. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
5. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
7. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
8. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
9. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.

### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.



3. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
4. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
5. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
8. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Persistence Job requires persistence in the face of obstacles.
10. Initiative Job requires a willingness to take on responsibilities and challenges.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Chef and Head Cook

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**Direct 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. And participate in cooking.**



## *Common Tasks*

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1. Check the quality of raw and cooked food products to ensure that standards are met.
2. Monitor sanitation practices to ensure that employees follow standards and regulations.
3. Check the quantity and quality of received products.
4. Order or requisition food and other supplies needed to ensure efficient operation.
5. Supervise and coordinate activities of cooks and workers engaged in food preparation.
6. Inspect supplies, equipment, and work areas to ensure conformance to established standards.
7. Determine how food should be presented, and create decorative food displays.
8. Instruct cooks and other workers in the preparation, cooking, garnishing, and presentation of food.
9. Estimate amounts and costs of required supplies, such as food and ingredients.
10. Collaborate with other personnel to plan and develop recipes and menus, taking into account such factors as seasonal availability of ingredients and the likely number of customers.





### *Skills Required:*

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1. Time Management: Managing one's own time and the time of others.
2. Negotiation: Bringing others together and trying to reconcile differences.
3. Service Orientation: Actively looking for ways to help people.
4. Instructing: Teaching others how to do something.
5. Equipment Maintenance Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
6. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. Equipment Selection: Determining the kind of tools and equipment needed to do a job.
9. Management of Financial Resources: Determining how money will be spent to get the work done, and accounting for these expenditures.
10. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.

### *Abilities Required:*

---

1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).



7. Near Vision: The ability to see details at close range (within a few feet of the observer).
8. Arm-Hand Steadiness The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
9. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
10. Speech Clarity: The ability to speak clearly so others can understand you.

### *Work Activities*

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1. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
2. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
3. Coordinating the Work and Activities of Others Getting members of a group to work together to accomplish tasks.
4. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
5. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
6. Inspecting Equipment, Structures, or Material: Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
7. Resolving Conflicts and Negotiating with Others: Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.
8. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
10. Monitoring and Controlling Resources Monitoring and controlling resources and overseeing the spending of money.

### *Work Styles*

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1. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high



stress situations.

3. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
4. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
5. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
6. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Integrity Job requires being honest and ethical.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Chemical Engineer

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**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.**

## *Common Tasks*

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1. Develop safety procedures to be employed by workers operating equipment or working in close proximity to on-going chemical reactions.
2. Troubleshoot problems with chemical manufacturing processes.
3. Evaluate chemical equipment and processes to identify ways to optimize performance or to ensure compliance with safety and environmental regulations.
4. Conduct research to develop new and improved chemical manufacturing processes.
5. Determine most effective arrangement of operations such as mixing, crushing, heat transfer, distillation, and drying.
6. Perform tests and monitor performance of processes throughout stages of production to determine degree of control over variables such as temperature, density, specific gravity, and pressure.
7. Design and plan layout of equipment.
8. Prepare estimate of production costs and production progress reports for management.
9. Design measurement and control systems for chemical plants based on data collected in laboratory experiments and in pilot plant operations.
10. Develop processes to separate components of liquids or gases or generate electrical currents using controlled chemical processes.

### *Skills*

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1. Science: Using scientific rules and methods to solve problems.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
5. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Technology Design: Generating or adapting equipment and technology to serve user needs.
8. Troubleshooting: Determining causes of operating errors and deciding what to do about it.
9. Mathematics: Using mathematics to solve problems.
10. Writing: Communicating effectively in writing as appropriate for the needs of the audience.

### *Abilities*

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1. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
2. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
3. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).



7. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
8. Written Comprehension: The ability to read and understand information and ideas presented in writing.
9. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.
10. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).

### *Work Activities*

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1. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
2. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
6. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
7. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
8. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
9. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
10. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events

### *Work Styles*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.



2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Integrity Job requires being honest and ethical.
5. Persistence Job requires persistence in the face of obstacles.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.

### *Work Values*

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1. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Chemist

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**Conduct qualitative and quantitative chemical analyses or chemical experiments in laboratories for quality or process control or to develop new products or knowledge. Sample of reported job titles: Chemist, Research Chemist, Air Quality Chemist, Analytical Chemist, Scientist, Sanitary Chemist, Product Development Chemist, Quality Control Chemist, Analytical Specialist, Environmental Chemist.**

## *Common Tasks*

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1. Analyze organic and inorganic compounds to determine chemical and physical properties, composition, structure, relationships, and reactions, utilizing chromatography, spectroscopy, and spectrophotometry techniques.
2. Maintain laboratory instruments to ensure proper working order and troubleshoot malfunctions when needed.  
Develop, improve, and customize products, equipment, formulas, processes, and analytical methods.  
Conduct quality control tests.
3. Direct, coordinate, and advise personnel in test procedures for analyzing components and physical properties of materials.
4. Prepare test solutions, compounds, and reagents for laboratory personnel to conduct test.
5. Compile and analyze test information to determine process or equipment operating efficiency and to diagnose malfunctions.
6. Confer with scientists and engineers to conduct analyses of research projects, interpret test results, or develop nonstandard tests.
7. Write technical papers and reports and prepare standards and specifications for processes, facilities, products, or tests.





8. Induce changes in composition of substances by introducing heat, light, energy, and chemical catalysts for quantitative and qualitative analysis.

### *Skills Required*

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1. Science: Using scientific rules and methods to solve problems.
2. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Quality Control Analysis: Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
5. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
6. Time Management: Managing one's own time and the time of others.
7. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
8. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
9. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
10. Speaking: Talking to others to convey information effectively.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
3. Near Vision: The ability to see details at close range (within a few feet of the observer).
4. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. Written Comprehension: The ability to read and understand information and ideas presented in writing.



6. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
7. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
8. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas to solve a problem.
10. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.

### *Work Activities*

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1. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
2. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
3. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
4. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
5. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
6. **Estimating the Quantifiable Characteristics of Products, Events, or Information:** Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
7. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
8. **Inspecting Equipment, Structures, or Material:** Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
9. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
10. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating,



recognizing differences or similarities, and detecting changes in circumstances or events.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.  
Integrity Job requires being honest and ethical.
2. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Initiative Job requires a willingness to take on responsibilities and challenges.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

---

1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Chief Executive

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**Determine and formulate policies and provide the overall direction of companies or private and public sector organizations within the 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.**

**Sample of reported job titles: Chief Executive Officer (CEO), President, Chief Financial Officer (CFO), Vice President, Chief Operating Officer (COO), Executive Director, Executive Vice President (EVP), Finance Vice President, General Manager, Operations Vice President**

## *Common Tasks*

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1. Direct and coordinate an organization's financial and budget activities to fund operations, maximize investments, and increase efficiency.
2. Confer with board members, organization officials, and staff members to discuss issues, coordinate activities, and resolve problems.
3. Analyze operations to evaluate performance of a company and its staff in meeting objectives, and to determine areas of potential cost reduction, program improvement, or policy change.
4. Direct, plan, and implement policies, objectives, and activities of organizations or businesses to ensure continuing operations, to maximize returns on investments, and to increase productivity.
5. Prepare budgets for approval, including those for funding and implementation of programs.
6. Direct and coordinate activities of businesses or departments concerned with production, pricing, sales, or distribution of products.
7. Negotiate or approve contracts and agreements with suppliers, distributors, federal and state agencies, and other organizational entities.
8. Review reports submitted by staff members to recommend approval or to suggest changes.



9. Appoint department heads or managers and assign or delegate responsibilities to them.
10. Direct human resources activities, including the approval of human resource plans and activities, the selection of directors and other high-level staff, and establishment and organization of major departments.

### *Skills Required*

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1. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
2. Management of Financial Resources: Determining how money will be spent to get the work done, and accounting for these expenditures.
3. Coordination: Adjusting actions in relation to others' actions.
4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Negotiation: Bringing others together and trying to reconcile differences.
6. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
7. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
8. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
10. Speaking: Talking to others to convey information effectively.

### *Abilities Required*

---

1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It



does not involve solving the problem, only recognizing there is a problem.

5. **Speech Clarity:** The ability to speak clearly so others can understand you.
6. **Speech Recognition:** The ability to identify and understand the speech of another person.
7. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
8. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
9. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
10. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).

### *Work Activities*

---

1. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.  
**Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
3. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
4. **Developing Objectives and Strategies:** Establishing long-range objectives and specifying the strategies and actions to achieve them.
5. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
6. **Developing and Building Teams:** Encouraging and building mutual trust, respect, and cooperation among team members.
7. **Resolving Conflicts and Negotiating with Others:** Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.
8. **Selling or Influencing Others:** Convincing others to buy merchandise/goods or to otherwise change their minds or actions.



9. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

### *Work Styles*

---

1. Integrity Job requires being honest and ethical.
2. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
3. Initiative Job requires a willingness to take on responsibilities and challenges.
4. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
6. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
7. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
8. Persistence Job requires persistence in the face of obstacles.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

### *Work Values*

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1. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Chiropractor

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**Adjust spinal column and other articulations of the body to correct abnormalities of the human body believed to be caused by interference with the nervous system. Examine patient to determine nature and extent of disorder. Manipulate spine or other involved area. It may utilize supplementary measures, such as exercise, rest, water, light, heat, and nutritional therapy. Sample of reported job titles: Chiropractor, Chiropractic Doctor (DC), Chiropractic Physician, Doctor of Chiropractic, Chiropractic Neurologist, Physician**

## *Common Tasks*

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1. Diagnose health problems by reviewing patients' health and medical histories, questioning, observing and examining patients, and interpreting x-rays.
2. Maintain accurate case histories of patients.
3. Perform a series of manual adjustments to the spine, or other articulations of the body, to correct the musculoskeletal system.
4. Evaluate the functioning of the neuromuscular skeletal system and the spine using systems of chiropractic diagnosis.
5. Obtain and record patients' medical histories.
6. Advise patients about recommended courses of treatment.
7. Consult with and refer patients to appropriate health practitioners when necessary.
8. Analyze x-rays to locate the sources of patients' difficulties and to rule out fractures or diseases as sources of problems.
9. Counsel patients about nutrition, exercise, sleeping habits, stress management, and other





matters.

10. Arrange for diagnostic x-rays to be taken.

### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. **Speaking:** Talking to others to convey information effectively.
5. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. **Time Management:** Managing one's own time and the time of others.
7. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
9. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
10. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.

### *Abilities Required*

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1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
4. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).



5. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
6. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
7. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
8. **Speech Clarity:** The ability to speak clearly so others can understand you.
9. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.  
**Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### *Work Activities*

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1. **Assisting and Caring for Others:** Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
4. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
5. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
7. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
8. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
9. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
10. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.



### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
5. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
8. Persistence Job requires persistence in the face of obstacles.
9. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
10. Social Orientation Job requires preferring to work with others rather than alone, and being personally connected with others on the job.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Choreographer

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**Create and teach dance. May direct and stage presentations. Sample of reported job titles: Choreographer, Artistic Director, Dance Director**

## *Common Tasks*

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1. Direct rehearsals to instruct dancers in how to use dance steps, and in techniques to achieve desired effects.
2. Read and study story lines and musical scores to determine how to translate ideas and moods into dance movements.
3. Design dances for individual dancers, dance companies, musical theatre, opera, fashion shows, film, television productions and special events, and for dancers ranging from beginners to professionals.
4. Choose the music, sound effects, or spoken narrative to accompany a dance.
5. Advise dancers on how to stand and move properly, teaching correct dance techniques to help prevent injuries.
6. Coordinate production music with music directors.
7. Audition performers for one or more dance parts.
8. Direct and stage dance presentations for various forms of entertainment.
9. Develop ideas for creating dances, keeping notes and sketches to record influences.
10. Train, exercise, and attend dance classes to maintain high levels of technical proficiency, physical ability, and physical fitness.

## *Skills Required*

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1. Instructing: Teaching others how to do something.
2. Time Management: Managing one's own time and the time of others.
3. Management of Personnel Resources: Motivating, developing, and directing people as they work, identifying the best people for the job.
4. Speaking: Talking to others to convey information effectively.
5. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. Coordination: Adjusting actions in relation to others' actions.
8. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
9. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
10. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.

### *Abilities Required*

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1. Gross Body Coordination: The ability to coordinate the movement of your arms, legs, and torso together when the whole body is in motion.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
5. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
6. Gross Body Equilibrium: The ability to keep or regain your body balance or stay upright when in an unstable position.
7. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It



does not involve solving the problem, only recognizing there is a problem.

8. **Speech Clarity:** The ability to speak clearly so others can understand you.
9. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
10. **Extent Flexibility:** The ability to bend, stretch, twist, or reach with your body, arms, and/or legs.

### *Work Activities*

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1. **Thinking creatively:** developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
2. **Guiding, directing, and motivating: Subordinates:** Providing guidance and direction to subordinates, including setting performance standards and monitoring performance.
3. **Coordinating the work and activities of others** getting members of a group to work together to accomplish tasks.
4. **Performing general physical Activities:** Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
5. **Coaching and Developing Others:** Identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills.
6. **Organizing, planning, and prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
7. **Developing and Building Teams:** Encouraging and building mutual trust, respect, and cooperation among team members.
8. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. **Making decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
10. **Scheduling Work and Activities:** Scheduling events, programs, and activities, as well as the work of others.



### *Work Styles*

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1. Innovation job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
2. Persistence job requires persistence in the face of obstacles.
3. Leadership job requires a willingness to lead, take charge, and offer opinions and direction.
4. Initiative job requires a willingness to take on responsibilities and challenges.
5. Achievement/effort job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
6. Attention to detail job requires being careful about detail and thorough in completing work tasks.
7. Dependability job requires being reliable, responsible, and dependable, and fulfilling obligations.
8. Independence job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Adaptability/flexibility job requires being open to change (positive or negative) and to considerable variety in the workplace.  
Stress tolerance job requires accepting criticism and dealing calmly and effectively with high stress situations.

### *Work Values*

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1. Achievement occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are ability utilization and achievement.
2. Independence occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are creativity, responsibility and autonomy.
3. Relationships occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are co-workers, moral values and social service.

# Civil Engineer

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**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.**

## *Common Tasks*

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1. Manage and direct staff members and the construction, operations, or maintenance activities at project site.
2. Provide technical advice regarding design, construction, or program modifications and structural repairs to industrial and managerial personnel.
3. Inspect project sites to monitor progress and ensure conformance to design specifications and safety or sanitation standards.
4. Estimate quantities and cost of materials, equipment, or labor to determine project feasibility.
5. Test soils and materials to determine the adequacy and strength of foundations, concrete, asphalt, or steel.
6. Compute load and grade requirements, water flow rates, and material stress factors to determine design specifications.
7. Plan and design transportation or hydraulic systems and structures, following construction and government standards, using design software and drawing tools.
8. Analyze survey reports, maps, drawings, blueprints, aerial photography, and other topographical or geologic data to plan projects.
9. Prepare or present public reports on topics such as bid proposals, deeds, environmental impact statements, or property and right-of-way descriptions.
10. Direct or participate in surveying to lay out installations and establish reference points,





grades, and elevations to guide construction.

### *Skills Required*

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1. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
2. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
4. **Mathematics:** Using mathematics to solve problems.
5. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
6. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
7. **Speaking:** Talking to others to convey information effectively.
8. **Time Management:** Managing one's own time and the time of others.
9. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
10. **Management of Personnel Resources:** Motivating, developing, and directing people as they work, identifying the best people for the job.

### *Abilities Required*

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1. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
3. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
5. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas



to solve a problem.

6. Near Vision: The ability to see details at close range (within a few feet of the observer).
7. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
8. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
9. Visualization: The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
10. Written Comprehension: The ability to read and understand information and ideas presented in writing.

### *Work Activities*

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1. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
2. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment: Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
5. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
6. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
7. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
8. Estimating the Quantifiable Characteristics of Products, Events, or Information: Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
9. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.



10. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.

### *Work Styles*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Integrity Job requires being honest and ethical.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
7. Persistence Job requires persistence in the face of obstacles.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
10. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.

# Commercial and Industrial Designer

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**Develop and design 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.**

## *Common Tasks*

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1. Prepare sketches of ideas, detailed drawings, illustrations, artwork, or blueprints, using drafting instruments, paints and brushes, or computer-aided design equipment.
2. Direct and coordinate the fabrication of models or samples and the drafting of working drawings and specification sheets from sketches.
3. Modify and refine designs, using working models, to conform with customer specifications, production limitations, or changes in design trends.
4. Coordinate the look and function of product lines.
5. Confer with engineering, marketing, production, or sales departments, or with customers, to establish and evaluate design concepts for manufactured products.
6. Present designs and reports to customers or design committees for approval, and discuss need for modification.
7. Evaluate feasibility of design ideas, based on factors such as appearance, safety, function, serviceability, budget, production costs/methods, and market characteristics.
8. Read publications, attend showings, and study competing products and design styles and motifs to obtain perspective and generate design concepts.
9. Research production specifications, costs, production materials and manufacturing methods, and provide cost estimates and itemized production requirements.
10. Design graphic material for use as ornamentation, illustration, or advertising on



manufactured materials and packaging or containers.

### *Skills Required*

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1. Time Management: Managing one's own time and the time of others.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Mathematics: Using mathematics to solve problems.
5. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
6. Operations Analysis: Analyzing needs and product requirements to create a design.
7. Troubleshooting: Determining causes of operating errors and deciding what to do about it.
8. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
9. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
10. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
5. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
6. Written Comprehension: The ability to read and understand information and ideas presented



in writing.

7. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. Near Vision: The ability to see details at close range (within a few feet of the observer).
10. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

### *Work Activities*

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
4. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
7. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
8. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
10. Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment: Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
4. Initiative Job requires a willingness to take on responsibilities and challenges.
5. Integrity Job requires being honest and ethical.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
8. Persistence Job requires persistence in the face of obstacles.
9. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Commercial Pilot

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**Pilot and navigate the flight of small fixed or rotary winged aircraft, primarily for the transport of cargo and passengers. It requires commercial rating.**

## *Common Tasks*

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1. Check aircraft prior to flights to ensure that the engines, controls, instruments, and other systems are functioning properly.
2. Contact control towers for takeoff clearances, arrival instructions, and other information, using radio equipment.
3. Start engines, operate controls, and pilot airplanes to transport passengers, mail, or freight according to flight plans, regulations, and procedures.
4. Monitor engine operation, fuel consumption, and functioning of aircraft systems during flights.
5. Consider airport altitudes, outside temperatures, plane weights, and wind speeds and directions to calculate the speed needed to become airborne.
6. Order changes in fuel supplies, loads, routes, or schedules to ensure safety of flights.
7. Obtain and review data such as load weights, fuel supplies, weather conditions, and flight schedules to determine flight plans and identify needed changes.
8. Plan flights according to government and company regulations, using aeronautical charts and navigation instruments.
9. Use instrumentation to pilot aircraft when visibility is poor.





10. Check baggage or cargo to ensure that it has been loaded correctly.

### *Skills Required*

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1. Operation Monitoring: Watching gauges, dials, or other indicators to make sure a machine is working properly.
2. Operation and Control: Controlling operations of equipment or systems.
3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Speaking: Talking to others to convey information effectively.
5. Troubleshooting: Determining causes of operating errors and deciding what to do about it.
6. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
8. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. Monitoring: Monitoring/Assessing performance of you, other individuals, or organizations to make improvements or take corrective action.
10. Time Management: Managing one's own time and the time of others.

### *Abilities Required*

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1. Control Precision: The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
2. Near Vision: The ability to see details at close range (within a few feet of the observer).
3. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. Depth Perception: The ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object.
6. Far Vision: The ability to see details at a distance.



7. **Response Orientation** The ability to choose quickly between two or more movements in response to two or more different signals (lights, sounds, pictures). It includes the speed with which the correct response is started with the hand, foot, or other body part.
8. **Multilimb Coordination:** The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.
9. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
10. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.

### *Work Activities*

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1. **Operating Vehicles, Mechanized Devices, or Equipment** Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
4. **Controlling Machines and Processes** Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
5. **Inspecting Equipment, Structures, or Material:** Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
6. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
7. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
9. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
10. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.



### *Work Styles*

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1. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
4. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
5. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
6. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
7. Integrity Job requires being honest and ethical.
8. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

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1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Computer and Information Systems Manager

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**Plan, direct, or coordinate activities in such field as electronic data processing, information systems, systems analysis, and computer programming.**

**Sample of reported job titles: Information Technology Manager (IT Manager), Information Technology Director (IT Director), Information Systems Director (IS Director), Data Processing Manager, MIS Director (Management Information Systems Director), Information Systems Manager (IS Manager), Information Systems Supervisor (IS Supervisor), Computing Services Director, Director of Application Development, Technical Services Manager**

## *Common Tasks*

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1. Review project plans to plan and coordinate project activity.
2. Manage backup, security and user help systems.
3. Develop and interpret organizational goals, policies, and procedures.
4. Develop computer information resources, providing for data security and control, strategic computing, and disaster recovery.
5. Consult with users, management, vendors, and technicians to assess computing needs and system requirements.
6. Stay abreast of advances in technology.
7. Meet with department heads, managers, supervisors, vendors, and others, to solicit cooperation and resolve problems.
8. Provide users with technical support for computer problems.
9. Recruit, hire, train and supervise staff, or participate in staffing decisions.



10. Evaluate data processing proposals to assess project feasibility and requirements.

### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
5. Monitoring: Monitoring/Assessing performance of you, other individuals, or organizations to make improvements or take corrective action.
6. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
7. Coordination: Adjusting actions in relation to others' actions.
8. Speaking: Talking to others to convey information effectively.
9. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.

### *Abilities Required*

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1. Written Comprehension: The ability to read and understand information and ideas presented in writing.  
Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.



5. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
6. Written Expression: The ability to communicate information and ideas in writing so others will understand.
7. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
8. Near Vision: The ability to see details at close range (within a few feet of the observer).
9. Speech Clarity: The ability to speak clearly so others can understand you.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
4. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
5. Developing and Building Teams: Encouraging and building mutual trust, respect, and cooperation among team
6. Members.
7. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
8. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
9. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
10. Guiding, Directing, and Motivating Subordinates: Providing guidance and direction to subordinates, including setting performance standards and monitoring performance.
11. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.

### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Integrity** Job requires being honest and ethical.
3. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.
4. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
5. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. **Analytical Thinking** Job requires analyzing information and using logic to address work-related issues and problems.
7. **Independence** Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
8. **Leadership** Job requires a willingness to lead, take charge, and offer opinions and direction.
9. **Concern for Others** Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
10. **Initiative** Job requires a willingness to take on responsibilities and challenges.

### *Work Values*

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1. **Working Conditions** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. **Support** Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Computer Programmer

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**Convert project specifications and statements of problems and procedures to detailed logical flow charts for coding into computer language. Develop and write computer programs to store, locate, and retrieve specific documents, data, and information. May program website.**

## *Common Tasks*

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1. Correct errors by making appropriate changes and rechecking the program to ensure that the desired results are produced.
2. Conduct trial runs of programs and software applications to be sure they will produce the desired information and that the instructions are correct.
3. Write, update, and maintain computer programs or software packages to handle specific jobs such as tracking inventory, storing or retrieving data, or controlling other equipment.
4. Write, analyze, review, and rewrite programs, using workflow chart and diagram, and applying knowledge of computer capabilities, subject matter, and symbolic logic.
5. Perform or direct revision, repair, or expansion of existing programs to increase operating efficiency or adapt to new requirements.
6. Consult with managerial, engineering, and technical personnel to clarify program intent, identify problems, and suggest changes.
7. Perform systems analysis and programming tasks to maintain and control the use of computer systems software as a systems programmer.
8. Compile and write documentation of program development and subsequent revisions, inserting comments in the coded instructions so others can understand the program.
9. Prepare detailed workflow charts and diagrams that describe input, output, and logical operation, and convert them into a series of instructions coded in a computer language.
10. Consult with and assist computer operators or system analysts to define and resolve problems in running computer programs.





### *Skills Required*

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1. Programming: Writing computer programs for various purposes.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
5. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
6. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
7. Operations Analysis: Analyzing needs and product requirements to create a design.
8. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
9. Technology Design: Generating or adapting equipment and technology to serve user needs.
10. Troubleshooting: Determining causes of operating errors and deciding what to do about it.

### *Abilities Required*

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1. Written Comprehension: The ability to read and understand information and ideas presented in writing.
2. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
3. Near Vision: The ability to see details at close range (within a few feet of the observer).
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).



7. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
8. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas to solve a problem.
9. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
10. **Number Facility:** The ability to add, subtract, multiply, or divide quickly and correctly.

### *Work Activities*

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1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
5. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
7. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
9. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
10. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.

### *Work Styles*

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1. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.



2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Initiative Job requires a willingness to take on responsibilities and challenges.
4. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
7. Persistence Job requires persistence in the face of obstacles.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Computer Software Engineer

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**Develop, create, and modify general computer applications software or specialized utility programs. Analyze user needs and develop software solutions. Design software or customize software for client use with the aim of optimizing operational efficiency. May analyze and design databases within an application area, working individually or coordinating database development as part of a team.**

## *Common Tasks*

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1. Modify existing software to correct errors, allow it to adapt to new hardware, or to improve its performance.
2. Develop and direct software system testing and validation procedures, programming, and documentation.
3. Confer with systems analysts, engineers, programmers and others to design system and to obtain information on project limitations and capabilities, performance requirements and interfaces.
4. Analyze user needs and software requirements to determine feasibility of design within time and cost constraints.
5. Design, develop and modify software systems, using scientific analysis and mathematical models to predict and measure outcome and consequences of design.
6. Store, retrieve, and manipulate data for analysis of system capabilities and requirements.
7. Consult with customers about software system design and maintenance.
8. Supervise the work of programmers, technologists and technicians and other engineering and scientific personnel.



9. Coordinate software system installation and monitor equipment functioning to ensure specifications are met.
10. Obtain and evaluate information on factors such as reporting formats required, costs, and security needs to determine hardware configuration.

### *Skills Required*

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1. Programming: Writing computer programs for various purposes.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
5. Troubleshooting: Determining causes of operating errors and deciding what to do about it.
6. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
7. Technology Design: Generating or adapting equipment and technology to serve user needs.
8. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
9. Operations Analysis: Analyzing needs and product requirements to create a design.
10. Systems Analysis: Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.

### *Abilities Required*

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1. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
2. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.



5. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
6. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
7. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
8. Near Vision: The ability to see details at close range (within a few feet of the observer).
9. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
10. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
3. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
4. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
5. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
6. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
7. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
8. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
10. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.

### *Work Styles*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
7. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
8. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
9. Persistence Job requires persistence in the face of obstacles.
10. Initiative Job requires a willingness to take on responsibilities and challenges.

### *Work Values*

---

1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.



# Computer Support Specialist

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**Provide technical assistance to computer system users. Answer questions or resolve computer problems for clients in person, via telephone or from remote location. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.**



## *Common Tasks*

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1. Oversee the daily performance of computer systems.
2. Answer user inquiries regarding computer software or hardware operation to resolve problems.
3. Enter commands and observe system functioning to verify correct operations and detect errors.
4. Set up equipment for employee use, performing or ensuring proper installation of cables, operating systems, or appropriate software.
5. Install and perform minor repairs to hardware, software, or peripheral equipment, following design or installation specifications.
6. Maintain records of daily data communication transactions, problems and remedial actions taken, or installation activities.
7. Read technical manuals, confer with users, or conduct computer diagnostics to investigate and resolve problems or to provide technical assistance and support.
8. Refer major hardware or software problems or defective products to vendors or technicians for service.
9. Develop training materials and procedures, or train users in the proper use of hardware or software.
10. Confer with staff, users, and management to establish requirements for new systems or





modifications.

### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Speaking:** Talking to others to convey information effectively.
3. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
4. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
6. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
7. **Time Management:** Managing one's own time and the time of others.
8. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
9. **Instructing:** Teaching others how to do something.
10. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.

### *Abilities Required*

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1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
4. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
5. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).



6. Near Vision: The ability to see details at close range (within a few feet of the observer).
7. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
8. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
9. Speech Clarity: The ability to speak clearly so others can understand you.
10. Speech Recognition: The ability to identify and understand the speech of another person.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
4. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
7. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
8. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
9. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.

### *Work Styles*

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1. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.



2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
5. Integrity Job requires being honest and ethical.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Persistence Job requires persistence in the face of obstacles.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Computer Systems Analyst

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Analyze science, engineering, business, and all other data processing problems for application to electronic data processing systems. Analyze user requirements, procedures, and problems to automate or improve existing systems and review computer system capabilities, workflow, and scheduling limitations. May analyze or recommend commercially available software. May supervise computer programmers.

**Sample of reported job titles: Systems Analyst, Programmer Analyst, Business Systems Analyst, Computer Systems Analyst, Computer Systems Consultant, Computer Analyst, Information Systems Analyst (ISA), Applications Analyst, Business Analyst, Systems Engineer**

## *Common Tasks*

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1. Expand or modify system to serve new purposes or improve work flow.
2. Test, maintain, and monitor computer programs and systems, including coordinating the installation of computer programs and systems.
3. Develop, document and revise system design procedures, test procedures, and quality standards.
4. Provide staff and users with assistance solving computer related problems, such as malfunctions and program problems.
5. Review and analyze computer printouts and performance indicators to locate code problems, and correct errors by correcting codes.
6. Consult with management to ensure agreement on system principles.
7. Confer with clients regarding the nature of the information processing or computation needs a computer program is to address.
8. Read manuals, periodicals, and technical reports to learn how to develop programs that meet staff and user requirements.
9. Coordinate and link the computer systems within an organization to increase compatibility and so information can be shared.



10. Determine computer software or hardware needed to set up or alter system.

### *Skills Required*

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1. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.
7. **Monitoring:** Monitoring/Assessing performance of you, other individuals, or organizations to make improvements or take corrective action.
8. **Service Orientation:** Actively looking for ways to help people.
9. **Time Management:** Managing one's own time and the time of others.
10. **Quality Control Analysis:** Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

### *Abilities Required*

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1. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
2. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
5. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce



answers that make sense.

6. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
7. Near Vision: The ability to see details at close range (within a few feet of the observer).
8. Speech Clarity: The ability to speak clearly so others can understand you.
9. Written Comprehension: The ability to read and understand information and ideas presented in writing.
10. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

### *Work Activities*

---

1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
3. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
4. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
5. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
7. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
9. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Integrity Job requires being honest and ethical.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

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1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Counseling Psychologist

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**Assess and evaluate individuals' problems through the use of case history, interview, and observation and provide individual or group counseling services to assist individuals in achieving more effective personal, social, educational, and vocational development and adjustment.**

## *Common Tasks*

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1. Counsel individuals, groups, or families to help them understand problems, define goals, and develop realistic action plans.
2. Collect information about individuals or clients, using interviews, case histories, observational techniques, and other assessment methods.
3. Develop therapeutic and treatment plans based on clients' interests, abilities, and needs.
4. Consult with other professionals to discuss therapies, treatments, counseling resources, or techniques, and to share occupational information.
5. Analyze data such as interview notes, test results, and reference manuals to identify symptoms and to diagnose the nature of clients' problems.
6. Advise clients on how they could be helped by counseling.
7. Evaluate the results of counseling methods to determine the reliability and validity of treatments.
8. Provide consulting services to schools, social service agencies, and businesses.
9. Refer clients to specialists or to other institutions for noncounseling treatment of problems.
10. Select, administer, and interpret psychological tests to assess intelligence, aptitudes, abilities, or interests.



### *Skills Required:*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
3. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
4. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
5. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
6. **Monitoring:** Monitoring/Assessing performance of you, other individuals, or organizations to make improvements or take corrective action.
7. **Time Management:** Managing one's own time and the time of others.
8. **Speaking:** Talking to others to convey information effectively.
9. **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
10. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.

### *Abilities Required:*

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1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. **Speech Clarity:** The ability to speak clearly so others can understand you.
6. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.



7. **Speech Recognition:** The ability to identify and understand the speech of another person.
8. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
9. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
10. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways

### *Work Activities*

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1. **Assisting and Caring for Others:** Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
2. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
6. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
7. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
8. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
9. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
10. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.

### *Work Styles*

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1. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
2. Integrity Job requires being honest and ethical.
3. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
5. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
6. Social Orientation Job requires preferring to work with others rather than alone, and being personally connected with others on the job.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Court Reporter

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**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.**

## *Common Tasks*

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1. Take notes in shorthand or use a steno type or shorthand machine that prints letters on a paper tape.
2. Provide transcripts of proceedings upon request of judges, lawyers, or the public.
3. Record verbatim proceedings of courts, legislative assemblies, committee meetings, and other proceedings, using computerized recording equipment, electronic stenograph machines, or stenomasks.
4. Transcribe recorded proceedings in accordance with established formats.
5. Ask speakers to clarify inaudible statements.
6. File a legible transcript of records of a court case with the court clerk's office.
7. File and store shorthand notes of court session.
8. Respond to requests during court sessions to read portions of the proceedings already recorded.
9. Record depositions and other proceedings for attorneys.
10. Verify accuracy of transcripts by checking copies against original records of proceedings and accuracy of rulings by checking with judges.

## *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at



inappropriate times.

2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Time Management: Managing one's own time and the time of others.
4. Equipment Selection: Determining the kind of tools and equipment needed to do a job.
5. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
8. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
9. Instructing: Teaching others how to do something.
10. Troubleshooting: Determining causes of operating errors and deciding what to do about it.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Speech Recognition: The ability to identify and understand the speech of another person.
3. Near Vision: The ability to see details at close range (within a few feet of the observer).
4. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
5. Selective Attention: The ability to concentrate on a task over a period of time without being distracted.
6. Written Comprehension: The ability to read and understand information and ideas presented in writing.
7. Written Expression: The ability to communicate information and ideas in writing so others will understand.
8. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).



9. **Control Precision:** The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
10. **Finger Dexterity** The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.

### *Work Activities*

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1. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
2. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
5. **Controlling Machines and Processes** Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
6. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
7. **Scheduling Work and Activities:** Scheduling events, programs, and activities, as well as the work of others.
8. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
10. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.

### *Work Styles*

---

1. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
2. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. **Integrity** Job requires being honest and ethical.



4. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
7. Persistence Job requires persistence in the face of obstacles.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

### *Work Values*

---

1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Credit Analyst

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**Analyze current 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 this credit information for use in decision-making.**

## *Common Tasks*

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1. Analyze credit data and financial statements to determine the degree of risk involved in extending credit or lending money.
2. Generate financial ratios, using computer programs, to evaluate customers' financial status.
3. Consult with customers to resolve complaints and verify financial and credit transactions.
4. Prepare reports that include the degree of risk involved in extending credit or lending money.
5. Compare liquidity, profitability, and credit histories of establishments being evaluated with those of similar establishments in the same industries and geographic locations.
6. Review individual or commercial customer files to identify and select delinquent accounts for collection.
7. Confer with credit association and other business representatives to exchange credit information.
8. Complete loan applications, including credit analyses and summaries of loan requests, and submit to loan committees for approval.
9. Analyze financial data such as income growth, quality of management, and market share to determine expected profitability of loans.
10. Evaluate customer records and recommend payment plans based on earnings, savings data, payment history, and purchase activity.





### *Skills Required:*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Speaking:** Talking to others to convey information effectively.
3. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
4. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. **Instructing:** Teaching others how to do something.
6. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
7. **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
8. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
9. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.

### *Abilities Required:*

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1. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas to solve a problem.
2. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
4. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. **Number Facility:** The ability to add, subtract, multiply, or divide quickly and correctly.
6. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.



7. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
8. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. Near Vision: The ability to see details at close range (within a few feet of the observer).
10. Written Comprehension: The ability to read and understand information and ideas presented in writing.

### *Work Activities*

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
5. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
6. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
7. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
8. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
9. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
10. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.

### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
6. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
9. Persistence Job requires persistence in the face of obstacles.
10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values*

---

1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Curator

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**Administer affairs of museum and conduct research programs. Direct instructional, research, and public service activities of institution.**

## *Common Tasks*

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1. Plan and organize the acquisition, storage, and exhibition of collections and related materials, including the selection of exhibition themes and designs.
2. Develop and maintain an institution's registration, cataloging, and basic recordkeeping systems, using computer databases.
3. Provide information from the institution's holdings to other curators and to the public.
4. Inspect premises to assess the need for repairs and to ensure that climate and pest-control issues are addressed.
5. Train and supervise curatorial, fiscal, technical, research, and clerical staff, as well as volunteers or interns.
6. Negotiate and authorize purchase, sale, exchange, or loan of collections.
7. Plan and conduct special research projects in area of interest or expertise.
8. Conduct or organize tours, workshops, and instructional sessions to acquaint individuals with an institution's facilities and materials.
9. Confer with the board of directors to formulate and interpret policies, to determine budget requirements, and to plan overall operations.
10. Attend meetings, conventions, and civic events to promote use of institution's services, to seek financing, and to maintain community alliances.

## *Skills Required*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.  
Speaking: Talking to others to convey information effectively.
3. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Time Management: Managing one's own time and the time of others.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Instructing: Teaching others how to do something.
8. Coordination: Adjusting actions in relation to others' actions.
9. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.

### *Abilities Required*

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1. Speech Clarity: The ability to speak clearly so others can understand you.
2. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
3. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
4. Near Vision: The ability to see details at close range (within a few feet of the observer).
5. Speech Recognition: The ability to identify and understand the speech of another person.
6. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
7. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.



9. Written Comprehension: The ability to read and understand information and ideas presented in writing.
10. Far Vision: The ability to see details at a distance.

### *Work Activities*

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1. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
2. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
3. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
4. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. Judging the Qualities of Things, Services, or People Assessing the value, importance, or quality of things or people.
6. Scheduling Work and Activities: Scheduling events, programs, and activities, as well as the work of others.
7. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
8. Handling and Moving Objects Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
9. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
10. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.



4. Initiative Job requires a willingness to take on responsibilities and challenges.
5. Integrity Job requires being honest and ethical.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
8. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

### *Work Values*

---

1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Customer Service Representative

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**Interact with customers to provide information in response to inquiries about products and services and to handle and resolve complaints.**

## *Common Tasks*

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1. Confer with customers by telephone or in person to provide information about products and services, to take or enter orders, cancel accounts, or to obtain details of complaints.
2. Keep records of customer interactions and transactions, recording details of inquiries, complaints, and comments, as well as actions taken.
3. Check to ensure that appropriate changes were made to resolve customers' problems.
4. Determine charges for services requested, collect deposits or payments, or arrange for billing.
5. Refer unresolved customer grievances to designated departments for further investigation.
6. Review insurance policy terms to determine whether a particular loss is covered by insurance.
7. Contact customers to respond to inquiries or to notify them of claim investigation results and any planned adjustments.
8. Resolve customers' service or billing complaints by performing activities such as exchanging merchandise, refunding money, and adjusting bills.
9. Compare disputed merchandise with original requisitions and information from invoices, and prepare invoices for returned goods.
10. Obtain and examine all relevant information to assess validity of complaints and to determine possible causes, such as extreme weather conditions that could increase utility bills.





### *Skills Required:*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
4. **Speaking:** Talking to others to convey information effectively.
5. **Time Management:** Managing one's own time and the time of others.
6. **Service Orientation:** Actively looking for ways to help people.
7. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
8. **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
9. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
10. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

### *Work Activities*

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1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
5. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.



6. Resolving Conflicts and Negotiating with Others: Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.
7. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
8. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
9. Performing Administrative Activities: Performing day-to-day administrative tasks such as maintaining information files and processing paperwork.
10. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
4. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
5. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Integrity Job requires being honest and ethical.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Social Orientation Job requires preferring to work with others rather than alone, and being personally connected with others on the job.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Independence Occupations that satisfy this work value allow employes to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Customs Broker



**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.**

## *Common Tasks*

1. Clear goods through customs and to their destinations for clients.
2. Prepare and process import and export documentation according to customs regulations, laws, or procedures.
3. Advise customers on import and export restrictions, tariff systems, insurance requirements, quotas, or other customs-related matters.
4. Apply for tariff concessions or for duty drawbacks and other refunds.
5. Calculate duty and tariff payments owed on shipments.
6. Classify goods according to tariff coding system.
7. Confer with officials in various agencies to facilitate clearance of goods through customs and quarantine.
8. Inform importers and exporters of steps to reduce duties and taxes.
9. Maintain relationships with customs brokers in other ports to expedite clearing of cargo.
10. Monitor or trace the location of goods.
11. Pay, or arrange for payment of, taxes and duties on shipments.



12. Prepare papers for shippers to appeal duty charges.
13. Quote duty and tax rates on goods to be imported, based on federal tariffs and excise taxes.
14. Stay abreast of changes in import or export laws or regulations by reading current literature, attending meetings or conferences, or conferring with colleagues.
15. Request or compile necessary import documentation, such as customs invoices, certificates of origin, and cargo-control documents.
16. Suggest best methods of packaging or labeling products.
17. Arrange for transportation, warehousing, or product distribution of imported or exported products.
18. Contract with freight forwarders for destination services.
19. Obtain line releases for frequent shippers of low-risk commodities, high-volume entries, or multiple-container loads.
20. Insure cargo against loss, damage, or pilferage.
21. Post bonds for the products being imported or assist clients in obtaining bonds.
22. Provide advice on transportation options, types of carriers, or shipping routes.
23. Sign documents on behalf of clients, using powers of attorney.

### *Work Values*

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1. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. **Independence** Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. **Recognition** Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

### *Interests*

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1. **Enterprising** Enterprising occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business.
2. **Conventional** Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.

# Dancer

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Perform dances. May also sing or act.

## *Common Tasks*

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1. Train, exercise, and attend dance classes to maintain high levels of technical proficiency, physical ability, and physical fitness.
2. Study and practice dance moves required in roles.
3. Harmonize body movements to rhythm of musical accompaniment.
4. Perform classical, modern, or acrobatic dances in productions, expressing stories, rhythm, and sound with their bodies.
5. Collaborate with choreographers in order to refine or modify dance steps.
6. Coordinate dancing with that of partners or dance ensembles.
7. Attend costume fittings, photography sessions, and makeup calls associated with dance performances.
8. Audition for dance roles or for membership in dance companies.
9. Develop self-understanding of physical capabilities and limitations, and choose dance styles accordingly.
10. Monitor the field of dance to remain aware of current trends and innovations.



## *Skills Required*

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1. **Coordination:** Adjusting actions in relation to others' actions.
2. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. **Instructing:** Teaching others how to do something.
4. **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.



5. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
6. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
7. **Time Management:** Managing one's own time and the time of others.
8. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
9. **Service Orientation:** Actively looking for ways to help people.
10. **Speaking:** Talking to others to convey information effectively.

### *Abilities Required*

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1. **Gross Body Coordination:** The ability to coordinate the movement of your arms, legs, and torso together when the whole body is in motion.
2. **Extent Flexibility:** The ability to bend stretches, twist, or reach with your body, arms, and/or legs.
3. **Stamina:** The ability to exert yourself physically over long periods of time without getting winded or out of breath.
4. **Dynamic Strength:** The ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue.
5. **Gross Body Equilibrium:** The ability to keep or regain your body balance or stay upright when in an unstable position.
6. **Trunk Strength:** The ability to use your abdominal and lower back muscles to support part of the body repeatedly or continuously over time without 'giving out' or fatiguing.
7. **Multilimb Coordination:** The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.
8. **Dynamic Flexibility:** The ability to quickly and repeatedly bend, stretch, twist, or reach out with your body, arms, and/or legs.
9. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
10. **Speed of Limb Movement:** The ability to quickly move the arms and legs.

### *Work Activities*

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1. **Performing General Physical Activities:** Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
2. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
3. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
4. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
5. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
6. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
7. **Coaching and Developing Others:** Identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills.
8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
9. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
10. **Training and Teaching Others:** Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.

### *Work Styles*

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1. **Stress Tolerance Job** requires accepting criticism and dealing calmly and effectively with high stress situations.
2. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
3. **Persistence Job** requires persistence in the face of obstacles.
4. **Achievement/Effort Job** requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
5. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.





6. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
9. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
10. Social Orientation Job requires preferring to work with others rather than alone, and being personally connected with others on the job.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.



## Database Administrator

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**Coordinate changes to computer databases, test and implement the database applying knowledge of database management systems. May plan, coordinate, and implement security measures to safeguard computer databases.**

### *Common Tasks*

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1. Test programs or databases, correct errors and make necessary modifications.
2. Modify existing databases and database management systems or direct programmers and analysts to make changes.
3. Plan, coordinate and implement security measures to safeguard information in computer files against accidental or unauthorized damage, modification or disclosure.
4. Work as part of a project team to coordinate database development and determine project scope and limitations.
5. Write and code logical and physical database descriptions and specify identifiers of database to management system or direct others in coding descriptions.
6. Train users and answer questions.
7. Specify users and user access levels for each segment of database.
8. Approve, schedule, plan, and supervise the installation and testing of new products and improvements to computer systems such as the installation of new databases.
9. Review project requests describing database user needs to estimate time and cost required to accomplish project.
10. Develop standards and guidelines to guide the use and acquisition of software and to protect vulnerable information.

### *Skills Required:*

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1. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
2. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.



3. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
4. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
5. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
7. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. **Speaking:** Talking to others to convey information effectively.
9. **Systems Analysis:** Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
10. **Coordination:** Adjusting actions in relation to others' actions.

### ***Abilities Required:***

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1. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
3. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
4. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
6. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
7. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
8. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.



9. Speech Clarity: The ability to speak clearly so others can understand you.
10. Written Comprehension: The ability to read and understand information and ideas presented in writing.

### *Work Activities:*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
3. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
4. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
5. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
7. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
8. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
10. Provide Consultation and Advice to Others: Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.

### *Work Styles:*

---

1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Integrity Job requires being honest and ethical.
3. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
8. Persistence Job requires persistence in the face of obstacles.
9. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values:*

---

1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.



## Database Architect

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**Design strategies for enterprise database systems and set standards for operations, programming, and security. Design and construct large relational databases. Integrate new systems with existing warehouse structure and refine system performance and functionality.**

### *Common Tasks*

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1. Develop and document database architectures.
2. Develop database architectural strategies at the modeling, design and implementation stages to address business or industry requirements.
3. Collaborate with system architects, software architects, design analysts, and others to understand business or industry requirements.
4. Create and enforce database development standards.
5. Demonstrate database technical functionality, such as performance, security and reliability.
6. Design database applications, such as interfaces, data transfer mechanisms, global temporary tables, data partitions, and function-based indexes to enable efficient access of the generic database structure.
7. Design databases to support business applications, ensuring system scalability, security, performance and reliability.
8. Develop data models for applications, metadata tables, views or related database structures.
9. Develop load-balancing processes to eliminate down time for backup processes.
10. Develop or maintain archived procedures, procedural codes, or queries for applications.



# Data Warehousing Specialist

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Design, model, or implement corporate data warehousing activities. Program and configure warehouses of database information and provide support to warehouse users.

## *Common Tasks*

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1. Design, implement, or operate comprehensive data warehouse systems to balance optimization of data access with batch loading and resource utilization factors, according to customer requirements.
2. Develop data warehouse process models, including sourcing, loading, transformation, and extraction.
3. Create or implement metadata processes and frameworks.
4. Create plans, test files, and scripts for data warehouse testing, ranging from unit to integration testing.
5. Create supporting documentation, such as metadata and diagrams of entity relationships, business processes, and process flow.
6. Design and implement warehouse database structures.
7. Develop and implement data extraction procedures from other systems, such as administration, billing, or claims.
8. Develop or maintain standards, such as organization, structure, or nomenclature, for the design of data warehouse elements, such as data architectures, models, tools, and databases.
9. Implement business rules via stored procedures, middleware, or other technologies.
10. Map data between source systems, data warehouses, and data marts.



## Dentist

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**Diagnose and treat diseases, injuries, and malformations of teeth and gums and related oral structures. May treat diseases of nerve, pulp, and other dental tissues affecting vitality of teeth.**

### *Common Tasks*

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1. Use masks, gloves and safety glasses to protect themselves and their patients from infectious diseases.
2. Administer anesthetics to limit the amount of pain experienced by patients during procedures.
3. Examine teeth, gums, and related tissues, using dental instruments, x-rays, and other diagnostic equipment, to evaluate dental health, diagnose diseases or abnormalities, and plan appropriate treatments.
4. Formulate plan of treatment for patient's teeth and mouth tissue.
5. Use air turbine and hand instruments, dental appliances and surgical implements.
6. Advise and instruct patients regarding preventive dental care, the causes and treatment of dental problems, and oral health care services.
7. Design, make, and fit prosthodontics appliances such as space maintainers, bridges, and dentures, or write fabrication instructions or prescriptions for denturists and dental technicians.
8. Diagnose and treat diseases, injuries, and malformations of teeth, gums and related oral structures, and provide preventive and corrective services.
9. Fill pulp chamber and canal with endodontic materials.
10. Write prescriptions for antibiotics and other medications.

### *Skills Required:*

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1. Science: Using scientific rules and methods to solve problems.
2. Active Listening: Giving full attention to what other people are saying, taking time to





understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

3. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
6. **Equipment Selection:** Determining the kind of tools and equipment needed to do a job.
7. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. **Time Management:** Managing one's own time and the time of others.
9. **Instructing:** Teaching others how to do something.
10. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.

### ***Abilities Required:***

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1. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
3. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
5. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
6. **Speech Clarity:** The ability to speak clearly so others can understand you.
7. **Speech Recognition:** The ability to identify and understand the speech of another person.
8. **Control Precision:** The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
9. **Near Vision:** The ability to see details at close range (within a few feet of the observer).



10. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.

### *Work Activities:*

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1. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
2. **Assisting and Caring for Others:** Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
3. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
4. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
5. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
7. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
8. **Guiding, Directing, and Motivating Subordinates:** Providing guidance and direction to subordinates, including setting performance standards and monitoring performance.
9. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
10. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.

### *Work Styles*

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1. **Integrity Job** requires being honest and ethical.
2. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
3. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.
4. **Cooperation Job** requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.



5. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
6. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
7. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Initiative Job requires a willingness to take on responsibilities and challenges.
10. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.

### *Work Values:*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

# Dermatologist

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**Diagnose, treat, and help prevent diseases or other conditions of the skin.**

## *Common Tasks*

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1. Conduct complete skin examinations.
2. Diagnose and treat skin conditions such as acne, dandruff, athlete's foot, moles, psoriasis, and skin cancer.
3. Counsel patients on topics such as the need for annual dermatologic screenings, sun protection, skin cancer awareness, or skin and lymph node self-examinations.
4. Diagnose and treat pigmented lesions such as common acquired nevi, congenital nevi, dysplastic nevi, Spitz nevi, blue nevi, and melanoma.
5. Perform incisional biopsies to diagnose melanoma.
6. Perform skin surgery to improve appearance, make early diagnoses, or control diseases such as skin cancer.
7. Prescribe hormonal agents or topical treatments such as contraceptives, spironolactone, antiandrogens, oral corticosteroids, retinoids, benzoyl peroxide, and antibiotics.
8. Provide dermabrasion or laser abrasion to treat atrophic scars, elevated scars, or other skin conditions.
9. Provide therapies such as intralesional steroids, chemical peels, and comedo removal to treat age spots, sun damage, rough skin, discolored skin, or oily skin.
10. Recommend diagnostic tests based on patients' histories and physical examination findings.



### *Work Values*

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1. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. **Independence** Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. **Recognition** Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

### *Interests*

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1. **Investigative:** Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.
2. **Social:** Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.
3. **Realistic:** Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.

# Desktop Publisher

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**Format typescript and graphic elements using computer software to produce publication-ready material.**

## *Common tasks*

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1. Check preliminary and final proofs for errors and make necessary corrections.
2. Operate desktop publishing software and equipment to design, lay out, and produce camera-ready copy.
3. Position text and art elements from a variety of databases in a visually appealing way to design print or web pages, using knowledge of type styles and size and layout patterns.
4. Convert various types of files for printing or for the Internet, using computer software. Transmit, deliver or mail publication master to printer for production into film and plates.
5. Study layout or other design instructions to determine work to be done and sequence of operations.
6. Enter digitized data into electronic prepress system computer memory, using scanner, camera, keyboard, or mouse.
7. View monitors for visual representation of work in progress and for instructions and feedback throughout process, making modifications as necessary.
8. Import text and art elements such as electronic clip-art or electronic files from photographs that have been scanned or produced with a digital camera, using computer software.
9. Collaborate with graphic artists, editors and writers to produce master copies according to design specifications.

## *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Time Management:** Managing one's own time and the time of others.
4. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.



5. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
6. Service Orientation: Actively looking for ways to help people.
7. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
8. Speaking: Talking to others to convey information effectively.
9. Coordination: Adjusting actions in relation to others' actions.
10. Equipment Selection: Determining the kind of tools and equipment needed to do a job.

### *Abilities Required*

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1. Near Vision: The ability to see details at close range (within a few feet of the observer).
2. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
3. Visualization The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
4. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
5. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
6. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
7. Visual Color Discrimination The ability to match or detect differences between colors, including shades of color and brightness.
8. Written Comprehension: The ability to read and understand information and ideas presented in writing.
9. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
10. Perceptual Speed The ability to quickly and accurately compare similarities and differences among sets of letters, numbers, objects, pictures, or patterns. The things to be compared may be presented at the same time or one after the other. This ability also includes comparing a presented object with a remembered object.

### *Work Activities*

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1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
4. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.  
**Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
7. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
8. **Training and Teaching Others:** Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.
9. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.

### *Work Styles*

---

1. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
2. **Cooperation Job** requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
3. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.
4. **Innovation Job** requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
5. **Adaptability/Flexibility Job** requires being open to change (positive or negative) and to considerable variety in the workplace.





6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.  
Integrity Job requires being honest and ethical.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values*

---

1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Dietician and Nutritionist

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**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.**

## *Common Tasks*

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1. Counsel individuals and groups on basic rules of good nutrition, healthy eating habits, and nutrition monitoring to improve their quality of life.
2. Assess nutritional needs, diet restrictions and current health plans to develop and implement dietary-care plans and provide nutritional counseling.
3. Advise patients and their families on nutritional principles, dietary plans and diet modifications, and food selection and preparation.
4. Consult with physicians and health care personnel to determine nutritional needs and diet restrictions of patient or client.
5. Monitor food service operations to ensure conformance to nutritional, safety, sanitation and quality standards.
6. Organize, develop, analyze, test, and prepare special meals such as low-fat, low-cholesterol and chemical-free meals.
7. Develop curriculum and prepare manuals, visual aids, course outlines, and other materials used in teaching.
8. Make recommendations regarding public policy, such as nutrition labeling, food fortification, and nutrition standards for school programs.
9. Purchase food in accordance with health and safety codes.



10. Plan and conduct training programs in dietetics, nutrition, and institutional management and administration for medical students, health-care personnel and the general public.

### *Skills Required:*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Instructing: Teaching others how to do something.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Speaking: Talking to others to convey information effectively.
5. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
6. Time Management: Managing one's own time and the time of others.
7. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
8. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
9. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.

### *Abilities Required:*

---

1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
5. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures,



mathematical operations).

6. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
7. **Speech Clarity:** The ability to speak clearly so others can understand you.
8. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
9. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. **Originality:** The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

### *Work Activities:*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
3. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
5. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
6. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
7. **Training and Teaching Others:** Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.
8. **Assisting and Caring for Others:** Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
9. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
10. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.



### *Work Styles:*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Integrity** Job requires being honest and ethical.
3. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
4. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
5. **Concern for Others** Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
6. **Analytical Thinking** Job requires analyzing information and using logic to address work-related issues and problems.
7. **Self-Control** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
8. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. **Initiative** Job requires a willingness to take on responsibilities and challenges.
10. **Achievement/Effort** Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values:*

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1. **Relationships** Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. **Independence** Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.



## Document Management Specialist

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**Implement and administer enterprise-wide document management procedures for the capture, storage, retrieval, sharing, and destruction of electronic records and documents.**

### *Common Tasks*

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- Develop or configure document management system features, such as user interfaces, access profiles, and document workflow procedures.
- Identify and classify documents or other electronic content according to characteristics such as security level, function, and metadata.
- Implement electronic document processing, retrieval, and distribution systems in collaboration with other information technology specialists.
- Operate data capture technology to import digitized documents into document management system.
- Administer document and system access rights and revision control to ensure security of system and integrity of master documents.
- Analyze, interpret, or disseminate system performance data.
- Assist in determining document management policies to facilitate efficient, legal, and secure access to electronic content.
- Assist in the assessment, acquisition, or deployment of new electronic document management systems.
- Assist in the development of document or content classification taxonomies to facilitate information capture, search, and retrieval.
- Conduct needs assessments to identify document management requirements of departments or end users.



## Economist

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**Conduct research, prepare reports, or formulate plans to aid in solution of economic problems arising from production and distribution of goods and services. May collect and process economic**

**and statistical data using econometric and sampling techniques.**

### *Common Tasks*

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1. Study economic and statistical data in area of specialization, such as finance, labor, or agriculture.
2. Provide advice and consultation on economic relationships to businesses, public and private agencies, and other employers.
3. Compile, analyze, and report data to explain economic phenomena and forecast market trends, applying mathematical models and statistical techniques.
4. Formulate recommendations, policies, or plans to solve economic problems or to interpret markets.
5. Develop economic guidelines and standards and prepare points of view used in forecasting trends and formulating economic policy.
6. Testify at regulatory or legislative hearings concerning the estimated effects of changes in legislation or public policy and present recommendations based on cost-benefit analyses.
7. Supervise research projects and students' study projects.
8. Forecast production and consumption of renewable resources and supply, consumption and depletion of non-renewable resources.
9. Teach theories, principles, and methods of economics.

### *Skills Required:*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.



3. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
4. Mathematics: Using mathematics to solve problems.
5. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
6. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
7. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
9. Time Management: Managing one's own time and the time of others.
10. Coordination: Adjusting actions in relation to others' actions.

#### ***Abilities Required:***

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Written Expression: The ability to communicate information and ideas in writing so others will understand.
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Speech Clarity: The ability to speak clearly so others can understand you.
8. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
9. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.





10. Near Vision: The ability to see details at close range (within a few feet of the observer).

### *Work Activities:*

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
3. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
6. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.
7. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
8. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
10. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.

### *Work Styles:*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Initiative Job requires a willingness to take on responsibilities and challenges.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.



5. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
6. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
7. Integrity Job requires being honest and ethical.
8. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

### *Work Values*

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1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Editor

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**Perform variety of editorial duties, such as laying out, indexing, and revising content of written materials, in preparation for final publication.**

## *Common Tasks*

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1. Prepare, rewrite and edit copy to improve readability, or supervise others who do this work.
2. Verify facts, dates, and statistics, using standard reference sources.
3. Read copy or proof to detect and correct errors in spelling, punctuation, and syntax.
4. Develop story or content ideas, considering reader or audience appeal.
5. Review and approve proofs submitted by composing room prior to publication production.
6. Supervise and coordinate work of reporters and other editors.
7. Plan the contents of publications according to the publication's style, editorial policy, and publishing requirements.
8. Read, evaluate and edit manuscripts or other materials submitted for publication and confer with authors regarding changes in content, style or organization, or publication.
9. Allocate print space for story text, photos, and illustrations according to space parameters and copy significance, using knowledge of layout principles.
10. Oversee publication production, including artwork, layout, computer typesetting, and printing, ensuring adherence to deadlines and budget requirements.

## *Skills Required:*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related



documents.

2. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
6. Time Management: Managing one's own time and the time of others.
7. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
8. Coordination: Adjusting actions in relation to others' actions.
9. Speaking: Talking to others to convey information effectively.
10. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

### ***Abilities Required:***

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1. Written Comprehension: The ability to read and understand information and ideas presented in writing.
2. Written Expression: The ability to communicate information and ideas in writing so others will understand.
3. Near Vision: The ability to see details at close range (within a few feet of the observer).
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
6. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
7. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
8. Speech Clarity: The ability to speak clearly so others can understand you.



9. **Speech Recognition:** The ability to identify and understand the speech of another person.
10. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.

### *Work Activities:*

---

1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
5. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
6. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
7. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
8. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
9. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
10. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.

### *Work Styles:*

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1. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
2. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.
3. **Initiative Job** requires a willingness to take on responsibilities and challenges.
4. **Adaptability/Flexibility Job** requires being open to change (positive or negative) and to



considerable variety in the workplace.

5. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
6. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
7. Persistence Job requires persistence in the face of obstacles.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values:*

---

1. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.



# Educational, Vocational, and School Counselor

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**Counsel individuals and provide group educational and vocational guidance services.**

## *Common Tasks*

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1. Counsel students regarding educational issues such as course and program selection, class scheduling, school adjustment, truancy, study habits, and career planning.
2. Counsel individuals to help them understand and overcome personal, social, or behavioral problems affecting their educational or vocational situations.
3. Maintain accurate and complete student records as required by laws, district policies, and administrative regulations.
4. Confer with parents or guardians, teachers, other counselors, and administrators to resolve students' behavioral, academic, and other problems.
5. Provide crisis intervention to students when difficult situations occur at schools.
6. Identify cases involving domestic abuse or other family problems affecting students' development.
7. Meet with parents and guardians to discuss their children's progress and to determine their priorities for their children and their resource needs.
8. Prepare students for later educational experiences by encouraging them to explore learning opportunities and to persevere with challenging tasks.
9. Encourage students or parents to seek additional assistance from mental health professionals when necessary.
10. Observe and evaluate students' performance, behavior, social development, and physical health.

### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
3. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
4. **Service Orientation:** Actively looking for ways to help people.
5. **Speaking:** Talking to others to convey information effectively.
6. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. **Time Management:** Managing one's own time and the time of others.
8. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
9. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
10. **Coordination:** Adjusting actions in relation to others' actions.

### *Abilities Required*

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1. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
2. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. **Speech Clarity:** The ability to speak clearly so others can understand you.
5. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
6. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
7. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce





answers that make sense.

8. Speech Recognition: The ability to identify and understand the speech of another person.
9. Written Comprehension: The ability to read and understand information and ideas presented in writing.
10. Near Vision: The ability to see details at close range (within a few feet of the observer).

### *Work Activities*

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1. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
2. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
5. Assisting and Caring for Others: Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
6. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
7. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
8. Resolving Conflicts and Negotiating with Others: Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.
9. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
10. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.

### *Work Styles*

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1. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.



2. Integrity Job requires being honest and ethical.
3. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
5. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
6. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
7. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Initiative Job requires a willingness to take on responsibilities and challenges.
10. Social Orientation Job requires preferring to work with others rather than alone, and being personally connected with others on the job.

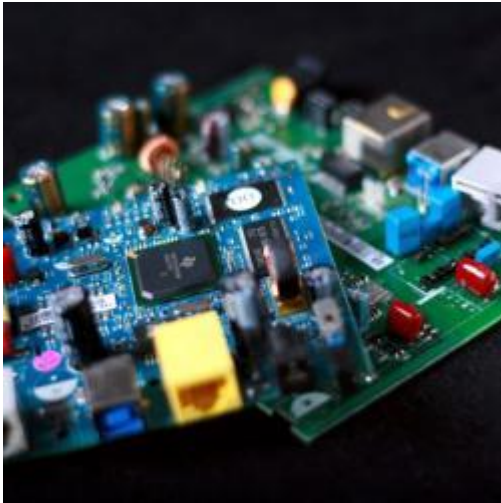
### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Electrical Drafter

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**Develop specifications and instructions for installation of voltage transformers, overhead or underground cables, and related electrical equipment used to conduct electrical energy from transmission lines or high-voltage distribution lines to consumers.**

## *Common Tasks*

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1. Use computer-aided drafting equipment or conventional drafting stations, technical handbooks, tables, calculators, and traditional drafting tools, such as boards, pencils, protractors, and T-squares.
2. Confer with engineering staff and other personnel to resolve problems.
3. Draft working drawings, wiring diagrams, wiring connection specifications or cross-sections of underground cables, as required for instructions to installation crew.
4. Draw master sketches to scale showing relation of proposed installations to existing facilities and exact specifications and dimensions.
5. Measure factors that affect installation and arrangement of equipment, such as distances to be spanned by wire and cable.
6. Assemble documentation packages and produce drawing sets which are checked by an engineer or an architect.
7. Review completed construction drawings and cost estimates for accuracy and conformity to standards and regulations.
8. Prepare and interpret specifications, calculating weights, volumes, and stress factors.
9. Explain drawings to production or construction teams and provide adjustments as necessary.
10. Supervise and train other technologists, technicians and drafters.

## *Skills Required*

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1. Time Management: Managing one's own time and the time of others.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
6. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
7. Mathematics: Using mathematics to solve problems.
8. Coordination: Adjusting actions in relation to others' actions.
9. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
10. Speaking: Talking to others to convey information effectively.

### *Abilities Required*

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Near Vision: The ability to see details at close range (within a few feet of the observer).
5. Written Expression: The ability to communicate information and ideas in writing so others will understand.
6. Speech Clarity: The ability to speak clearly so others can understand you.
7. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).



8. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
9. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
10. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

### *Work Activities*

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1. **Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment:** Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
2. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
4. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
6. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
7. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
8. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
10. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.

### *Work Styles*

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1. **Integrity Job** requires being honest and ethical.



2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
6. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
7. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Initiative Job requires a willingness to take on responsibilities and challenges.
10. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.

### *Work Values*

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1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

# Electrical Engineer

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**Design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use.**

## *Common Tasks*

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1. Prepare and study technical drawings, specifications of electrical systems, and topographical maps to ensure that installation and operations conform to standards and customer requirements.
2. Operate computer-assisted engineering and design software and equipment to perform engineering tasks.
3. Confer with engineers, customers, and others to discuss existing or potential engineering projects and products.
4. Direct and coordinate manufacturing, construction, installation, maintenance, support, documentation, and testing activities to ensure compliance with specifications, codes, and customer requirements.
5. Design, implement, maintain, and improve electrical instruments, equipment, facilities, components, products, and systems for commercial, industrial, and domestic purposes.
6. Prepare specifications for purchase of materials and equipment.
7. Perform detailed calculations to compute and establish manufacturing, construction, and installation standards and specifications.
8. Investigate customer or public complaints, determine nature and extent of problem, and recommend remedial measures.
9. Oversee project production efforts to assure projects are completed satisfactorily, on time



and within budget.

10. Plan and implement research methodology and procedures to apply principles of electrical theory to engineering projects.

### ***Skills Required:***

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.
3. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
5. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. **Technology Design:** Generating or adapting equipment and technology to serve user needs.
7. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
8. **Systems Analysis:** Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
9. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. **Time Management:** Managing one's own time and the time of others.

### ***Abilities Required:***

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1. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
3. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.





5. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
6. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
8. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
9. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. **Near Vision:** The ability to see details at close range (within a few feet of the observer).

### *Work Activities:*

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1. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
2. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment:** Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
5. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
6. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
7. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
8. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
9. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws,



regulations, or standards.

10. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.

### *Work Styles:*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Persistence Job requires persistence in the face of obstacles.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Integrity Job requires being honest and ethical.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Electrical Engineering Technologist

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**Apply engineering theory and technical skills to support electrical engineering activities such as process control, electrical power distribution, and instrumentation design. Prepare layouts of machinery and equipment, plan the flow of work, conduct statistical studies and analyze production costs.**



## *Common Tasks*

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1. Calculate design specifications or cost, material, and resource estimates, and prepare project schedules and budgets.
2. Design or modify engineering schematics for electrical transmission and distribution systems or for electrical installation in residential, commercial, or industrial buildings, using computer-aided design (CAD) software.
3. Install or maintain electrical control systems, industrial automation systems, and electrical equipment including control circuits, variable speed drives, or programmable logic controllers.
4. Review electrical engineering plans to ensure adherence to design specifications and compliance with applicable electrical codes and standards.
5. Supervise the construction and testing of electrical prototypes according to general instructions and established standards.
6. Compile and maintain records documenting engineering schematics, installed equipment, installation and operational problems, resources used, and repairs or corrective action performed.
7. Review installation and quality assurance documentation.
8. Review, develop and prepare maintenance standards.
9. Set up and operate standard and specialized testing equipment.
10. Diagnose, test, or analyze the performance of electrical components, assemblies, and systems.

### ○ *Work Values*

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1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

### *Tools & Technology*

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#### **Tools used in this occupation:**

1. Microcontrollers Programmable logic controllers PLC
2. Power meters Power quality analyzers
3. Signal generators Function generators
4. Soldering irons or guns Soldering equipment
5. Voltage or current meters Analog current meters; Digital voltmeters DVM; Standing wave ratio SWR meters

#### **Technology used in this occupation:**

1. Analytical or scientific software BSVC; octtools \*; PTC Mathcad; Wolfram Research Mathematica
2. Computer aided design CAD software Autodesk autocad software; Bentley Microstation; PUFF; Tanner Research L-Edit
3. Development environment software C; Microchip MPLAB Integrated Development Environment \*; Motorola Digital Signal Processing DSP Assembler; National Instruments labview
4. Object or component oriented development software C++; Microsoft Visual Basic.NET
5. Program testing software Rockwell rslogix; Vector software
6. Software developed by a government agency and/or distributed as freeware or shareware.



### *Education*

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This occupation may require a background in the following science, technology, engineering, and mathematics (STEM) educational disciplines:

- Engineering Electrical, Electronic and Communications Engineering Technology/Technician

# Electronic Commerce Specialist

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**Market products on proprietary websites. Produce online advertising. Determine website content and design. Analyze customer preferences and online sales.**

## *Common Tasks*

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1. Collaborate with web, multimedia, or art design staffs to create multimedia web sites that conform to brand and company visual format.
2. Collect and analyze sales data, using web traffic metrics such as page visits, transaction size, link popularity, click-through rates, and cost-per clicks.
3. Conduct online marketing initiatives such as paid ad placement, affiliate programs, sponsorship programs, email promotions, and viral marketing campaigns on social media websites.
4. Optimize web site exposure by analyzing search engine patterns to direct online placement of keywords or other content.
5. Collaborate with other marketing staff to integrate and complement marketing strategies across multiple sales channels.
6. Communicate and collaborate with merchants, webmasters, bloggers, or online editors to place sales-oriented hyperlinks in high-traffic locations.
7. Conduct financial modeling for online marketing programs or website revenue forecasting.
8. Conduct market research analysis to identify electronic commerce trends, market opportunities, or competitor performance.
9. Coordinate sales or other promotional strategies with merchandising, operations, or inventory control staff to ensure product catalogs are current and accurate.
10. Develop transactional web applications, using web programming software and knowledge of programming languages, such as hypertext markup language (HTML) and extensible markup language (XML).

# Electronics Engineering Technologist

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**Apply engineering theory and technical skills to support electronics engineering activities such as electronics systems and instrumentation design and digital signal processing.**



## *Common Tasks*

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1. Analyze and implement engineering designs for producing electronic devices and systems and microprocessor-based control applications, applying principles of mathematics, digital signal processing, network analysis, and computer engineering.
2. Conduct or supervise the installation and operation of electronic equipment and systems.
3. Evaluate machine and process control requirements and develop device and controller specifications suited to operating environments.
4. Supervise the building and testing of prototypes of electronics circuits, equipment, and systems.
5. Inspect newly installed equipment to adjust or correct operating problems.
6. Integrate software and hardware components using computer, microprocessor, and control architecture.
7. Produce electronics drawings and other graphics representing industrial control, instrumentation, sensors, or analog and digital telecommunications networks using computer-aided design (CAD) software.
8. Replace defective components and parts using hand tools and precision instruments.
9. Select electronics equipment, components, and systems to meet functional specifications.



10. Set up and operate specialized and standard test equipment to diagnose, test, and analyze the performance of electronic components, assemblies, and systems.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.

### *Skills*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Speaking: Talking to others to convey information effectively.
6. Equipment Maintenance Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
7. Mathematics: Using mathematics to solve problems.
8. Operation Monitoring: Watching gauges, dials, or other indicators to make sure a machine is working properly.
9. Quality Control Analysis: Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
10. Repairing Repairing machines or systems using the needed tools.

### *Abilities*

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1. Near Vision: The ability to see details at close range (within a few feet of the observer).
2. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
3. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
4. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
6. Visualization The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
7. Flexibility of Closure: The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
8. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
9. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
10. Visual Color Discrimination The ability to match or detect differences between colors, including shades of color and brightness.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Repairing and Maintaining Electronic Equipment Servicing, repairing, calibrating, regulating, fine-tuning, or testing machines, devices, and equipment that operate primarily on the basis of electrical or electronic (not mechanical) principles.
3. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
4. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
5. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.



6. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
7. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
8. Inspecting Equipment, Structures, or Material: Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
9. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
10. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.



## Emergency Management Specialist

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

### *Common Tasks*

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1. Keep informed of activities or changes that could affect the likelihood of an emergency, as well as those that could affect response efforts and details of plan implementation.
2. Prepare plans that outline operating procedures to be used in response to disasters or emergencies, such as hurricanes, nuclear accidents, and terrorist attacks, and in recovery from these events.
3. Propose alteration of emergency response procedures based on regulatory changes, technological changes, or knowledge gained from outcomes of previous emergency situations.
4. Maintain and update all resource materials associated with emergency preparedness plans.
5. Coordinate disaster response or crisis management activities, such as ordering evacuations, opening public shelters, and implementing special needs plans and programs.
6. Develop and maintain liaisons with municipalities, county departments, and similar entities to facilitate plan development, response effort coordination, and exchanges of personnel and equipment.
7. Keep informed of federal, state, and local regulations affecting emergency plans and ensure that plans adhere to these regulations.
8. Prepare emergency situation status reports that describe response and recovery efforts, needs, and preliminary damage assessments.
9. Design and administer emergency or disaster preparedness training courses that teach people how to effectively respond to major emergencies and disasters.



10. Inspect facilities and equipment, such as emergency management centers and communications equipment, to determine their operational and functional capabilities in emergency situations.

### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Coordination:** Adjusting actions in relation to others' actions.
4. **Instructing:** Teaching others how to do something.
5. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
6. **Speaking:** Talking to others to convey information effectively.
7. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
9. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
10. **Time Management:** Managing one's own time and the time of others.

### *Abilities Required*

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1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. **Speech Clarity:** The ability to speak clearly so others can understand you.
5. **Speech Recognition:** The ability to identify and understand the speech of another person.
6. **Written Expression:** The ability to communicate information and ideas in writing so others



will understand.

7. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
8. Written Comprehension: The ability to read and understand information and ideas presented in writing.
9. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
10. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### *Work Activities*

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1. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
2. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
3. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
4. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
5. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
6. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
7. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
8. Developing Objectives and Strategies: Establishing long-range objectives and specifying the strategies and actions to achieve them.
9. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
10. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating,



recognizing differences or similarities, and detecting changes in circumstances or events.

### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Integrity** Job requires being honest and ethical.
3. **Leadership** Job requires a willingness to lead, take charge, and offer opinions and direction.
4. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. **Persistence** Job requires persistence in the face of obstacles.
7. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. **Analytical Thinking** Job requires analyzing information and using logic to address work-related issues and problems.
9. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
10. **Initiative** Job requires a willingness to take on responsibilities and challenges.

### *Work Values*

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1. **Independence** Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. **Relationships** Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. **Recognition** Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Energy Auditor

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**Conduct energy audits of buildings, building systems and process systems. May also conduct investment grade audits of buildings or systems.**

## *Common Tasks*

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1. Identify and prioritize energy saving measures.
2. Prepare audit reports containing energy analysis results and recommendations for energy cost savings.
3. Collect and analyze field data related to energy usage.
4. Inspect or evaluate building envelopes, mechanical systems, electrical systems, or process systems to determine the energy consumption of each system.
5. Perform tests such as blower-door tests to locate air leaks.
6. Educate customers on energy efficiency or answer questions on topics such as the costs of running household appliances and the selection of energy efficient appliances.
7. Calculate potential for energy savings.
8. Prepare job specification sheets for home energy improvements such as attic insulation, window retrofits, and heating system upgrades.
9. Recommend energy efficient technologies or alternate energy sources.
10. Quantify energy consumption to establish baselines for energy use and need.

## *Abilities Required*

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1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.



2. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
3. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
4. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
6. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
7. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
8. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas to solve a problem.
10. **Number Facility:** The ability to add, subtract, multiply, or divide quickly and correctly.

### *Work Activities*

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1. **Inspecting Equipment, Structures, or Material:** Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
4. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
5. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
7. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws,





regulations, or standards.

8. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
9. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
10. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.

### *Work Styles*

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1. **Integrity Job** requires being honest and ethical.
2. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
3. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.
4. **Initiative Job** requires a willingness to take on responsibilities and challenges.
5. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.
6. **Adaptability/Flexibility Job** requires being open to change (positive or negative) and to considerable variety in the workplace.
7. **Cooperation Job** requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. **Self-Control Job** requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
9. **Independence Job** requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. **Persistence Job** requires persistence in the face of obstacles.

### *Work Values*

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1. **Independence Occupations** that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. **Support Occupations** that satisfy this work value offer supportive management that stands



behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.

3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.



## Energy Engineer



**Design, develop, and evaluate energy-related projects and 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.**

### *Common Tasks*

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1. Identify energy savings opportunities and make recommendations to achieve more energy efficient operation.
2. Manage the development, design, or construction of energy conservation projects to ensure acceptability of budgets and time lines, conformance to federal and state laws, or adherence to approved specifications.
3. Conduct energy audits to evaluate energy use, costs, or conservation measures.
4. Monitor and analyze energy consumption.
5. Perform energy modeling, measurement, verification, commissioning, or retro-commissioning.
6. Oversee design or construction aspects related to energy such as energy engineering, energy management, and sustainable design.
7. Conduct jobsite observations, field inspections, or sub-metering to collect data for energy conservation analyses.
8. Review architectural, mechanical, or electrical plans and specifications to evaluate energy efficiency or determine economic, service, or engineering feasibility.
9. Inspect or monitor energy systems including heating, ventilation and air conditioning (HVAC),



or daylighting systems to determine energy use or potential energy savings.

10. Evaluate construction design information such as detail and assembly drawings, design calculations, system layouts and sketches, or specifications.

### ***Abilities Required:***

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1. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
2. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
3. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
6. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
7. **Speech Clarity:** The ability to speak clearly so others can understand you.
8. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
10. **Near Vision:** The ability to see details at close range (within a few feet of the observer).

### ***Work Activities:***

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1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
4. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to



- supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
  6. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
  7. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
  8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
  9. **Estimating the Quantifiable Characteristics of Products, Events, or Information:** Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
  10. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.

### *Work Styles:*

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1. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.
2. **Integrity Job** requires being honest and ethical.
3. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
4. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.
5. **Initiative Job** requires a willingness to take on responsibilities and challenges.
6. **Cooperation Job** requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. **Adaptability/Flexibility Job** requires being open to change (positive or negative) and to considerable variety in the workplace.
8. **Persistence Job** requires persistence in the face of obstacles.
9. **Innovation Job** requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.



10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

*Work Values:*

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1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Environmental Engineer

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**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.**

## *Common Tasks*

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1. Collaborate with environmental scientists, planners, hazardous waste technicians, engineers, and other specialists, and experts in law and business to address environmental problems.
2. Inspect industrial and municipal facilities and programs to evaluate operational effectiveness and ensure compliance with environmental regulations.
3. Prepare, review, and update environmental investigation and recommendation reports.
4. Design and supervise the development of systems processes or equipment for control, management, or remediation of water, air, or soil quality.
5. Provide environmental engineering assistance in network analysis, regulatory analysis, and planning or reviewing database development.
6. Obtain, update, and maintain plans, permits, and standard operating procedures.
7. Provide technical-level support for environmental remediation and litigation projects, including remediation system design and determination of regulatory applicability.
8. Monitor progress of environmental improvement programs.
9. Advise corporations and government agencies of procedures to follow in cleaning up contaminated sites to protect people and the environment.
10. Inform company employees and other interested parties of environmental issues.

## *Skills Required:*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Speaking: Talking to others to convey information effectively.
5. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
7. Systems Analysis: Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
8. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
9. Systems Evaluation Identifying: Measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
10. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.

### ***Abilities Required:***

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1. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
3. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
5. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
6. Written Comprehension: The ability to read and understand information and ideas presented





in writing.

7. Flexibility of Closure: The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
8. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
9. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. Near Vision: The ability to see details at close range (within a few feet of the observer).

### ***Work Activities:***

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
5. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
6. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
7. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
8. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
9. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.



### *Work Styles:*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Integrity Job requires being honest and ethical.
4. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Epidemiologist

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**Investigate and describe the determinants and distribution of disease, disability, and other health outcomes and develop the means for prevention and control.**

**Sample of reported job titles: Epidemiologist, Nurse Epidemiologist, Infection Control Practitioner (ICP), Epidemiology Investigator, Research Epidemiologist, Chronic Disease Epidemiologist, Communicable Disease Specialist, Epidemiologist Advanced, State Epidemiologist, Environmental Epidemiologist**

## *Common Tasks*

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1. Monitor and report incidents of infectious diseases to local and state health agencies.
2. Plan and direct studies to investigate human or animal disease, preventive methods, and treatments for disease.
3. Communicate research findings on various types of diseases to health practitioners, policy makers, and the public.
4. Provide expertise in the design, management and evaluation of study protocols and health status questionnaires, sample selection and analysis.
5. Oversee public health programs, including statistical analysis, health care planning, surveillance systems, and public health improvement.
6. Investigate diseases or parasites to determine cause and risk factors, progress, life cycle, or mode of transmission.
7. Educate healthcare workers, patients, and the public about infectious and communicable diseases, including disease transmission and prevention.



8. Conduct research to develop methodologies, instrumentation and procedures for medical application, analyzing data and presenting findings.
9. Identify and analyze public health issues related to foodborne parasitic diseases and their impact on public policies or scientific studies or surveys.
10. Supervise professional, technical and clerical personnel.

### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Speaking: Talking to others to convey information effectively.
3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
6. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
7. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
9. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
10. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.

### *Abilities Required*

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1. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will



understand.

4. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
5. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
6. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
8. **Speech Clarity:** The ability to speak clearly so others can understand you.
9. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
10. **Speech Recognition:** The ability to identify and understand the speech of another person.

### *Work Activities*

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1. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
4. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
5. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
7. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
9. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new



knowledge to your job.

10. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.

### *Work Styles*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Integrity Job requires being honest and ethical.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Initiative Job requires a willingness to take on responsibilities and challenges.
5. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
8. Persistence Job requires persistence in the face of obstacles.
9. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Fashion Designer

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**Design clothing and accessories. Create original garments or design garments that follow well established fashion trends. May develop the line of color and kinds of materials.**

## *Common Tasks*

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1. Direct and coordinate workers involved in drawing and cutting patterns and constructing samples or finished garments.
2. Examine sample garments on and off models; then modify designs to achieve desired effects.
3. Sketch rough and detailed drawings of apparel or accessories, and write specifications such as color schemes, construction, material types, and accessory requirements.
4. Confer with sales and management executives or with clients in order to discuss design ideas.
5. Identify target markets for designs, looking at factors such as age, gender, and socioeconomic status.
6. Attend fashion shows and review garment magazines and manuals in order to gather information about fashion trends and consumer preferences.
7. Select materials and production techniques to be used for products.
8. Provide sample garments to agents and sales representatives, and arrange for showings of sample garments at sales meetings or fashion shows.
9. Adapt other designers' ideas for the mass market.
10. Purchase new or used clothing and accessory items as needed to complete designs.

## *Skills Required:*

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1. Time Management: Managing one's own time and the time of others.
2. Coordination: Adjusting actions in relation to others' actions.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
5. Speaking: Talking to others to convey information effectively.
6. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
7. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
8. Mathematics: Using mathematics to solve problems.
9. Persuasion: Persuading others to change their minds or behavior.
10. Operations Analysis: Analyzing needs and product requirements to create a design.

### ***Abilities Required:***

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
4. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
5. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Written Comprehension: The ability to read and understand information and ideas presented in writing.
8. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It





does not involve solving the problem, only recognizing there is a problem.

9. Near Vision: The ability to see details at close range (within a few feet of the observer).
10. Speech Clarity: The ability to speak clearly so others can understand you.

### *Work Activities:*

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1. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
2. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
3. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
4. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
5. Judging the Qualities of Things, Services, or People Assessing the value, importance, or quality of things or people.
6. Scheduling Work and Activities: Scheduling events, programs, and activities, as well as the work of others.
7. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
8. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
10. Selling or Influencing Others: Convincing others to buy merchandise/goods or to otherwise change their minds or actions.

### *Work Styles:*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.



3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Initiative Job requires a willingness to take on responsibilities and challenges.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
7. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

### *Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Financial Analyst

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**Conduct quantitative analyses of information affecting investment programs of public or private institutions.**



## *Common Tasks*

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1. Assemble spreadsheets and draw charts and graphs used to illustrate technical reports, using computer.
2. Analyze financial information to produce forecasts of business, industry, and economic conditions for use in making investment decisions.
3. Maintain knowledge and stay abreast of developments in the fields of industrial technology, business, finance, and economic theory.
4. Interpret data affecting investment programs, such as price, yield, stability, future trends in investment risks, and economic influences.
5. Monitor fundamental economic, industrial, and corporate developments through the analysis of information obtained from financial publications and services, investment banking firms, government agencies, trade publications, company sources, and personal interviews.
6. Recommend investments and investment timing to companies, investment firm staff, or the investing public.
7. Determine the prices at which securities should be syndicated and offered to the public.
8. Prepare plans of action for investment based on financial analyses.
9. Evaluate and compare the relative quality of various securities in a given industry.
10. Present oral and written reports on general economic trends, individual corporations, and entire industries.



### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Time Management: Managing one's own time and the time of others.
3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
5. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. Mathematics: Using mathematics to solve problems.
7. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. Management of Financial Resources: Determining how money will be spent to get the work done, and accounting for these expenditures.
9. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
10. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

### *Abilities Required:*

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1. Written Comprehension: The ability to read and understand information and ideas presented in writing.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Written Expression: The ability to communicate information and ideas in writing so others will understand.
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.



6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Near Vision: The ability to see details at close range (within a few feet of the observer).
8. Speech Clarity: The ability to speak clearly so others can understand you.
9. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.
10. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

### *Work Activities:*

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1. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
7. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
8. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
9. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.

### *Work Styles:*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.



2. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Integrity Job requires being honest and ethical.
5. Persistence Job requires persistence in the face of obstacles.
6. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
7. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

### *Work Values:*

---

1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Financial Quantitative Analyst

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**Develop quantitative financial products used to inform individuals and financial institutions engaged in saving, lending, investing, borrowing, or managing risk. Investigate methods for financial analysis to create mathematical models used to develop improved analytical tools and advanced financial investment instruments.**

## *Common Tasks*

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1. Apply mathematical and statistical techniques to address practical issues in finance, such as derivative valuation, securities trading, risk management, or financial market regulation.
2. Devise or apply independent models and tools to help verify results of analytical systems.
3. Research and develop analytical tools to address issues such as portfolio construction and optimization, performance measurement, attribution, profit-and-loss measurement, and pricing models.
4. Collaborate with product development teams to research, model, validate, or implement quantitative structured solutions for new or expanded markets.
5. Confer with other financial engineers and analysts to understand trading strategies, market dynamics, and trading system performance to inform development of quantitative techniques.
6. Consult financial industry personnel, such as traders, to determine the need for new or improved analytical applications.
7. Define and recommend model specifications or data collection methods.
8. Develop core analytical capabilities or model libraries, using advanced statistical, quantitative, and econometric techniques.



9. Interpret results of analytical procedures.
10. Maintain and modify all analytic models in use.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

### *Interests*

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1. Conventional Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.
2. Investigative: Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.

### *Tools & Technology*

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#### Tools

- Special purpose telephones Multi-line telephone systems
- Photocopiers Photocopying equipment
- Notebook computers Laptop computers
- Mainframe computers
- Desktop computers

#### Technology

- Office suite software Microsoft Office software,
- Object or component oriented development software C++; Microsoft Visual C#; Python; R





- Enterprise resource planning ERP software microstrategy Desktop
- Data base user interface and query software Microsoft Access; Structured query language SQL
- Analytical or scientific software Insightful S-PLUS; SAS software; statacorp Stata; The mathworks MATLAB



## Flight Attendant

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**Provide personal services to ensure the safety and comfort of airline passengers during flight. Greet passengers, verify tickets, explain use of safety equipment, and serve food or beverages.**

### *Common Tasks*

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1. Direct and assist passengers in emergency procedures, such as evacuating a plane following an emergency landing.
2. Announce and demonstrate safety and emergency procedures, such as the use of oxygen masks, seat belts, and life jackets.
3. Walk aisles of planes to verify that passengers have complied with federal regulations prior to takeoffs and landings.
4. Verify that first aid kits and other emergency equipment, including fire extinguishers and oxygen bottles, are in working order.
5. Administer first aid to passengers in distress.
6. Attend preflight briefings concerning weather, altitudes, routes, emergency procedures, crew coordination, lengths of flights, food and beverage services offered, and numbers of passengers.
7. Prepare passengers and aircraft for landing, following procedures.
8. Determine special assistance needs of passengers such as small children, the elderly or disabled persons.
9. Check to ensure that food, beverages, blankets, reading material, emergency equipment, and other supplies are aboard and are in adequate supply.
10. Reassure passengers when situations such as turbulence are encountered.

### *Skills Required:*

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1. Service Orientation: Actively looking for ways to help people.



2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Speaking: Talking to others to convey information effectively.
6. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. Coordination: Adjusting actions in relation to others' actions.
8. Time Management: Managing one's own time and the time of others.
9. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.

### ***Abilities Required:***

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Speech Clarity: The ability to speak clearly so others can understand you.
4. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. Speech Recognition: The ability to identify and understand the speech of another person.
6. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
7. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
8. Near Vision: The ability to see details at close range (within a few feet of the observer).



9. **Arm-Hand Steadiness** The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
10. **Far Vision:** The ability to see details at a distance.

### *Work Activities:*

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1. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
2. **Inspecting Equipment, Structures, or Material:** Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
3. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
5. **Performing General Physical Activities:** Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
6. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
7. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
8. **Assisting and Caring for Others:** Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
9. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
10. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.

### *Work Styles:*

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1. **Self-Control** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
2. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.



3. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
4. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
7. Integrity Job requires being honest and ethical.
8. Social Orientation Job requires preferring to work with others rather than alone, and being personally connected with others on the job.
9. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

#### *Work Values:*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Flight Engineer

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**Pilot and navigate the flight of multi-engine aircraft in regularly scheduled service for the transport of passengers and cargo. Requires Federal Air Transport rating and certification in specific aircraft type used.**

## *Common Tasks*

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1. Use instrumentation to guide flights when visibility is poor.
2. Respond to and report in-flight emergencies and malfunctions.
3. Work as part of a flight team with other crew members, especially during takeoffs and landings.
4. Contact control towers for takeoff clearances, arrival instructions, and other information, using radio equipment.
5. Steer aircraft along planned routes, using autopilot and flight management computers.
6. Monitor gauges, warning devices, and control panels to verify aircraft performance and to regulate engine speed.
7. Start engines; operate controls, and pilot airplanes to transport passengers, mail, or freight, adhering to flight plans, regulations, and procedures.
8. Inspect aircraft for defects and malfunctions, according to pre-flight checklists.
9. Check passenger and cargo distributions and fuel amounts to ensure that weight and balance specifications are met.
10. Monitor engine operation, fuel consumption, and functioning of aircraft systems during flights.

## *Skills Required*

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1. **Operation Monitoring:** Watching gauges, dials, or other indicators to make sure a machine is working properly.



2. Operation and Control: Controlling operations of equipment or systems.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
5. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
8. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
9. Troubleshooting: Determining causes of operating errors and deciding what to do about it.
10. Speaking: Talking to others to convey information effectively.

### *Abilities Required*

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1. Control Precision: The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
2. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. Response Orientation The ability to choose quickly between two or more movements in response to two or more different signals (lights, sounds, pictures). It includes the speed with which the correct response is started with the hand, foot, or other body part.
4. Depth Perception The ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object.
5. Spatial Orientation The ability to know your location in relation to the environment or to know where other objects are in relation to you.
6. Far Vision: The ability to see details at a distance.
7. Multilimb Coordination: The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.



8. **Rate Control** The ability to time your movements or the movement of a piece of equipment in anticipation of changes in the speed and/or direction of a moving object or scene.
9. **Reaction Time** The ability to quickly respond (with the hand, finger, or foot) to a signal (sound, light, picture) when it appears.
10. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.

### *Work Activities*

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1. **Operating Vehicles, Mechanized Devices, or Equipment** Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.
2. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Controlling Machines and Processes** Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
5. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
6. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
7. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
8. **Inspecting Equipment, Structures, or Material:** Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
9. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
10. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.



### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
4. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
8. Integrity Job requires being honest and ethical.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Food Science Technician

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**Perform standardized qualitative and quantitative tests to determine physical or chemical properties of food or beverage products.**

## *Common Tasks*

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1. Conduct standardized tests on food, beverages, additives, and preservatives to ensure compliance with standards and regulations regarding factors such as color, texture, and nutrients.
2. Provide assistance to food scientists and technologists in research and development, production technology, and quality control.
3. Compute moisture or salt content, percentages of ingredients, formulas, or other product factors, using mathematical and chemical procedures.
4. Record and compile test results, and prepare graphs, charts, and reports.
5. Clean and sterilize laboratory equipment.
6. Analyze test results to classify products, or compare results with standard tables.
7. Taste or smell foods or beverages to ensure that flavors meet specifications, or to select samples with specific characteristics.
8. Examine chemical and biological samples to identify cell structures and to locate bacteria, or extraneous material, using a microscope.



9. Mix, blend, or cultivate ingredients to make reagents or to manufacture food or beverage products.
10. Measure, test, and weigh bottles, cans, and other containers to ensure hardness, strength, and dimensions that meet specifications.

### *Skills Required*

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1. Quality Control Analysis: Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Science: Using scientific rules and methods to solve problems.
5. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Mathematics: Using mathematics to solve problems.
8. Speaking: Talking to others to convey information effectively.
9. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
10. Operation Monitoring: Watching gauges, dials, or other indicators to make sure a machine is working properly.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.



5. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
6. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
7. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
8. **Speech Clarity:** The ability to speak clearly so others can understand you.
9. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
10. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### *Work Activities*

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1. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
2. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
3. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
4. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
7. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
9. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
10. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws,



regulations, or standards.

### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Integrity** Job requires being honest and ethical.
3. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
4. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
5. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
7. **Initiative** Job requires a willingness to take on responsibilities and challenges.
8. **Analytical Thinking** Job requires analyzing information and using logic to address work-related issues and problems.
9. **Self-Control** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
10. **Independence** Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values*

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1. **Support** Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. **Relationships** Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Food Scientist and Technologist

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**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.**

## *Common Tasks*

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1. Test new products for flavor, texture, color, nutritional content, and adherence to government and industry standards.
2. Check raw ingredients for maturity or stability for processing and finished products for safety, quality, and nutritional value.
3. Confer with process engineers, plant operators, flavor experts, and packaging and marketing specialists to resolve problems in product development.
4. Evaluate food processing and storage operations and assist in the development of quality assurance programs for such operations.
5. Study methods to improve aspects of foods, such as chemical composition, flavor, color, texture, nutritional value, and convenience.
6. Study the structure and composition of food or the changes foods undergo in storage and processing.
7. Develop new or improved ways of preserving, processing, packaging, storing, and delivering foods, using knowledge of chemistry, microbiology, and other sciences.
8. Develop food standards and production specifications, safety and sanitary regulations, and waste management and water supply specifications.
9. Demonstrate products to clients.
10. Inspect food processing areas to ensure compliance with government regulations and standards for sanitation, safety, quality, and waste management standards.



### *Skills Required*

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1. **Quality Control Analysis:** Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
2. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
4. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
5. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
6. **Mathematics:** Using mathematics to solve problems.
7. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. **Speaking:** Talking to others to convey information effectively.
9. **Time Management:** Managing one's own time and the time of others.
10. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.

### *Abilities Required*

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1. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
2. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
3. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
6. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.



7. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
8. Written Comprehension: The ability to read and understand information and ideas presented in writing.
9. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
10. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

### *Work Activities*

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
3. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
4. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
5. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
6. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
7. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
8. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
9. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
10. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Integrity Job requires being honest and ethical.
4. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Persistence Job requires persistence in the face of obstacles.
8. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
9. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Forester

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**Manage 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 the best time for harvesting. Develop forest management plans for public and privately-owned forested lands.**

## *Common Tasks*

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1. Monitor contract compliance and results of forestry activities to assure adherence to government regulations.
2. Establish short- and long-term plans for management of forest lands and forest resources.
3. Supervise activities of other forestry workers.
4. Choose and prepare sites for new trees, using controlled burning, bulldozers, or herbicides to clear weeds, brush, and logging debris.
5. Plan and supervise forestry projects, such as determining the type, number and placement of trees to be planted, managing tree nurseries, thinning forest and monitoring growth of new seedlings.
6. Negotiate terms and conditions of agreements and contracts for forest harvesting, forest



management and leasing of forest lands.

7. Direct, and participate in, forest-fire suppression.
8. Determine methods of cutting and removing timber with minimum waste and environmental damage.
9. Analyze effect of forest conditions on tree growth rates and tree species prevalence and the yield, duration, seed production, growth viability, and germination of different species.
10. Monitor forest-cleared lands to ensure that they are reclaimed to their most suitable end use.

### *Skills Required*

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1. Time Management: Managing one's own time and the time of others.
2. Coordination: Adjusting actions in relation to others' actions.
3. Science: Using scientific rules and methods to solve problems.
4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
6. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
7. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
8. Mathematics: Using mathematics to solve problems.
9. Speaking: Talking to others to convey information effectively.
10. Management of Financial Resources: Determining how money will be spent to get the work done, and accounting for these expenditures.

### *Abilities Required*

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.



3. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. Written Comprehension: The ability to read and understand information and ideas presented in writing.
6. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
7. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. Speech Clarity: The ability to speak clearly so others can understand you.
9. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
10. Near Vision: The ability to see details at close range (within a few feet of the observer).

### *Work Activities*

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1. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
2. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
3. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
4. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
7. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.



8. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
9. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
10. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.

### *Work Styles*

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1. **Cooperation Job** requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
2. **Independence Job** requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
3. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.
4. **Initiative Job** requires a willingness to take on responsibilities and challenges.
5. **Integrity Job** requires being honest and ethical.
6. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
7. **Persistence Job** requires persistence in the face of obstacles.
8. **Self-Control Job** requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
9. **Adaptability/Flexibility Job** requires being open to change (positive or negative) and to considerable variety in the workplace.
10. **Concern for Others Job** requires being sensitive to others' needs and feelings and being understanding and helpful on the job.

### *Work Values*

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1. **Independence Occupations** that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. **Working Conditions Occupations** that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.



3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Fraud Examiner, Investigator and Analyst

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**Obtain evidence, take statements, produce reports, and testify to findings regarding resolution of fraud allegations. May coordinate fraud detection and prevention activities.**

## *Common Tasks*

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1. Analyze financial data to detect irregularities in areas such as billing trends, financial relationships, and regulatory compliance procedures.
2. Conduct in-depth investigations of suspicious financial activity, such as suspected money-laundering efforts.
3. Coordinate investigative efforts with law enforcement officers and attorneys.
4. Create and maintain logs, records, or databases of information about fraudulent activity.
5. Evaluate business operations to identify risk areas for fraud.
6. Gather financial documents related to investigations.
7. Design, implement, or maintain fraud detection tools or procedures.
8. Interview witnesses or suspects and take statements.
9. Lead, or participate in, fraud investigation teams.
10. Advise businesses or agencies on ways to improve fraud detection.
11. Coordinate investigative efforts with law enforcement officers and attorneys.
12. Interview witnesses or suspects and take statements.



13. Testify in court regarding investigation findings.
14. Prepare evidence for presentation in court.
15. Prepare written reports of investigation findings.
16. Document all investigative activities.

### *Knowledge*

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1. Education and Training Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.
2. Administration and Management Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
3. Mathematics Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
4. Computers and Electronics Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
5. Public Safety and Security Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.
6. Psychology Knowledge of human behavior and performance; individual differences in ability, personality, and interests; learning and motivation; psychological research methods; and the assessment and treatment of behavioral and affective disorders.
7. Customer and Personal Service Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
8. Economics and Accounting Knowledge of economic and accounting principles and practices, the financial markets, banking and the analysis and reporting of financial data.
9. English Language Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
10. Law and Government Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.

### *Skills*

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1. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or





- organizations to make improvements or take corrective action.
2. **Coordination:** Adjusting actions in relation to others' actions. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
  3. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
  4. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
  5. **Speaking:** Talking to others to convey information effectively.
  6. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
  7. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
  8. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
  9. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.

### *Abilities*

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1. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
2. **Speech Recognition:** The ability to identify and understand the speech of another person.
3. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. **Speech Clarity:** The ability to speak clearly so others can understand you. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
5. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
6. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.



8. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
3. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
4. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
5. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
7. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
9. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
10. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.



3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Fuel Cell Engineer

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**Design, evaluate, modify, and construct fuel cell components and systems for transportation, stationary, or portable applications.**

## *Common Tasks*

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1. Design fuel cell systems, subsystems, stacks, assemblies, or components, such as electric traction motors and power electronics.
2. Analyze fuel cell or related test data, using statistical software.
3. Calculate the efficiency and power output of a fuel cell system or process.
4. Characterize component and fuel cell performances by generating operating maps, defining operating conditions, identifying design refinements, or executing durability assessments.
5. Conduct fuel cell testing projects, using fuel cell test stations, analytical instruments, or electrochemical diagnostics, such as cyclic voltammetry, impedance spectroscopy, and hydrogen pumps.
6. Conduct post-service or failure analyses, using electromechanical diagnostic principles and procedures.
7. Design or implement fuel cell testing or development programs.
8. Develop fuel cell materials and fuel cell test equipment.
9. Fabricate prototypes of fuel cell components, assemblies, stacks, or systems.



10. Identify and define the vehicle and system integration challenges for fuel cell vehicles.

### *Tools & Technology*

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**1. Tools used in this occupation:**

2. Homogenizers Digital sonifiers; Ultrasonic blenders
3. Infrared spectrometers Fourier transfer infrared FTIR spectrometers; Infrared IR spectrophotometers
4. Power meters Load boxes; Power analyzers
5. Reactors or fermenters or digesters Flow reactors
6. Scanning electron microscopes Scanning electron microscopes SEM

### *Technology used in this occupation:*

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1. Analytical or scientific software factsage; Gaussian gaussview; GE Energy gatecycle; Wolfram Research Mathematica
2. Development environment software C; National Instruments labview; Wind River Systems C/C++ Compiler Suite
3. Office suite software Microsoft Office software
4. Presentation software Microsoft powerpoint
5. Word processing software Microsoft Word

# Geneticist

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**Research and study the inheritance of traits at the molecular, organism or population level. May evaluate or treat patients with genetic disorders.**

## *Common Tasks*

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1. Analyze determinants responsible for specific inherited traits, and devise methods for altering traits or producing new traits.
2. Plan or conduct basic genomic and biological research related to areas such as regulation of gene expression, protein interactions, metabolic networks, and nucleic acid or protein complexes.
3. Conduct family medical studies to evaluate the genetic basis for traits or diseases.
4. Create or use statistical models for the analysis of genetic data.
5. Design sampling plans or coordinate the field collection of samples such as tissue specimens.
6. Develop protocols to improve existing genetic techniques or to incorporate new diagnostic procedures.
7. Evaluate genetic data by performing appropriate mathematical or statistical calculations and analyses.
8. Extract deoxyribonucleic acid (DNA) or perform diagnostic tests involving processes such as gel electrophoresis, Southern blot analysis, and polymerase chain reaction analysis.
9. Maintain laboratory notebooks that record research methods, procedures, and results.
10. Prepare results of experimental findings for presentation at professional conferences or in scientific journals.

### *Work Values*

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1. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Geographer

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**Study nature and use of areas of 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.**

## *Common Tasks*

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1. Write and present reports of research findings.
2. Create and modify maps, graphs, or diagrams, using geographical information software and related equipment, and principles of cartography such as coordinate systems, longitude, latitude, elevation, topography, and map scales.
3. Gather and compile geographic data from sources including censuses, field observations, satellite imagery, aerial photographs, and existing maps.
4. Analyze geographic distributions of physical and cultural phenomena on local, regional, continental, or global scales.
5. Develop, operate, and maintain geographical information (GIS) computer systems, including hardware, software, plotters, digitizers, printers, and video cameras.
6. Provide consulting services in fields including resource development and management, business location and market area analysis, environmental hazards, regional cultural history, and urban social planning.
7. Teach geography.
8. Provide geographical information systems support to the private and public sectors.





9. Study the economic, political, and cultural characteristics of a specific region's population.
10. Locate and obtain existing geographic information databases.

### *Skills Required*

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1. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. **Speaking:** Talking to others to convey information effectively.
6. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
7. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
8. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. **Systems Analysis:** Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
10. **Instructing:** Teaching others how to do something.

### *Abilities Required*

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1. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.



5. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
6. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
7. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
8. **Speech Clarity:** The ability to speak clearly so others can understand you.
9. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

### *Work Activities*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
3. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
4. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
5. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
7. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
8. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
9. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
10. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships,



systems, or products, including artistic contributions.

### *Work Styles*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
3. Integrity Job requires being honest and ethical.
4. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
5. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

---

1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Geographic Information Systems Technician

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**Assist scientists, technologists, and related professionals in building, maintaining, modifying, and using geographic information systems (GIS) databases. May also perform some custom application development and provide user support.**

## *Common Tasks*

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1. Design or coordinate the development of integrated Geographic Information Systems (GIS) spatial or non-spatial databases.
2. Design or prepare graphic representations of Geographic Information Systems (GIS) data using GIS hardware or software applications.
3. Enter data into Geographic Information Systems (GIS) databases using techniques such as coordinate geometry, keyboard entry of tabular data, manual digitizing of maps, scanning or automatic conversion to vectors, and conversion of other sources of digital data.
4. Maintain or modify existing Geographic Information Systems (GIS) databases.
5. Perform geospatial data building, modeling, or analysis using advanced spatial analysis, data manipulation, or cartography software.
6. Analyze Geographic Information Systems (GIS) data to identify spatial relationships or display results of analyses using maps, graphs, or tabular data.
7. Interpret aerial or ortho photographs.



8. Review existing or incoming data for currency, accuracy, usefulness, quality, or completeness of documentation.
9. Transfer or rescale information from original photographs onto maps or other photographs.
10. Select cartographic elements needed for effective presentation of information.

### *Work Values*

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1. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. **Independence** Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. **Working Conditions** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

### *Interest*

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1. **Conventional** Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.
2. **Realistic**: Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.
3. **Investigative**: Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.

### *Tools & Technology*

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#### Tools

- Object or component oriented development software Microsoft Visual C#; Microsoft Visual C++; Python; Sun Microsystems javamap creation software
- ESRI arcgis software; ESRI arcims; ESRI arcview; Trimble Pathfinder officedevelopment environment software
- C; List processing language LISP; Microsoft Visual Basic for Applications VBA; Microsoft Visual studiodata base user interface and query software



- Autodesk Topobase; ESRI arceditor; Microsoft Access; Structured query language sqlanalytical or scientific software
- Coordinate geometry COGO software; ESRI arcgis Geostatistical Analyst; ESRI arcgis Spatial Analyst; Landmark Graphics geographix software

#### Technology

- Special purpose telephones
- Multi-line telephone systemsscanners
- Computer data input scanners; digitizersplotter printers
- Large-format plotters; plottersnotebook computers
- Laptop computersglobal positioning system receivers
- Global positioning system GPS devices

# Geological Sample Test Technician

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**Test and analyze geological samples, crude oil, or petroleum products to detect presence of petroleum, gas, or mineral deposits indicating potential for exploration and production, or to determine physical and chemical properties to ensure that products meet quality standards.**

## *Common Tasks*

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1. Test and analyze samples in order to determine their content and characteristics, using laboratory apparatus and testing equipment.
2. Collect and prepare solid and fluid samples for analysis.
3. Assemble, operate, and maintain field and laboratory testing, measuring, and mechanical equipment, working as part of a crew when required.
4. Compile and record testing and operational data for review and further analysis.
5. Adjust and repair testing, electrical, and mechanical equipment and devices.
6. Supervise well exploration and drilling activities, and well completions.
7. Inspect engines for wear and defective parts, using equipment and measuring devices.
8. Prepare notes, sketches, geological maps, and cross sections.
9. Participate in geological, geophysical, geochemical, hydrographic or oceanographic surveys, prospecting field trips, exploratory drilling, well logging or underground mine survey programs.
10. Plot information from aerial photographs, well logs, section descriptions, and other databases.

## *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Science: Using scientific rules and methods to solve problems.
4. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
5. Mathematics: Using mathematics to solve problems.
6. Coordination: Adjusting actions in relation to others' actions.
7. Time Management: Managing one's own time and the time of others.
8. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
9. Quality Control Analysis: Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
10. Writing: Communicating effectively in writing as appropriate for the needs of the audience.

### *Abilities Required*

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1. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
2. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
5. Flexibility of Closure: The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
6. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
7. Near Vision: The ability to see details at close range (within a few feet of the observer).





8. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
9. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
10. **Far Vision:** The ability to see details at a distance.

### *Work Activities*

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1. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
6. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
7. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
8. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
9. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
10. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.

### *Work Styles*

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1. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
2. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.



3. Integrity Job requires being honest and ethical.
4. Initiative Job requires a willingness to take on responsibilities and challenges.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
7. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
8. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
9. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values*

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1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

# Geophysical Data Technician

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**Measure, record, and evaluate geological data, using sonic, electronic, electrical, seismic, or gravity-measuring instruments to prospect for oil or gas. May collect and evaluate core samples and cuttings.**

## *Common Tasks*

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1. Prepare notes, sketches, geological maps and cross-sections.
2. Read and study reports in order to compile information and data for geological and geophysical prospecting.
3. Interview individuals, and research public databases in order to obtain information.
4. Assemble, maintain, and distribute information for library or record systems.
5. Operate and adjust equipment and apparatus used to obtain geological data.
6. Plan and direct activities of workers who operate equipment to collect data.
7. Set up, or direct set-up of instruments used to collect geological data.
8. Record readings in order to compile data used in prospecting for oil or gas.
9. Supervise oil, water, and gas well drilling activities.
10. Collect samples and cuttings, using equipment and hand tools.

## *Skills Required*

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1. Science: Using scientific rules and methods to solve problems.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Active Listening: Giving full attention to what other people are saying, taking time to



understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

4. Mathematics: Using mathematics to solve problems.
5. Speaking: Talking to others to convey information effectively.
6. Time Management: Managing one's own time and the time of others.
7. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
8. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
9. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
10. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.

### *Abilities Required*

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1. Written Comprehension: The ability to read and understand information and ideas presented in writing.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Written Expression: The ability to communicate information and ideas in writing so others will understand.
5. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
6. Near Vision: The ability to see details at close range (within a few feet of the observer).
7. Speech Clarity: The ability to speak clearly so others can understand you.
8. Speech Recognition: The ability to identify and understand the speech of another person.
9. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).



### *Work Activities*

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
4. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
5. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
6. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
7. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
8. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
9. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
10. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.



6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
8. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
9. Persistence Job requires persistence in the face of obstacles.
10. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

### *Work Values*

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1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Geoscientist, Except Hydrologist and Geographer

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**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, oceans, and its magnetic, electrical, and gravitational forces. Includes mineralogists, crystallographers, paleontologists, stratigraphers, geodesists, and seismologists.**

## *Common Tasks*

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1. Analyze and interpret geological, geochemical, and geophysical information from sources such as survey data, well logs, bore holes, and aerial photos.
2. Locate and estimate probable natural gas, oil, and mineral ore deposits and underground water resources, using aerial photographs, charts, or research and survey results.
3. Plan and conduct geological, geochemical, and geophysical field studies and surveys, sample collection, or drilling and testing programs used to collect data for research or application.
4. Analyze and interpret geological data, using computer software.
5. Search for and review research articles or environmental, historical, and technical reports.
6. Assess ground and surface water movement to provide advice regarding issues such as waste management, route and site selection, and the restoration of contaminated sites.
7. Prepare geological maps, cross-sectional diagrams, charts, and reports concerning mineral extraction, land use, and resource management, using results of field work and laboratory research.



8. Investigate the composition, structure, and history of the Earth's crust through the collection, examination, measurement, and classification of soils, minerals, rocks, or fossil remains.
9. Conduct geological and geophysical studies to provide information for use in regional development, site selection, and development of public works projects.
10. Measure characteristics of the Earth, such as gravity and magnetic fields, using equipment such as seismographs, gravimeters, torsion balances, and magnetometers.

### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
5. Speaking: Talking to others to convey information effectively.
6. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. Time Management: Managing one's own time and the time of others.
8. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
9. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
10. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

### *Abilities Required*

---

1. Written Comprehension: The ability to read and understand information and ideas presented in writing.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will





understand.

4. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
5. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
6. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
7. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
8. **Speech Clarity:** The ability to speak clearly so others can understand you.
9. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

### *Work Activities*

---

1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
3. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
4. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
5. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
7. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
8. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
9. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or



maintaining information in written or electronic/magnetic form.

10. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.

### *Work Styles*

---

1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Integrity Job requires being honest and ethical.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
5. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
8. Persistence Job requires persistence in the face of obstacles.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Initiative Job requires a willingness to take on responsibilities and challenges.

### *Work Values*

---

1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Geospatial Information Scientist and Technologist

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**Research and develop geospatial technologies. May produce databases, perform applications programming or coordinate projects. May specialize in areas such as agriculture, mining, health care, retail trade, urban planning or military intelligence.**

## *Common Tasks*

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1. Produce data layers, maps, tables, or reports using spatial analysis procedures and Geographic Information Systems (GIS) technology, equipment, or systems.
2. Coordinate the development or administration of Geographic Information Systems (GIS) projects, including the development of technical priorities, client reporting and interface, or coordination and review of schedules and budgets.
3. Provide technical expertise in Geographic Information Systems (GIS) technology to clients or users.
4. Create, analyze, report, convert, or transfer data using specialized applications program software.
5. Design, program, or model Geographic Information Systems (GIS) applications or procedures.
6. Provide technical support for computer-based Geographic Information Systems (GIS) mapping software.
7. Perform computer programming, data analysis, or software development for Geographic Information Systems (GIS) applications, including the maintenance of existing systems or research and development for future enhancements.
8. Lead, train, or supervise technicians or related staff in the conduct of Geographic Information



Systems (GIS) analytical procedures.

9. Collect, compile, or integrate Geographic Information Systems (GIS) data such as remote sensing and cartographic data for inclusion in map manuscripts.
10. Meet with clients to discuss topics such as technical specifications, customized solutions, and operational problems.

### *Abilities Required*

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1. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
5. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
6. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
7. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
10. **Speech Clarity:** The ability to speak clearly so others can understand you.



### *Work Activities*

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1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
4. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
5. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
6. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
7. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
8. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
9. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
10. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.

### *Work Styles*

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1. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.
2. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
3. **Integrity Job** requires being honest and ethical.
4. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.
5. **Initiative Job** requires a willingness to take on responsibilities and challenges.



6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Persistence Job requires persistence in the face of obstacles.
8. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Graphic Designer

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**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.**



## *Common Tasks*

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1. Create designs, concepts, and sample layouts based on knowledge of layout principles and esthetic design concepts.
2. Determine size and arrangement of illustrative material and copy, and select style and size of type.
3. Confer with clients to discuss and determine layout design.
4. Develop graphics and layouts for product illustrations, company logos, and Internet websites.
5. Review final layouts and suggest improvements as needed.
6. Prepare illustrations or rough sketches of material, discussing them with clients or supervisors and making necessary changes.
7. Use computer software to generate new images.
8. Key information into computer equipment to create layouts for client or supervisor.
9. Maintain archive of images, photos, or previous work products.
10. Prepare notes and instructions for workers who assemble and prepare final layouts for printing.

## *Skills Required:*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Speaking: Talking to others to convey information effectively.
3. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Coordination: Adjusting actions in relation to others' actions.
8. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
10. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

### ***Abilities Required:***

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1. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
2. Written Comprehension: The ability to read and understand information and ideas presented in writing.
3. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
4. Near Vision: The ability to see details at close range (within a few feet of the observer).
5. Written Expression: The ability to communicate information and ideas in writing so others will understand.
6. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.





7. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
8. Visualization The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
9. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

### *Work Activities:*

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1. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
2. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
5. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
6. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
7. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
8. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.

### *Work Styles:*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
5. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
9. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
10. Integrity Job requires being honest and ethical.

### *Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Hairdresser, Hairstylist, and Cosmetologist

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**Provide beauty services, such as shampooing, cutting, coloring, and styling hair, and massaging and treating scalp. May also apply makeup, dress wigs, perform hair removal, and provide nail and skin care services.**

## *Common Tasks*

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1. Keep work stations clean and sanitize tools such as scissors and combs.
2. Cut, trim and shape hair or hairpieces, based on customers' instructions, hair type and facial features, using clippers, scissors, trimmers and razors.
3. Analyze patrons' hair and other physical features to determine and recommend beauty treatment or suggest hair styles.
4. Schedule client appointments.
5. Bleach, dye, or tint hair, using applicator or brush.
6. Update and maintain customer information records, such as beauty services provided.
7. Shampoo, rinse, condition and dry hair and scalp or hairpieces with water, liquid soap, or other solutions.
8. Operate cash registers to receive payments from patrons.
9. Demonstrate and sell hair care products and cosmetics.
10. Develop new styles and techniques.

## *Skills Required*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Speaking: Talking to others to convey information effectively.
3. Time Management: Managing one's own time and the time of others.
4. Coordination: Adjusting actions in relation to others' actions.
5. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
6. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
7. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
8. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
9. Equipment Selection: Determining the kind of tools and equipment needed to do a job.
10. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

### *Abilities Required*

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1. Arm-Hand Steadiness The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
2. Manual Dexterity The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
3. Finger Dexterity The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Near Vision: The ability to see details at close range (within a few feet of the observer).
6. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
7. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.



8. **Speech Recognition:** The ability to identify and understand the speech of another person.
9. **Visualization** The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
10. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).

### *Work Activities*

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1. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
2. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
3. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
4. **Assisting and Caring for Others:** Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
5. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
6. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
7. **Performing General Physical Activities:** Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
8. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
9. **Provide Consultation and Advice to Others:** Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.
10. **Handling and Moving Objects** Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.

### *Work Styles*

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1. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
2. **Attention to Detail** Job requires being careful about detail and thorough in completing work



tasks.

3. Integrity Job requires being honest and ethical.
4. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
5. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
6. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
7. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
8. Social Orientation Job requires preferring to work with others rather than alone, and being personally connected with others on the job.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Initiative Job requires a willingness to take on responsibilities and challenges.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.



## Historian

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**Research, analyze, record, and interpret the past as recorded in sources, such as government and institutional records, newspapers and other periodicals, photographs, interviews, films, and unpublished manuscripts, such as personal diaries and letters.**

### *Common Tasks*

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1. Organize data, and analyze and interpret its authenticity and relative significance.
2. Gather historical data from sources such as archives, court records, diaries, news files, and photographs, as well as collect data sources such as books, pamphlets, and periodicals.
3. Trace historical development in a particular field, such as social, cultural, political, or diplomatic history.
4. Conduct historical research as a basis for the identification, conservation, and reconstruction of historic places and materials.
5. Teach and conduct research in colleges, universities, museums, and other research agencies and schools.
6. Conduct historical research, and publish or present findings and theories.
7. Speak to various groups, organizations, and clubs in order to promote the aims and activities of historical societies.
8. Prepare publications and exhibits, or review those prepared by others in order to ensure their historical accuracy.
9. Research the history of a particular country or region, or of a specific time period.
10. Present historical accounts in terms of individuals or social, ethnic, political, economic, or geographic groupings.

### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.



2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Speaking: Talking to others to convey information effectively.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Instructing: Teaching others how to do something.
8. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
9. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
10. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

### *Abilities Required*

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1. Written Comprehension: The ability to read and understand information and ideas presented in writing.
2. Written Expression: The ability to communicate information and ideas in writing so others will understand.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. Near Vision: The ability to see details at close range (within a few feet of the observer).
6. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
7. Speech Clarity: The ability to speak clearly so others can understand you.
8. Speech Recognition: The ability to identify and understand the speech of another person.
9. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.





10. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

### *Work Activities*

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1. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
2. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
5. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
6. **Training and Teaching Others:** Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.
7. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
8. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
10. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.

### *Work Styles*

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1. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Integrity Job** requires being honest and ethical.
3. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.



4. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
5. Persistence Job requires persistence in the face of obstacles.
6. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values*

---

1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Hydrologist

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**Research the distribution, circulation, and physical properties of underground and surface waters; study the form and intensity of precipitation, its rate of infiltration into the soil, movement through the earth, and its return to the ocean and atmosphere.**



## *Common Tasks*

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1. Study and document quantities, distribution, disposition, and development of underground and surface waters.
2. Draft final reports describing research results, including illustrations, appendices, maps, and other attachments.
3. Coordinate and supervise the work of professional and technical staff, including research assistants, technologists, and technicians.
4. Prepare hydrogeologic evaluations of known or suspected hazardous waste sites and land treatment and feedlot facilities.
5. Design and conduct scientific hydrogeological investigations to ensure that accurate and appropriate information is available for use in water resource management decisions.
6. Study public water supply issues, including flood and drought risks, water quality, wastewater, and impacts on wetland habitats.
7. Collect and analyze water samples as part of field investigations or to validate data from automatic monitors.
8. Apply research findings to help minimize the environmental impacts of pollution, waterborne diseases, erosion, and sedimentation.
9. Measure and graph phenomena such as lake levels, stream flows, and changes in water volumes.
10. Investigate complaints or conflicts related to the alteration of public waters, gathering information, recommending alternatives, informing participants of progress, and preparing draft orders.

## *Skills Required*

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1. Science: Using scientific rules and methods to solve problems.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
4. Mathematics: Using mathematics to solve problems.
5. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
8. Time Management: Managing one's own time and the time of others.
9. Speaking: Talking to others to convey information effectively.
10. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
3. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
5. Written Comprehension: The ability to read and understand information and ideas presented in writing.
6. Written Expression: The ability to communicate information and ideas in writing so others will understand.
7. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.



8. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. Near Vision: The ability to see details at close range (within a few feet of the observer).
10. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).

### *Work Activities*

---

1. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
4. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
5. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
6. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
7. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.
9. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
10. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.

### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Analytical Thinking Job requires analyzing information and using logic to address work-related



issues and problems.

3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
7. Persistence Job requires persistence in the face of obstacles.
8. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

### *Work Values*

---

1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Industrial Engineer

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**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.**

## *Common Tasks*

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1. Analyze statistical data and product specifications to determine standards and establish quality and reliability objectives of finished product.
2. Develop manufacturing methods, labor utilization standards, and cost analysis systems to promote efficient staff and facility utilization.
3. Recommend methods for improving utilization of personnel, material, and utilities.
4. Plan and establish sequence of operations to fabricate and assemble parts or products and to promote efficient utilization.
5. Apply statistical methods and perform mathematical calculations to determine manufacturing processes, staff requirements, and production standards.
6. Coordinate quality control objectives and activities to resolve production problems, maximize product reliability, and minimize cost.
7. Confer with vendors, staff, and management personnel regarding purchases, procedures, product specifications, manufacturing capabilities, and project status.
8. Draft and design layout of equipment, materials, and workspace to illustrate maximum efficiency using drafting tools and computer.
9. Review production schedules, engineering specifications, orders, and related information to obtain knowledge of manufacturing methods, procedures, and activities.
10. Communicate with management and user personnel to develop production and design standards.



### *Skills Required:*

---

1. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
2. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. **Time Management:** Managing one's own time and the time of others.
4. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
5. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. **Mathematics:** Using mathematics to solve problems.
7. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
8. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. **Speaking:** Talking to others to convey information effectively.
10. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.

### *Abilities Required:*

---

1. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
2. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
3. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas to solve a problem.
6. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).





7. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
8. **Speech Clarity:** The ability to speak clearly so others can understand you.
9. **Visualization** The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
10. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.

### ***Work Activities:***

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1. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
2. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
3. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
5. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
6. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
7. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
8. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
9. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
10. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.

### ***Work Styles:***

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1. **Attention to Detail** Job requires being careful about detail and thorough in completing work



tasks.

2. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Initiative Job requires a willingness to take on responsibilities and challenges.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Integrity Job requires being honest and ethical.
7. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
8. Persistence Job requires persistence in the face of obstacles.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.

### *Work Values:*

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1. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Information Technology Project Manager

**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.**



## *Common Tasks*

1. Develop and manage work breakdown structure (WBS) of information technology projects.
2. Develop or update project plans for information technology projects including information such as project objectives, technologies, systems, information specifications, schedules, funding, and staffing.
3. Manage project execution to ensure adherence to budget, schedule, and scope.
4. Prepare project status reports by collecting, analyzing, and summarizing information and trends.
5. Assign duties, responsibilities, and spans of authority to project personnel.
6. Coordinate recruitment or selection of project personnel.
7. Develop and manage annual budgets for information technology projects.
8. Develop implementation plans that include analyses such as cost-benefit or return on investment (ROI).
9. Direct or coordinate activities of project personnel.
10. Establish and execute a project communication plan.
11. Identify need for initial or supplemental project resources.
12. Identify, review, or select vendors or consultants to meet project needs.
13. Initiate, review, or approve modifications to project plans.



14. Monitor or track project milestones and deliverables.
15. Negotiate with project stakeholders or suppliers to obtain resources or materials.
16. Schedule and facilitate meetings related to information technology projects.
17. Assess current or future customer needs and priorities through communicating directly with customers, conducting surveys, or other methods.
18. Confer with project personnel to identify and resolve problems.
19. Monitor the performance of project team members, providing and documenting performance feedback.
20. Perform risk assessments to develop response strategies.
21. Submit project deliverables, ensuring adherence to quality standards.

# Insurance Appraiser, Auto Damage

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**Appraise automobile or other vehicle damage to determine cost of repair for insurance claim settlement and seek agreement with automotive repair shop on cost of repair. Prepare insurance forms to indicate repair cost or cost estimates and recommendations.**

## *Common Tasks*

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1. Estimate parts and labor to repair damage, using standard automotive labor and parts cost manuals and knowledge of automotive repair.
2. Review repair cost estimates with automobile repair shop to secure agreement on cost of repairs.
3. Examine damaged vehicle to determine extent of structural, body, mechanical, electrical, or interior damage.
4. Evaluate practicality of repair as opposed to payment of market value of vehicle before accident.
5. Determine salvage value on total-loss vehicle.
6. Prepare insurance forms to indicate repair cost estimates and recommendations.
7. Arrange to have damage appraised by another appraiser to resolve disagreement with shop on repair cost.

## *Skills Required*

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1. Time Management: Managing one's own time and the time of others.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related



documents.

4. Negotiation: Bringing others together and trying to reconcile differences.
5. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
6. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. Speaking: Talking to others to convey information effectively.
8. Service Orientation: Actively looking for ways to help people.
9. Mathematics: Using mathematics to solve problems.
10. Persuasion: Persuading others to change their minds or behavior.

### *Abilities Required*

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Written Expression: The ability to communicate information and ideas in writing so others will understand.
5. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Speech Clarity: The ability to speak clearly so others can understand you.
8. Speech Recognition: The ability to identify and understand the speech of another person.
9. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
10. Near Vision: The ability to see details at close range (within a few feet of the observer).

### *Work Activities*

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1. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
5. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
6. **Resolving Conflicts and Negotiating with Others:** Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.
7. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
8. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
9. **Inspecting Equipment, Structures, or Material:** Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
10. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.

### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
3. **Self-Control** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
4. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
5. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.



6. Integrity Job requires being honest and ethical.
7. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
8. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Initiative Job requires a willingness to take on responsibilities and challenges.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.



# Insurance Underwriter

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**Review individual applications for insurance to evaluate degree of risk involved and determine acceptance of applications.**

## *Common Tasks*

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1. Decrease value of policy when risk is substandard and specify applicable endorsements or apply rating to ensure safe profitable distribution of risks, using reference materials.
2. Decline excessive risks.
3. Write to field representatives, medical personnel, and others to obtain further information, quote rates, or explain company underwriting policies.
4. Review company records to determine amount of insurance in force on single risk or group of closely related risks.
5. Examine documents to determine degree of risk from such factors as applicant financial standing and value and condition of property.
6. Authorize reinsurance of policy when risk is high.
7. Evaluate possibility of losses due to catastrophe or excessive insurance.

## *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. **Reading Comprehension:** Understanding written sentences and paragraphs in work related



documents.

4. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
5. Speaking: Talking to others to convey information effectively.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. Time Management: Managing one's own time and the time of others.
9. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
10. Service Orientation: Actively looking for ways to help people.

### *Abilities Required*

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1. Written Comprehension: The ability to read and understand information and ideas presented in writing.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
5. Written Expression: The ability to communicate information and ideas in writing so others will understand.
6. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
7. Speech Clarity: The ability to speak clearly so others can understand you.
8. Near Vision: The ability to see details at close range (within a few feet of the observer).
9. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
10. Speech Recognition: The ability to identify and understand the speech of another person.



### *Work Activities*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
3. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
4. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
7. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
8. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
10. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.

### *Work Styles*

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1. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
2. **Integrity Job** requires being honest and ethical.
3. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.
4. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.
5. **Self-Control Job** requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.



6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Initiative Job requires a willingness to take on responsibilities and challenges.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.

# Intelligence Analyst

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**Gather, analyze, and evaluate information from a variety of sources, such as law enforcement databases, surveillance, intelligence networks and geographic information systems. Use data to anticipate and prevent organized crime activities, such as terrorism.**

## *Common Tasks*

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1. Predict future gang, organized crime, or terrorist activity, using analyses of intelligence data.
2. Study activities relating to narcotics, money laundering, gangs, auto theft rings, terrorism, or other national security threats.
3. Design, use, or maintain databases and software applications, such as geographic information systems (GIS) mapping and artificial intelligence tools.
4. Establish criminal profiles to aid in connecting criminal organizations with their members.
5. Evaluate records of communications, such as telephone calls, to plot activity and determine the size and location of criminal groups and members.
6. Gather and evaluate information, using tools such as aerial photographs, radar equipment, or sensitive radio equipment.
7. Gather intelligence information by field observation, confidential information sources, or public records.
8. Gather, analyze, correlate, or evaluate information from a variety of resources, such as law enforcement databases.



9. Link or chart suspects to criminal organizations or events to determine activities and interrelationships.
10. Operate cameras, radios, or other surveillance equipment to intercept communications or document activities.
11. Prepare comprehensive written reports, presentations, maps, or charts based on research, collection, and analysis of intelligence data.
12. Prepare plans to intercept foreign communications transmissions.
13. Study the assets of criminal suspects to determine the flow of money from or to targeted groups.
14. Validate known intelligence with data from other sources.
15. Collaborate with representatives from other government and intelligence organizations to share information or coordinate intelligence activities.
16. Develop defense plans or tactics, using intelligence and other information.
17. Interview, interrogate, or interact with witnesses or crime suspects to collect human intelligence.
18. Study communication code languages or foreign languages to translate intelligence.



## Interior Designer

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**Plan, design, and furnish interiors of residential, commercial, or industrial buildings. Formulate design which is practical, aesthetic, and conducive to intended purposes, such as raising productivity, selling merchandise, or improving life style. May specialize in a particular field, style, or phase of interior design.**

### *Common Tasks*

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1. Confer with client to determine factors affecting planning interior environments, such as budget, architectural preferences, and purpose and function.
2. Advise client on interior design factors such as space planning, layout and utilization of furnishings or equipment, and color coordination.
3. Coordinate with other professionals, such as contractors, architects, engineers, and plumbers, to ensure job success.
4. Review and detail shop drawings for construction plans.
5. Estimate material requirements and costs, and present design to client for approval.
6. Subcontract fabrication, installation, and arrangement of carpeting, fixtures, accessories, draperies, paint and wall coverings, art work, furniture, and related items.
7. Formulate environmental plan to be practical, esthetic, and conducive to intended purposes, such as raising productivity or selling merchandise.
8. Select or design, and purchase furnishings, art works, and accessories.
9. Render design ideas in form of paste-ups or drawings.
10. Use computer-aided drafting (CAD) and related software to produce construction documents.

### *Skills Required:*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at



inappropriate times.

2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Management of Financial Resources: Determining how money will be spent to get the work done, and accounting for these expenditures.
4. Speaking: Talking to others to convey information effectively.
5. Persuasion: Persuading others to change their minds or behavior.
6. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
7. Time Management: Managing one's own time and the time of others.
8. Mathematics: Using mathematics to solve problems.
9. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
10. Installation Installing equipment, machines, wiring, or programs to meet specifications.

### ***Abilities Required:***

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Visualization The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
5. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
6. Near Vision: The ability to see details at close range (within a few feet of the observer).
7. Speech Clarity: The ability to speak clearly so others can understand you.
8. Written Comprehension: The ability to read and understand information and ideas presented in writing.
9. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.





10. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

### *Work Activities:*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
3. **Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment:** Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
4. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
5. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
6. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
7. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
8. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. **Estimating the Quantifiable Characteristics of Products, Events, or Information:** Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
10. **Coordinating the Work and Activities of Others** Getting members of a group to work together to accomplish tasks.

### *Work Styles:*

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1. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
2. **Innovation Job** requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.



3. Integrity Job requires being honest and ethical.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

### *Work Values:*

---

1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

# Interpreter and Translator

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**Translate or interpret written, oral, or sign language text into another language for others.**

## *Common Tasks*

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1. Follow ethical codes that protect the confidentiality of information.
2. Identify and resolve conflicts related to the meanings of words, concepts, practices, or behaviors.
3. Translate messages simultaneously or consecutively into specified languages, orally or by using hand signs, maintaining message content, context, and style as much as possible.
4. Proofread, edit, and revise translated materials.
5. Check translations of technical terms and terminology to ensure that they are accurate and remain consistent throughout translation revisions.
6. Read written materials, such as legal documents, scientific works, or news reports, and rewrite material into specified languages.
7. Refer to reference materials, such as dictionaries, lexicons, encyclopedias, and computerized terminology banks, as needed to ensure translation accuracy.
8. Compile terminology and information to be used in translations, including technical terms such as those for legal or medical material.
9. Adapt translations to students' cognitive and grade levels, collaborating with educational team members as necessary.
10. Listen to speakers' statements to determine meanings and to prepare translations, using electronic listening systems as necessary.

## *Skills Required*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Speaking: Talking to others to convey information effectively.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
5. Coordination: Adjusting actions in relation to others' actions.
6. Time Management: Managing one's own time and the time of others.
7. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
9. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
10. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.

### *Abilities Required*

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1. Speech Recognition: The ability to identify and understand the speech of another person.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
5. Speech Clarity: The ability to speak clearly so others can understand you.
6. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
7. Written Expression: The ability to communicate information and ideas in writing so others will understand.



8. **Auditory Attention:** The ability to focus on a single source of sound in the presence of other distracting sounds.
9. **Hearing Sensitivity** The ability to detect or tell the differences between sounds that vary in pitch and loudness.
10. **Near Vision:** The ability to see details at close range (within a few feet of the observer).

### *Work Activities*

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1. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
2. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
3. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
4. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
5. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
6. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
7. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
9. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
10. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.

### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Integrity** Job requires being honest and ethical.



3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
7. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
9. Initiative Job requires a willingness to take on responsibilities and challenges.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

---

1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Judge, Magistrate Judge, and Magistrate

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**Arbitrate, advise, adjudicate, or administer justice in a court of law. May sentence defendant in criminal cases according to government statutes. May determine liability of defendant in civil cases. May issue marriage licenses and perform wedding ceremonies.**

## *Common Tasks*

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1. Instruct juries on applicable laws, direct juries to deduce the facts from the evidence presented, and hear their verdicts.
2. Sentence defendants in criminal cases, on conviction by jury, according to applicable government statutes.
3. Rule on admissibility of evidence and methods of conducting testimony.
4. Preside over hearings and listen to allegations made by plaintiffs to determine whether the evidence supports the charges.
5. Read documents on pleadings and motions to ascertain facts and issues.
6. Interpret and enforce rules of procedure or establish new rules in situations where there are no procedures already established by law.
7. Monitor proceedings to ensure that all applicable rules and procedures are followed.
8. Advise attorneys, juries, litigants, and court personnel regarding conduct, issues, and proceedings.
9. Research legal issues and write opinions on the issues.
10. Conduct preliminary hearings to decide issues such as whether there is reasonable and probable cause to hold defendants in felony cases.

## *Skills Required*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Speaking: Talking to others to convey information effectively.
6. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
7. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
8. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
9. Time Management: Managing one's own time and the time of others.
10. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

### *Abilities Required*

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1. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. Written Comprehension: The ability to read and understand information and ideas presented in writing.
6. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.





7. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
8. **Speech Clarity:** The ability to speak clearly so others can understand you.
9. **Speech Recognition:** The ability to identify and understand the speech of another person.
10. **Near Vision:** The ability to see details at close range (within a few feet of the observer).

### *Work Activities*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
3. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
4. **Judging the Qualities of Things, Services, or People:** Assessing the value, importance, or quality of things or people.
5. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
6. **Resolving Conflicts and Negotiating with Others:** Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.
7. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
9. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
10. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.

### *Work Styles*

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1. **Integrity Job** requires being honest and ethical.
2. **Attention to Detail Job** requires being careful about detail and thorough in completing work



tasks.

3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
5. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
6. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
7. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

## Kindergarten Teacher

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**Teach elemental natural and social science, personal hygiene, music, art, and literature to children from 4 to 6 years old. Promote physical, mental, and social development. May be required to hold State certification.**



### Common Tasks

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1. Teach basic skills such as color, shape, number and letter recognition, personal hygiene, and social skills.
2. Establish and enforce rules for behavior, and policies and procedures to maintain order among students.
3. Observe and evaluate children's performance, behavior, social development, and physical health.
4. Instruct students individually and in groups, adapting teaching methods to meet students' varying needs and interests.
5. Read books to entire classes or to small groups.
6. Demonstrate activities to children.
7. Provide a variety of materials and resources for children to explore, manipulate, and use, both in learning activities and in imaginative play.
8. Plan and conduct activities for a balanced program of instruction, demonstration, and work time that provides students with opportunities to observe, question, and investigate.
9. Confer with parents or guardians, other teachers, counselors, and administrators to resolve students' behavioral and academic problems.
10. Prepare children for later grades by encouraging them to explore learning opportunities and to persevere with challenging tasks.

### Skills Required:

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1. Instructing: Teaching others how to do something.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
4. Speaking: Talking to others to convey information effectively.
5. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
6. Active Listening: Giving full attention to what other people are saying, taking time to



understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

7. Time Management: Managing one's own time and the time of others.
8. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
9. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
10. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.

### ***Abilities Required:***

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Speech Recognition: The ability to identify and understand the speech of another person.
3. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. Speech Clarity: The ability to speak clearly so others can understand you.
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
6. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
7. Written Expression: The ability to communicate information and ideas in writing so others will understand.
8. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
9. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
10. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### ***Work Activities:***

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1. Training and Teaching Others: Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.



2. **Developing Objectives and Strategies:** Establishing long-range objectives and specifying the strategies and actions to achieve them.
3. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
4. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
5. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
6. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
7. **Coaching and Developing Others:** Identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills.
8. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
10. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.

### *Work Styles:*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Concern for Others** Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
3. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. **Integrity** Job requires being honest and ethical.
5. **Self-Control** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
6. **Social Orientation** Job requires preferring to work with others rather than alone, and being personally connected with others on the job.
7. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to



considerable variety in the workplace.

8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Landscape Architect



**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.**

## *Common Tasks*

1. Confer with clients, engineering personnel, and architects on overall program.
2. Prepare site plans, specifications, and cost estimates for land development, coordinating arrangement of existing and proposed land features and structures.
3. Seek new work opportunities through marketing, writing proposals or giving presentations.
4. Inspect landscape work to ensure compliance with specifications, approve quality of materials and work, and advise client and construction personnel.
5. Prepare graphic representations and drawings of proposed plans and designs.
6. Compile and analyze data on conditions such as location, drainage, and location of structures for environmental reports and landscaping plans.

## *Skills Required:*

1. **Time Management:** Managing one's own time and the time of others.
2. **Coordination:** Adjusting actions in relation to others' actions.
3. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. **Reading Comprehension:** Understanding written sentences and paragraphs in work related



documents.

5. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
6. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
9. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
10. Mathematics: Using mathematics to solve problems.

### ***Abilities Required:***

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Speech Clarity: The ability to speak clearly so others can understand you.
5. Visualization The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
6. Written Comprehension: The ability to read and understand information and ideas presented in writing.
7. Written Expression: The ability to communicate information and ideas in writing so others will understand.
8. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
9. Near Vision: The ability to see details at close range (within a few feet of the observer).
10. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.





### *Work Activities:*

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1. **Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment:** Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
2. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
3. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
4. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
5. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
6. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
7. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
8. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
9. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
10. **Coordinating the Work and Activities of Others** Getting members of a group to work together to accomplish tasks.

### *Work Styles:*

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1. **Integrity Job** requires being honest and ethical.
2. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
3. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.



4. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
8. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values:*

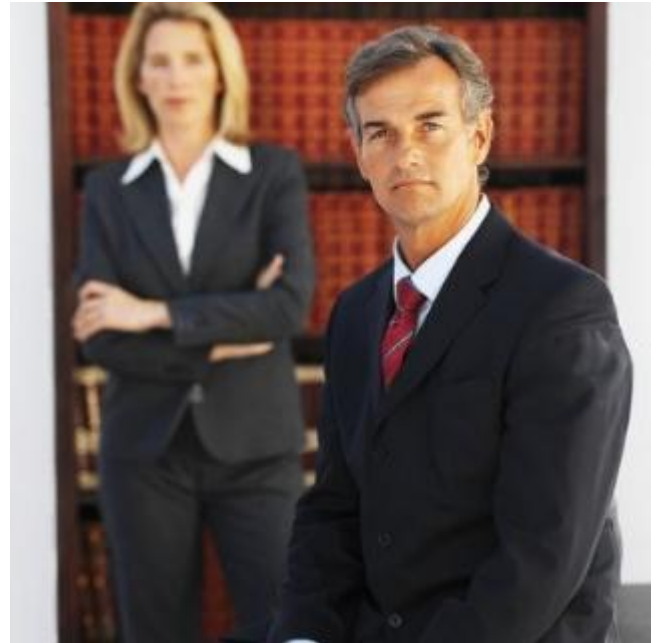
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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Lawyer

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**Represent clients in criminal and civil litigation and other legal proceedings, draw up legal documents, and manage or advise clients on legal transactions. May specialize in a single area or may practice broadly in many areas of law.**



## *Tasks*

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1. Represent clients in court or before government agencies.
2. Present evidence to defend clients or prosecute defendants in criminal or civil litigation.
3. Select jurors, argue motions, meet with judges and question witnesses during the course of a trial.
4. Study Constitution, statutes, decisions, regulations, and ordinances of quasi-judicial bodies to determine ramifications for cases.
5. Interpret laws, rulings and regulations for individuals and businesses.
6. Present and summarize cases to judges and juries.
7. Prepare legal briefs and opinions, and file appeals in state and federal courts of appeal.
8. Analyze the probable outcomes of cases, using knowledge of legal precedents.
9. Examine legal data to determine advisability of defending or prosecuting lawsuit.
10. Evaluate findings and develop strategies and arguments in preparation for presentation of cases.

## *Skills Required:*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
3. Writing: Communicating effectively in writing as appropriate for the needs of the audience.



4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. Persuasion: Persuading others to change their minds or behavior.
7. Time Management: Managing one's own time and the time of others.
8. Negotiation: Bringing others together and trying to reconcile differences.
9. Speaking: Talking to others to convey information effectively.
10. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.

### ***Abilities Required:***

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Speech Clarity: The ability to speak clearly so others can understand you.
4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
5. Written Expression: The ability to communicate information and ideas in writing so others will understand.
6. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
7. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
9. Speech Recognition: The ability to identify and understand the speech of another person.
10. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).



### *Work Activities:*

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1. **Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.**
2. **Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.**
3. **Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.**
4. **Resolving Conflicts and Negotiating with Others: Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.**
5. **Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.**
6. **Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.**
7. **Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.**
8. **Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.**
9. **Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.**
10. **Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.**

### *Work Styles:*

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1. **Integrity Job requires being honest and ethical.**
2. **Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.**
3. **Attention to Detail Job requires being careful about detail and thorough in completing work tasks.**
4. **Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.**



5. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
6. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
7. Persistence Job requires persistence in the face of obstacles.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

### *Work Values:*

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1. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.



## Legal Secretary

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**Perform secretarial duties utilizing legal terminology, procedures, and documents. Prepare legal papers and correspondence, such as summonses, complaints, motions, and subpoenas. May also assist with legal research.**

### *Common Tasks*

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1. Prepare and process legal documents and papers, such as summonses, subpoenas, complaints, appeals, motions, and pretrial agreements.
2. Mail, fax, or arrange for delivery of legal correspondence to clients, witnesses, and court officials.
3. Receive and place telephone calls.
4. Schedule and make appointments.
5. Make photocopies of correspondence, documents, and other printed matter.
6. Organize and maintain law libraries, documents, and case files.
7. Assist attorneys in collecting information such as employment, medical, and other records.
8. Attend legal meetings, such as client interviews, hearings, or depositions, and take notes.
9. Draft and type office memos.
10. Review legal publications and perform database searches to identify laws and court decisions relevant to pending cases.

### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Active Listening: Giving full attention to what other people are saying, taking time to



understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

3. Time Management: Managing one's own time and the time of others.
4. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
5. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
6. Speaking: Talking to others to convey information effectively.
7. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
8. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. Coordination: Adjusting actions in relation to others' actions.
10. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Speech Recognition: The ability to identify and understand the speech of another person.
4. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
5. Speech Clarity: The ability to speak clearly so others can understand you.
6. Written Comprehension: The ability to read and understand information and ideas presented in writing.
7. Near Vision: The ability to see details at close range (within a few feet of the observer).
8. Written Expression: The ability to communicate information and ideas in writing so others will understand.
9. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.





10. Selective Attention: The ability to concentrate on a task over a period of time without being distracted.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Performing Administrative Activities: Performing day-to-day administrative tasks such as maintaining information files and processing paperwork.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
7. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
8. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
9. Monitoring and Controlling Resources Monitoring and controlling resources and overseeing the spending of money.
10. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Integrity Job requires being honest and ethical.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.



4. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
5. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
6. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Legislator

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**Develop laws and statutes at the Federal, State, or local level.**

## *Common Tasks*

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1. Analyze and understand the local and national implications of proposed legislation.
2. Appoint nominees to leadership posts, or approve such appointments.
3. Confer with colleagues to formulate positions and strategies pertaining to pending issues.
4. Debate the merits of proposals and bill amendments during floor sessions, following the appropriate rules of procedure.
5. Develop expertise in subject matters related to committee assignments.
6. Hear testimony from constituents, representatives of interest groups, board and commission members, and others with an interest in bills or issues under consideration.
7. Keep abreast of the issues affecting constituents by making personal visits and phone calls, reading local newspapers, and viewing or listening to local broadcasts.
8. Maintain knowledge of relevant national and international current events.
9. Make decisions that balance the perspectives of private citizens, public officials, and party leaders.
10. Negotiate with colleagues or members of other political parties in order to reconcile differing



interests, and to create policies and agreements.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Librarian

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**Administer libraries and perform related library services. Work in a variety of settings, including public libraries, schools, colleges and universities, museums, corporations, government agencies, law firms, non-profit organizations, and healthcare providers. Tasks may include selecting, acquiring, cataloguing, classifying, circulating, and maintaining library materials; and furnishing reference, bibliographical, and readers' advisory services. May perform in-depth, strategic research, and synthesize, analyze, edit, and filter information. May set up or work with databases and information systems to catalogue and access information.**

## *Common Tasks*

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1. Analyze patrons' requests to determine needed information, and assist in furnishing or locating that information.
2. Search standard reference materials, including online sources and the Internet, to answer patrons' reference questions.
3. Teach library patrons basic computer skills, such as searching computerized databases.
4. Plan and teach classes on topics such as information literacy, library instruction, and technology use.
5. Review and evaluate materials, using book reviews, catalogs, faculty recommendations, and current holdings, to select and order print, audiovisual, and electronic resources.
6. Locate unusual or unique information in response to specific requests.
7. Explain use of library facilities, resources, equipment, and services, and provide information about library policies.



8. Plan and deliver client-centered programs and services such as special services for corporate clients, storytelling for children, newsletters, or programs for special groups.
9. Respond to customer complaints, taking action as necessary.
10. Develop library policies and procedures.

### *Skills Required:*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
4. Instructing: Teaching others how to do something.
5. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
6. Speaking: Talking to others to convey information effectively.
7. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. Service Orientation: Actively looking for ways to help people.
9. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
10. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.



### *Abilities Required:*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Written Comprehension: The ability to read and understand information and ideas presented in writing.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Written Expression: The ability to communicate information and ideas in writing so others will understand.
5. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
6. Near Vision: The ability to see details at close range (within a few feet of the observer).
7. Speech Clarity: The ability to speak clearly so others can understand you.
8. Speech Recognition: The ability to identify and understand the speech of another person.
9. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

### *Work Activities*

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
5. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. Interpreting the Meaning of Information for Others: Translating or explaining what



information means and how it can be used.

7. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
8. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
9. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.

### *Work Styles*

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1. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
2. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Integrity Job requires being honest and ethical.
5. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
6. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
7. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
8. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
9. Initiative Job requires a willingness to take on responsibilities and challenges.
10. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.





2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Library Technician

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**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; remove or repair damaged books; register patrons; check materials in and out of the circulation process.**

**.Replace materials in shelving area (stacks) or files. Includes bookmobile drivers who operate bookmobiles or light trucks that pull trailers to specific locations on a predetermined schedule and assist with providing services in mobile libraries.**

## *Common Tasks*

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1. Help patrons find and use library resources, such as reference materials, audiovisual equipment, computers and other electronic resources, and provide technical assistance when needed.
2. Answer routine telephone or in-person reference inquiries, referring patrons to librarians for further assistance, when necessary.
3. Process print and non-print library materials to prepare them for inclusion in library collections.
4. Reserve, circulate, renew, and discharge books and other materials.
5. Catalogue and sort books and other print and non-print materials according to procedure, and return them to shelves, files, or other designated storage areas.
6. Provide assistance to teachers and students by locating materials and helping to complete special projects.



7. Organize and maintain periodicals and reference materials.
8. Maintain and troubleshoot problems with library equipment including computers, photocopiers, and audiovisual equipment.
9. Deliver and retrieve items throughout the library by hand or using pushcart.
10. Train other staff, volunteers or student assistants, and schedule and supervise their work.

### *Skills Required*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Service Orientation: Actively looking for ways to help people.
4. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
5. Speaking: Talking to others to convey information effectively.
6. Instructing: Teaching others how to do something.
7. Time Management: Managing one's own time and the time of others.
8. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
9. Coordination: Adjusting actions in relation to others' actions.
10. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

### *Abilities Required*

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1. Speech Recognition: The ability to identify and understand the speech of another person.
2. Written Comprehension: The ability to read and understand information and ideas presented in writing.
3. Near Vision: The ability to see details at close range (within a few feet of the observer).
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.



5. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
6. Speech Clarity: The ability to speak clearly so others can understand you.
7. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
8. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.

### *Work Activities*

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1. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
2. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
3. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
4. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
5. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. Handling and Moving Objects Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
7. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
8. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
9. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.



2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
4. Integrity Job requires being honest and ethical.
5. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Persistence Job requires persistence in the face of obstacles.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions

# Licensing Examiner and Inspector

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**Examine, evaluate, and investigate eligibility for, conformity with, or liability under licenses or permits.**

## *Common Tasks*

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1. Issue licenses to individuals meeting standards.
2. Evaluate applications, records, and documents in order to gather information about eligibility or liability issues.
3. Administer oral, written, road, or flight tests to license applicants.
4. Score tests and observe equipment operation and control in order to rate ability of applicants.
5. Advise licensees and other individuals or groups concerning licensing, permit, or passport regulations.
6. Warn violators of infractions or penalties.
7. Prepare reports of activities, evaluations, recommendations, and decisions.
8. Prepare correspondence to inform concerned parties of licensing decisions and of appeals processes.
9. Confer with and interview officials, technical or professional specialists, and applicants, in order to obtain information or to clarify facts relevant to licensing decisions.
10. Report law or regulation violations to appropriate boards and agencies.



### *Skills Required*

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1. Speaking: Talking to others to convey information effectively.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Instructing: Teaching others how to do something.
5. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
6. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. Time Management: Managing one's own time and the time of others.
8. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
9. Mathematics: Using mathematics to solve problems.
10. Writing: Communicating effectively in writing as appropriate for the needs of the audience.

### *Abilities Required*

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Speech Clarity: The ability to speak clearly so others can understand you.
4. Speech Recognition: The ability to identify and understand the speech of another person.
5. Written Comprehension: The ability to read and understand information and ideas presented in writing.
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Near Vision: The ability to see details at close range (within a few feet of the observer).



8. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
9. **Far Vision:** The ability to see details at a distance.
10. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

### *Work Activities*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
3. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
5. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
7. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
8. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
9. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
10. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.

### *Work Styles*

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1. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
2. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling





obligations.

3. Integrity Job requires being honest and ethical.
4. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
7. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
10. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.

### *Work Values*

---

1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.

# Loan Officer

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**Evaluate, authorize, or recommend approval of commercial, real estate, or credit loans. Advise borrowers on financial status and methods of payments. Includes mortgage loan officers and agents, collection analysts, loan servicing officers, and loan underwriters.**



## *Common Tasks*

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1. Approve loans within specified limits, and refer loan applications outside those limits to management for approval.
2. Meet with applicants to obtain information for loan applications and to answer questions about the process.
3. Analyze applicants' financial status, credit, and property evaluations to determine feasibility of granting loans.
4. Explain to customers the different types of loans and credit options that are available, as well as the terms of those services.
5. Obtain and compile copies of loan applicants' credit histories, corporate financial statements, and other financial information.
6. Review and update credit and loan files.
7. Review loan agreements to ensure that they are complete and accurate according to policy.
8. Compute payment schedules.
9. Stay abreast of new types of loans and other financial services and products to better meet customers' needs.
10. Submit applications to credit analysts for verification and recommendation.

## *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at



inappropriate times.

2. Time Management: Managing one's own time and the time of others.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Persuasion: Persuading others to change their minds or behavior.
5. Speaking: Talking to others to convey information effectively.
6. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
7. Coordination: Adjusting actions in relation to others' actions.
8. Service Orientation: Actively looking for ways to help people.
9. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
10. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Speech Clarity: The ability to speak clearly so others can understand you.
4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
5. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
6. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
7. Speech Recognition: The ability to identify and understand the speech of another person.
8. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
9. Near Vision: The ability to see details at close range (within a few feet of the observer).



10. Written Expression: The ability to communicate information and ideas in writing so others will understand.

### *Work Activities*

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1. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
2. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
3. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
4. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
5. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
6. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
7. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
8. Judging the Qualities of Things, Services, or People Assessing the value, importance, or quality of things or people.
9. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
10. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.

### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Social Orientation Job requires preferring to work with others rather than alone, and being personally connected with others on the job.



3. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
6. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
7. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
9. Initiative Job requires a willingness to take on responsibilities and challenges.
10. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.

# Locomotive Engineer

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**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**

## *Common Tasks*

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1. Monitor gauges and meters that measure speed, amperage, battery charge, and air pressure in brake lines and in main reservoirs.
2. Observe tracks to detect obstructions.
3. Interpret train orders, signals, and railroad rules and regulations that govern the operation of locomotives.
4. Receive starting signals from conductors, then move controls such as throttles and air brakes to drive electric, diesel-electric, steam, or gas-turbine-electric locomotives.
5. Confer with conductors or traffic control center personnel via radiophones to issue or receive information concerning stops, delays, or oncoming trains.
6. Operate locomotives to transport freight or passengers between stations, and to assemble and disassemble trains within rail yards.
7. Respond to emergency conditions or breakdowns, following applicable safety procedures and rules.
8. Check to ensure that brake examination tests are conducted at shunting stations.
9. Call out train signals to assistants in order to verify meanings.
10. Inspect locomotives to verify adequate fuel, sand, water, and other supplies before each run, and to check for mechanical problems.



### *Skills Required:*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Operation Monitoring:** Watching gauges, dials, or other indicators to make sure a machine is working properly.
3. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
4. **Operation and Control:** Controlling operations of equipment or systems.
5. **Instructing:** Teaching others how to do something.
6. **Speaking:** Talking to others to convey information effectively.
7. **Coordination:** Adjusting actions in relation to others' actions.
8. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
9. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
10. **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.

### *Abilities Required:*

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1. **Control Precision:** The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
2. **Far Vision:** The ability to see details at a distance.
3. **Depth Perception** The ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object.
4. **Response Orientation** The ability to choose quickly between two or more movements in response to two or more different signals (lights, sounds, pictures). It includes the speed with which the correct response is started with the hand, foot, or other body part.
5. **Selective Attention:** The ability to concentrate on a task over a period of time without being distracted.
6. **Manual Dexterity** The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.



7. Near Vision: The ability to see details at close range (within a few feet of the observer).
8. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
9. Reaction Time The ability to quickly respond (with the hand, finger, or foot) to a signal (sound, light, picture) when it appears.
10. Multilimb Coordination: The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.

### ***Work Activities:***

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1. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Inspecting Equipment, Structures, or Material: Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
4. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
5. Controlling Machines and Processes Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
6. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
7. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. Operating Vehicles, Mechanized Devices, or Equipment Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.
9. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
10. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.

### ***Work Styles:***

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1. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
2. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Integrity Job requires being honest and ethical.
7. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Initiative Job requires a willingness to take on responsibilities and challenges.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values:*

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1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

# Logistic Analyst

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**Analyze product delivery or supply chain processes to identify or recommend changes. May manage route activity including invoicing, electronic bills, and shipment tracing.**



## *Common Tasks*

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1. Analyze logistics data, using methods such as data mining, data modeling, and cost or benefit analysis.
2. Apply analytic methods and tools to understand, predict, or control logistics operations and processes.
3. Interpret data on logistics elements, such as availability, maintainability, reliability, supply chain management, strategic sourcing and distribution, supplier management, and transportation.
4. Compute reporting metrics, such as on-time delivery rates, order fulfillment rates, and inventory turns.
5. Confer with logistics management teams to determine ways to optimize service levels, maintain supply-chain efficiency, and minimize cost.
6. Develop and maintain models for logistics uses, such as cost estimating and demand forecasting.
7. Maintain databases of logistics information.
8. Maintain logistics records in accordance with corporate policies.
9. Manage systems to ensure that pricing structures adequately reflect logistics costing.
10. Monitor inventory transactions at warehouse facilities to assess receiving, storage, shipping, or inventory integrity.

*Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Logistic Engineer

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**Design and analyze operational solutions for projects such as transportation optimization, network modeling, process and methods analysis, cost containment, capacity enhancement, routing and shipment optimization, and information management.**

## *Common Tasks*

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1. Apply logistics modeling techniques to address issues such as operational process improvement and facility design or layout.
2. Evaluate effectiveness of current or future logistical processes.
3. Provide facility and capacity planning analyses for distribution and transportation functions in logistics.
4. Provide logistics technology and information for effective and efficient support of product, equipment, or system manufacturing or service.
5. Analyze and interpret logistics data involving customer service, forecasting, procurement, manufacturing, inventory, transportation, or warehousing.
6. Conduct logistics studies and analyses, such as time studies, zero-base analyses, rate analyses, network analyses, flow-path analyses, and supply chain analyses.
7. Determine logistics support requirements, such as facility details, staffing needs, and safety or maintenance plans.
8. Determine feasibility of designing new facilities or modifying existing facilities, based on such factors as cost, available space, schedule, technical requirements, and ergonomics.
9. Develop and maintain cost estimates, forecasts, or cost models.
10. Develop metrics, internal analysis tools, or key performance indicators for business units within logistics.



### *Work Values*

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1. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. **Independence** Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. **Recognition** Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

### *Wages & Employment Trends*

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#### **National**

- Median wages data collected from Logisticians.
- Employment data collected from Logisticians.
- Industry data collected from Logisticians.

#### **Median wages (2009)**

\$32.67 hourly, \$67,960 annual

#### **Employment (2008)**

100,000 employees

#### **Projected growth (2008-2018)**

Much faster than average (20% or higher)

#### **Projected job openings (2008-2018)**

41,900

#### **Top industries (2008)**

Government, Manufacturing

# Logistician

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**Analyze and coordinate the 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.**

## *Common Tasks*

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1. Maintain and develop positive business relationships with a customer's key personnel involved in or directly relevant to a logistics activity.
2. Develop an understanding of customers' needs and take actions to ensure that such needs are met.
3. Direct availability and allocation of materials, supplies, and finished products.
4. Collaborate with other departments as necessary to meet customer requirements, to take advantage of sales opportunities or, in the case of shortages, to minimize negative impacts on a business.
5. Protect and control proprietary materials.
6. Review logistics performance with customers against targets, benchmarks and service agreements.
7. Develop and implement technical project management tools such as plans, schedules, and responsibility and compliance matrices.
8. Direct team activities, establishing task priorities, scheduling and tracking work assignments, providing guidance, and ensuring the availability of resources.
9. Report project plans, progress, and results.
10. Direct and support the compilation and analysis of technical source data necessary for



product development.

### *Skills Required*

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1. **Coordination:** Adjusting actions in relation to others' actions.
2. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
5. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
6. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. **Service Orientation:** Actively looking for ways to help people.
8. **Time Management:** Managing one's own time and the time of others.
9. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.

### *Abilities Required*

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1. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
2. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
3. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
4. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.



6. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
7. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
8. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
9. **Speech Clarity:** The ability to speak clearly so others can understand you.
10. **Speech Recognition:** The ability to identify and understand the speech of another person.

### *Work Activities*

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1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
3. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. **Judging the Qualities of Things, Services, or People** Assessing the value, importance, or quality of things or people.
5. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
6. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
7. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
8. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
9. **Scheduling Work and Activities:** Scheduling events, programs, and activities, as well as the work of others.
10. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.





### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Persistence Job requires persistence in the face of obstacles.
7. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Machinist

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Set up and operate a variety of machine tools to produce precision parts and instruments. 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, shop mathematics, metal properties, layout, and machining procedures.

## *Common Tasks*

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1. Calculate dimensions and tolerances using knowledge of mathematics and instruments such as micrometers and vernier calipers.
2. Align and secure holding fixtures, cutting tools, attachments, accessories, and materials onto machines.
3. Select the appropriate tools, machines, and materials to be used in preparation of machinery work.
4. Monitor the feed and speed of machines during the machining process.
5. Machine parts to specifications using machine tools such as lathes, milling machines, shapers, or grinders.
6. Set up, adjust, and operate all of the basic machine tools and many specialized or advanced variation tools to perform precision machining operations.
7. Measure, examine, and test completed units to detect defects and ensure conformance to specifications, using precision instruments such as micrometers.
8. Set controls to regulate machining, or enter commands to retrieve, input, or edit computerized machine control media.
9. Position and fasten work pieces.
10. Maintain industrial machines, applying knowledge of mechanics, shop mathematics, metal properties, layout, and machining procedures.



### *Skills Required*

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1. **Operation Monitoring:** Watching gauges, dials, or other indicators to make sure a machine is working properly.
2. **Quality Control Analysis:** Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
3. **Operation and Control:** Controlling operations of equipment or systems.
4. **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.
5. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
6. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
8. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. **Coordination:** Adjusting actions in relation to others' actions.
10. **Equipment Maintenance** Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.

### *Abilities Required*

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1. **Control Precision:** The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
2. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. **Finger Dexterity** The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.
4. **Manual Dexterity** The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
5. **Arm-Hand Steadiness** The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
6. **Multilimb Coordination:** The ability to coordinate two or more limbs (for example, two arms,



two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.

7. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
8. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
9. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
10. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas to solve a problem.

### *Work Activities*

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1. **Controlling Machines and Processes** Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
4. **Inspecting Equipment, Structures, or Material:** Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
5. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. **Handling and Moving Objects** Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
7. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
8. **Performing General Physical Activities:** Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
9. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
10. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Integrity Job requires being honest and ethical.
7. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
9. Persistence Job requires persistence in the face of obstacles.
10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values*

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1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Management Analyst

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**Conduct organizational studies and evaluations, design systems and procedures, conduct work simplifications and measurement studies, and prepare operations and procedures manuals to assist management in operating more efficiently and effectively. Includes program analysts and management consultants.**

## *Common Tasks*

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1. Gather and organize information on problems or procedures.
2. Analyze data gathered and develop solutions or alternative methods of proceeding.
3. Confer with personnel concerned to ensure successful functioning of newly implemented systems or procedures.
4. Develop and implement records management program for filing, protection, and retrieval of records, and assure compliance with program.
5. Review forms and reports and confer with management and users about format, distribution, and purpose, and to identify problems and improvements.
6. Interview personnel and conduct on-site observation to ascertain unit functions, work performed, and methods, equipment, and personnel used.
7. Document findings of study and prepare recommendations for implementation of new systems, procedures, or organizational changes.
8. Prepare manuals and train workers in use of new forms, reports, procedures or equipment, according to organizational policy.



9. Design, evaluate, recommend, and approve changes of forms and reports.
10. Plan study of work problems and procedures, such as organizational change, communications, information flow, integrated production methods, inventory control, or cost analysis.

### ***Skills Required:***

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1. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
2. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
3. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. **Coordination:** Adjusting actions in relation to others' actions.
5. **Time Management:** Managing one's own time and the time of others.
6. **Instructing:** Teaching others how to do something.
7. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
8. **Quality Control Analysis:** Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
9. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
10. **Operation and Control:** Controlling operations of equipment or systems.

### ***Abilities Required:***

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1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
4. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).



5. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
6. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
7. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
8. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. **Speech Clarity:** The ability to speak clearly so others can understand you.
10. **Speech Recognition:** The ability to identify and understand the speech of another person.

### ***Work Activities:***

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
3. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
4. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
5. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
6. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
7. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
8. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
9. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
10. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new





knowledge to your job.

### *Work Styles:*

---

1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.
3. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. **Integrity** Job requires being honest and ethical.
6. **Concern for Others** Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
7. **Leadership** Job requires a willingness to lead, take charge, and offer opinions and direction.
8. **Persistence** Job requires persistence in the face of obstacles.
9. **Analytical Thinking** Job requires analyzing information and using logic to address work-related issues and problems.
10. **Initiative** Job requires a willingness to take on responsibilities and challenges.

### *Work Values:*

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1. **Relationships** Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. **Independence** Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Manufacturing Engineer

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**Apply knowledge of materials and engineering theory and methods to design, integrate, and improve manufacturing systems or related processes. May work with commercial or industrial designers to refine product designs to increase producibility and decrease costs.**

## *Common Tasks*

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1. Identify opportunities or implement changes to improve products or reduce costs using knowledge of fabrication processes, tooling and production equipment, assembly methods, quality control standards, or product design, materials and parts.
2. Determine root causes of failures using statistical methods and recommend changes in designs, tolerances, or processing methods.
3. Provide technical expertise or support related to manufacturing.
4. Incorporate new methods and processes to improve existing operations.
5. Supervise technicians, technologists, analysts, administrative staff, or other engineers.
6. Troubleshoot new and existing product problems involving designs, materials, or processes.
7. Review product designs for manufacturability and completeness.
8. Train production personnel in new or existing methods.
9. Communicate manufacturing capabilities, production schedules, or other information to facilitate production processes.
10. Design, install, or troubleshoot manufacturing equipment.



### *Abilities Required:*

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1. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
2. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas to solve a problem.
3. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
4. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
6. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
8. **Number Facility:** The ability to add, subtract, multiply, or divide quickly and correctly.
9. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
10. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.

### *Work Activities:*

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1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
5. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.



6. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
7. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
9. Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment: Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
10. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.

### *Work Styles:*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Initiative Job requires a willingness to take on responsibilities and challenges.
5. Integrity Job requires being honest and ethical.
6. Persistence Job requires persistence in the face of obstacles.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

### *Work Values:*

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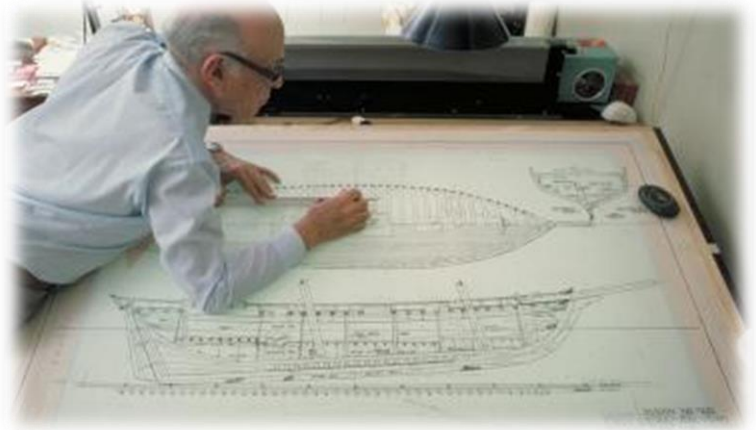


1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Marine Architect

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**Design and oversee construction and repair of marine craft and floating structures such as ships, barges, tugs, dredges, submarines, torpedoes, floats, and buoys. May confer with marine engineers.**



## *Common Tasks*

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1. Design complete hull and superstructure according to specifications and test data, in conformity with standards of safety, efficiency, and economy.
2. Design layout of craft interior, including cargo space, passenger compartments, ladder wells, and elevators.
3. Study design proposals and specifications to establish basic characteristics of craft, such as size, weight, speed, propulsion, displacement, and draft.
4. Confer with marine engineering personnel to establish arrangement of boiler room equipment and propulsion machinery, heating and ventilating systems, refrigeration equipment, piping, and other functional equipment.
5. Evaluate performance of craft during dock and sea trials to determine design changes and conformance with national and international standards.
6. Oversee construction and testing of prototype in model basin and develop sectional and waterline curves of hull to establish center of gravity, ideal hull form, and buoyancy and stability data.

## *Skills Required:*

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1. Mathematics: Using mathematics to solve problems.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of



alternative solutions, conclusions or approaches to problems.

4. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
5. Science: Using scientific rules and methods to solve problems.
6. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
7. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
8. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. Speaking: Talking to others to convey information effectively.
10. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.

### ***Abilities Required:***

---

1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
8. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
9. Near Vision: The ability to see details at close range (within a few feet of the observer).



10. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.

### *Work Activities:*

---

1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
3. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
5. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
6. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
7. Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment: Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
8. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
9. Estimating the Quantifiable Characteristics of Products, Events, or Information: Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
10. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

### *Work Styles:*

---

1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.





3. Integrity Job requires being honest and ethical.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. Persistence Job requires persistence in the face of obstacles.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.

### *Work Values:*

---

1. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Marine Engineer

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**Design, develop, and take responsibility for the installation of ship machinery and related equipment including propulsion machines and power supply systems.**

## *Common Tasks*

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1. Prepare, or direct the preparation of, product or system layouts and detailed drawings and schematics.
2. Inspect marine equipment and machinery to draw up work requests and job specifications.
3. Conduct analytical, environmental, operational, or performance studies to develop designs for products, such as marine engines, equipment, and structures.
4. Design and oversee testing, installation, and repair of marine apparatus and equipment.
5. Prepare plans, estimates, design and construction schedules, and contract specifications, including any special provisions.
6. Investigate and observe tests on machinery and equipment for compliance with standards.
7. Coordinate activities with regulatory bodies to ensure repairs and alterations are at minimum cost, consistent with safety.
8. Conduct environmental, operational or performance tests on marine machinery and equipment.
9. Prepare technical reports for use by engineering, management, or sales personnel.
10. Maintain contact with, and formulate reports for, contractors and clients to ensure completion of work at minimum cost.

## *Skills Required:*

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1. Mathematics: Using mathematics to solve problems.



2. Equipment Selection: Determining the kind of tools and equipment needed to do a job.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
5. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
8. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
9. Speaking: Talking to others to convey information effectively.
10. Technology Design: Generating or adapting equipment and technology to serve user needs.

### ***Abilities Required:***

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1. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
2. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
3. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. Written Comprehension: The ability to read and understand information and ideas presented in writing.
6. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
7. Written Expression: The ability to communicate information and ideas in writing so others will understand.



8. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas to solve a problem.
9. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
10. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.

### *Work Activities:*

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1. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
2. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Inspecting Equipment, Structures, or Material:** Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
5. **Provide Consultation and Advice to Others:** Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.
6. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
7. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
8. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
10. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.

### *Work Styles:*

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1. **Integrity Job** requires being honest and ethical.
2. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.



3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
7. Persistence Job requires persistence in the face of obstacles.
8. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

#### *Work Values:*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.



## Marketing Manager

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**Determine 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.**

### *Common Tasks*

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1. Formulate, direct and coordinate marketing activities and policies to promote products and services, working with advertising and promotion managers.
2. Identify, develop, and evaluate marketing strategy, based on knowledge of establishment objectives, market characteristics, and cost and markup factors.
3. Direct the hiring, training, and performance evaluations of marketing and sales staff and oversee their daily activities.
4. Evaluate the financial aspects of product development, such as budgets, expenditures, research and development appropriations, and return-on-investment and profit-loss projections.
5. Develop pricing strategies, balancing firm objectives and customer satisfaction.
6. Compile lists describing product or service offerings.
7. Initiate market research studies and analyze their findings.
8. Use sales forecasting and strategic planning to ensure the sale and profitability of products, lines, or services, analyzing business developments and monitoring market trends.
9. Coordinate and participate in promotional activities and trade shows, working with developers, advertisers, and production managers, to market products and services.
10. Consult with buying personnel to gain advice regarding the types of products or services expected to be in demand.

### *Skills Required*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. Persuasion: Persuading others to change their minds or behavior.
4. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
5. Speaking: Talking to others to convey information effectively.
6. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
7. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
8. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
9. Coordination: Adjusting actions in relation to others' actions.
10. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.

### ***Abilities Required***

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
5. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
6. Speech Recognition: The ability to identify and understand the speech of another person.
7. Written Expression: The ability to communicate information and ideas in writing so others



will understand.

8. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
9. **Originality:** The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
10. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

### *Work Activities*

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1. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
2. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
5. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
6. **Developing and Building Teams:** Encouraging and building mutual trust, respect, and cooperation among team members.
7. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
8. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
9. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
10. **Developing Objectives and Strategies:** Establishing long-range objectives and specifying the strategies and actions to achieve them.

### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling





obligations.

2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. Integrity Job requires being honest and ethical.
5. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Persistence Job requires persistence in the face of obstacles.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values*

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1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Market Research Analyst

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**Research market conditions in local, regional, or national areas to determine potential sales of a product or service. May gather information on competitors, prices, sales, and methods of marketing and distribution. May use survey results to create a marketing campaign based on regional preferences and buying habits.**



## *Common Tasks*

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1. Prepare reports of findings, illustrating data graphically and translating complex findings into written text.
2. Seek and provide information to help companies determine their position in the marketplace.
3. Gather data on competitors and analyze their prices, sales, and method of marketing and distribution.
4. Collect and analyze data on customer demographics, preferences, needs, and buying habits to identify potential markets and factors affecting product demand.
5. Devise and evaluate methods and procedures for collecting data, such as surveys, opinion polls, or questionnaires, or arrange to obtain existing data.
6. Monitor industry statistics and follow trends in trade literature.
7. Measure and assess customer and employee satisfaction.
8. Measure the effectiveness of marketing, advertising, and communications programs and strategies.
9. Forecast and track marketing and sales trends, analyzing collected data.
10. Attend staff conferences to provide management with information and proposals concerning the promotion, distribution, design, and pricing of company products or services.



### *Skills Required:*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Time Management: Managing one's own time and the time of others.
3. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
4. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
5. Coordination: Adjusting actions in relation to others' actions.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. Speaking: Talking to others to convey information effectively.
9. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. Negotiation: Bringing others together and trying to reconcile differences.

### *Abilities Required:*

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1. Written Comprehension: The ability to read and understand information and ideas presented in writing.
2. Written Expression: The ability to communicate information and ideas in writing so others will understand.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
6. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.



7. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
8. Speech Clarity: The ability to speak clearly so others can understand you.
9. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### *Work Activities:*

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1. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
7. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
8. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
9. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
10. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.

### *Work Styles:*

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1. Integrity Job requires being honest and ethical.



2. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Initiative Job requires a willingness to take on responsibilities and challenges.
5. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
6. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Persistence Job requires persistence in the face of obstacles.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.



## Materials Scientist

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**Research and study the structures and chemical properties of various natural and manmade 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.**

### *Common Tasks*

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1. Plan laboratory experiments to confirm feasibility of processes and techniques used in the production of materials having special characteristics.
2. Confer with customers to determine how to tailor materials to their needs.
3. Conduct research on the structures and properties of materials, such as metals, alloys, polymers, and ceramics, to obtain information that could be used to develop new products or enhance existing ones.
4. Prepare reports of materials study findings for the use of other scientists and requestors.
5. Devise testing methods to evaluate the effects of various conditions on particular materials.
6. 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.
7. Recommend materials for reliable performance in various environments.
8. Test individual parts and products to ensure that manufacturer and governmental quality and safety standards are met.
9. Visit suppliers of materials or users of products to gather specific information.
10. Research methods of processing, forming, and firing materials to develop such products as ceramic dental fillings, unbreakable dinner plates, and telescope lenses.

### *Skills Required*

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1. Science: Using scientific rules and methods to solve problems.



2. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. **Mathematics:** Using mathematics to solve problems.
5. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
6. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
7. **Equipment Selection:** Determining the kind of tools and equipment needed to do a job.
8. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
9. **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.
10. **Time Management:** Managing one's own time and the time of others.

### ***Abilities Required***

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1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
4. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
5. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
6. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
7. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
8. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.



9. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### *Work Activities*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
3. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
4. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
5. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
7. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
8. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
10. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.

### *Work Styles*

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1. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.
2. **Innovation Job** requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
3. **Achievement/Effort Job** requires establishing and maintaining personally challenging





- achievement goals and exerting effort toward mastering tasks.
4. Initiative Job requires a willingness to take on responsibilities and challenges.
  5. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
  6. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
  7. Persistence Job requires persistence in the face of obstacles.
  8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
  9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
  10. Integrity Job requires being honest and ethical.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Mathematical Technician

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**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.**

## *Common Tasks*

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1. Apply standardized mathematical formulas, principles, and methodology to the solution of technological problems involving engineering or physical science.
2. Process data for analysis, using computers.
3. Reduce raw data to meaningful terms, using the most practical and accurate combination and sequence of computational methods.
4. Translate data into numbers, equations, flow charts, graphs, or other forms.
5. Confer with scientific or engineering personnel to plan projects.
6. Modify standard formulas so that they conform to project needs and data processing methods.

## *Skills Required*

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1. Mathematics: Using mathematics to solve problems.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of



alternative solutions, conclusions or approaches to problems.

3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
5. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
6. Equipment Selection: Determining the kind of tools and equipment needed to do a job.
7. Science: Using scientific rules and methods to solve problems.
8. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
10. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

### ***Abilities Required***

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1. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
2. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
5. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
6. Near Vision: The ability to see details at close range (within a few feet of the observer).
7. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

### ***Work Activities***

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1. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
2. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
5. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
6. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
7. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
8. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
10. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.

### *Work Context*

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1. Indoors, Environmentally Controlled How often does this job require working indoors in environmentally controlled conditions?
2. Importance of Being Exact or Accurate How important is being very exact or highly accurate in performing this job?
3. Spend Time Sitting How much does this job require sitting?
4. Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls How much does this job require using your hands to handle, control, or feel objects, tools or controls?

### *Work Values*

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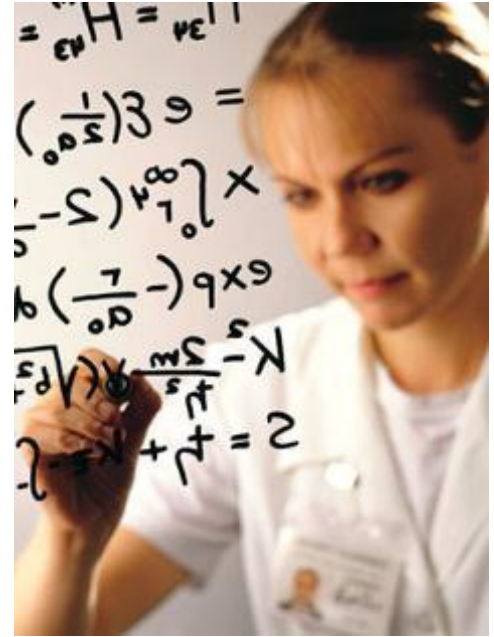
1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Mathematician

Conduct research in fundamental mathematics or in application of mathematical techniques to science, management, and other fields. Solve or direct solutions to problems in various fields by mathematical methods.

## Common Tasks

1. Apply mathematical theories and techniques to the solution of practical problems in business, engineering, the sciences, or other fields.
2. Develop computational methods for solving problems that occur in areas of science and engineering or that come from applications in business or industry.
3. Maintain knowledge in the field by reading professional journals, talking with other mathematicians, and attending professional conferences.
4. Perform computations and apply methods of numerical analysis to data.
5. Develop mathematical or statistical models of phenomena to be used for analysis or for computational simulation.
6. Assemble sets of assumptions and explore the consequences of each set.
7. Address the relationships of quantities, magnitudes, and forms through the use of numbers and symbols.
8. Develop new principles and new relationships between existing mathematical principles to advance mathematical science.
9. Design, analyze, and decipher encryption systems designed to transmit military, political, financial, or law-enforcement-related information in code.
10. Conduct research to extend mathematical knowledge in traditional areas, such as algebra, geometry, probability, and logic.



### *Skills Required*

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1. Mathematics: Using mathematics to solve problems.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
5. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
6. Programming: Writing computer programs for various purposes.
7. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
8. Science: Using scientific rules and methods to solve problems.
9. Speaking: Talking to others to convey information effectively.
10. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

### *Abilities Required*

---

1. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
2. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
3. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
4. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.
5. Written Comprehension: The ability to read and understand information and ideas presented in writing.
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).



7. **Originality:** The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
8. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
9. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
10. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.

### *Work Activities*

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1. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
2. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
3. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
5. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
6. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
7. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
9. **Provide Consultation and Advice to Others:** Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.
10. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.

### *Work Styles*

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1. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.





2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
4. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
5. Persistence Job requires persistence in the face of obstacles.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Integrity Job requires being honest and ethical.
8. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

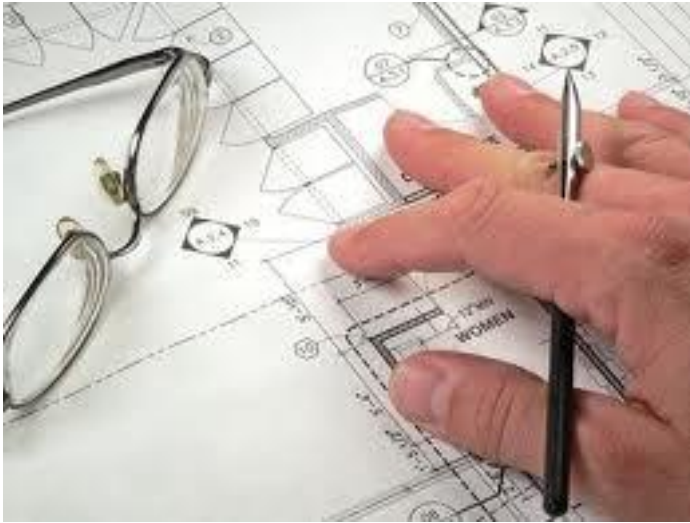
### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Mechanical Drafter

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

## *Common Tasks*

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1. Develop detailed design drawings and specifications for mechanical equipment, dies, tools, and controls, using computer-assisted drafting (CAD) equipment.
2. Lay out and draw schematic, orthographic, or angle views to depict functional relationships of components, assemblies, systems, and machines.
3. Coordinate with and consult other workers to design, lay out, or detail components and systems and to resolve design or other problems.
4. Check dimensions of materials to be used and assign numbers to the materials.
5. Review and analyze specifications, sketches, drawings, ideas, and related data to assess factors affecting component designs and the procedures and instructions to be followed.
6. Modify and revise designs to correct operating deficiencies or to reduce production problems.
7. Compute mathematical formulas to develop and design detailed specifications for components or machinery using computer-assisted equipment.
8. Position instructions and comments onto drawings.
9. Lay out, draw, and reproduce illustrations for reference manuals and technical publications to describe operation and maintenance of mechanical systems.
10. Design scale or full-size blueprints of specialty items such as furniture and automobile body or chassis components.



### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Mathematics: Using mathematics to solve problems.
3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Instructing: Teaching others how to do something.
5. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
6. Technology Design: Generating or adapting equipment and technology to serve user needs.
7. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
8. Equipment Selection: Determining the kind of tools and equipment needed to do a job.
9. Speaking: Talking to others to convey information effectively.
10. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.

### *Abilities Required*

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1. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
2. Near Vision: The ability to see details at close range (within a few feet of the observer).
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Visualization The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
6. Written Expression: The ability to communicate information and ideas in writing so others will understand.
7. Information Ordering: The ability to arrange things or actions in a certain order or pattern



according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

8. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
9. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
10. Speech Clarity: The ability to speak clearly so others can understand you.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment: Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
7. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
8. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
9. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
10. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
4. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
5. Integrity Job requires being honest and ethical.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
10. Persistence Job requires persistence in the face of obstacles.

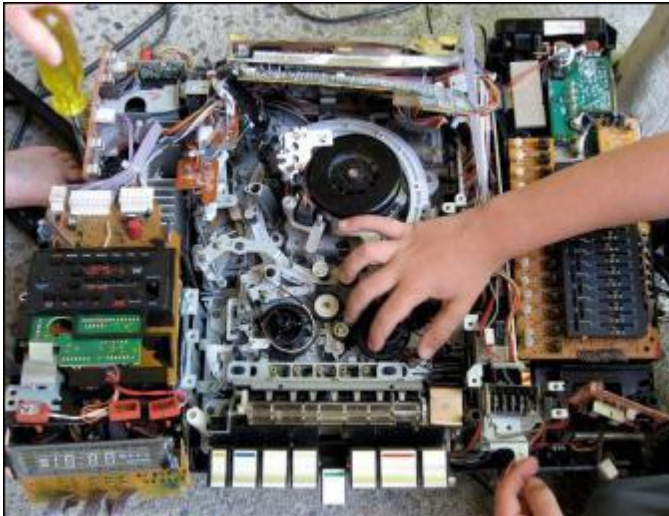
### *Work Values*

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1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Mechanical Engineer

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**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.**

## *Common Tasks*

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1. Read and interpret blueprints, technical drawings, schematics, and computer-generated reports.
2. Assist drafters in developing the structural design of products using drafting tools or computer-assisted design (CAD) or drafting equipment and software.
3. Research, design, evaluate, install, operate, and maintain mechanical products, equipment, systems and processes to meet requirements, applying knowledge of engineering principles.
4. Confer with engineers and other personnel to implement operating procedures, resolve system malfunctions, and provide technical information.
5. Recommend design modifications to eliminate machine or system malfunctions.
6. Conduct research that tests and analyzes the feasibility, design, operation and performance of equipment, components and systems.
7. Investigate equipment failures and difficulties to diagnose faulty operation, and to make recommendations to maintenance crew.
8. Develop and test models of alternate designs and processing methods to assess feasibility, operating condition effects, possible new applications and necessity of modification.
9. Develop, coordinate, and monitor all aspects of production, including selection of manufacturing methods, fabrication, and operation of product designs.
10. Specify system components or direct modification of products to ensure conformance with engineering design and performance specifications.

### *Skills Required:*

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1. Mathematics: Using mathematics to solve problems.
2. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Science: Using scientific rules and methods to solve problems.
6. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
7. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. Time Management: Managing one's own time and the time of others.
9. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
10. Speaking: Talking to others to convey information effectively.

### *Abilities Required:*

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1. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
2. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
5. Near Vision: The ability to see details at close range (within a few feet of the observer).
6. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.



7. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
9. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.

### *Work Activities:*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
4. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
7. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
8. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
9. Estimating the Quantifiable Characteristics of Products, Events, or Information: Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
10. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.

### *Work Styles:*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.





2. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Initiative Job requires a willingness to take on responsibilities and challenges.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Persistence Job requires persistence in the face of obstacles.
7. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values*

---

1. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Medical Assistant

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**Perform administrative and certain clinical duties under the direction of physician. Administrative duties may include scheduling appointments, maintaining medical records, billing, and coding 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.**



## *Common Tasks*

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1. Record patients' medical history, vital statistics and information such as test results in medical records.
2. Prepare treatment rooms for patient examinations, keeping the rooms neat and clean.
3. Interview patients to obtain medical information and measure their vital signs, weight, and height.
4. Authorize drug refills and provide prescription information to pharmacies.
5. Clean and sterilize instruments and dispose of contaminated supplies.
6. Prepare and administer medications as directed by a physician.
7. Show patients to examination rooms and prepare them for the physician.
8. Explain treatment procedures, medications, diets and physicians' instructions to patients.
9. Help physicians examine and treat patients, handing them instruments and materials or performing such tasks as giving injections or removing sutures.
10. Collect blood, tissue or other laboratory specimens, log the specimens, and prepare them for testing.



### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Speaking:** Talking to others to convey information effectively.
3. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
4. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
5. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
6. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
8. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
9. **Coordination:** Adjusting actions in relation to others' actions.
10. **Service Orientation:** Actively looking for ways to help people.

### *Abilities Required*

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1. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
2. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. **Speech Clarity:** The ability to speak clearly so others can understand you.
5. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
6. **Speech Recognition:** The ability to identify and understand the speech of another person.
7. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.



8. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. Written Expression: The ability to communicate information and ideas in writing so others will understand.
10. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.

### *Work Activities*

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1. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
2. Assisting and Caring for Others: Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
3. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
5. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
6. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
7. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
8. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
9. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
10. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work



tasks.

2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
4. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. Integrity Job requires being honest and ethical.
6. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Initiative Job requires a willingness to take on responsibilities and challenges.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Medical Transcriptionist

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**Use transcribing machines with headset and foot pedal to listen to recordings by physicians and other healthcare professionals dictating a variety of medical reports, such as emergency room visits, diagnostic imaging studies, operations, chart reviews, and final summaries. Transcribe dictated reports and translate medical jargon and abbreviations into their expanded forms. Edit as necessary and return reports in either printed or electronic form to the dictator for review and signature, or correction.**

## *Common Tasks*

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1. Transcribe dictation for a variety of medical reports, such as patient histories, physical examinations, emergency room visits, operations, chart reviews, consultation, or discharge summaries.
2. Review and edit transcribed reports or dictated material for spelling, grammar, clarity, consistency, and proper medical terminology.
3. Distinguish between homonyms and recognize inconsistencies and mistakes in medical terms, referring to dictionaries, drug references, and other sources on anatomy, physiology, and medicine.
4. Return dictated reports in printed or electronic form for physician's review, signature, and corrections and for inclusion in patients' medical records.
5. Translate medical jargon and abbreviations into their expanded forms to ensure the accuracy of patient and health care facility records.
6. Take dictation using either shorthand or a stenotype machine, or using headsets and transcribing machines; then convert dictated materials or rough notes to written form.
7. Identify mistakes in reports and check with doctors to obtain the correct information.
8. Perform data entry and data retrieval services, providing data for inclusion in medical records



and for transmission to physicians.

9. Produce medical reports, correspondence, records, patient-care information, statistics, medical research, and administrative material.
10. Answer inquiries concerning the progress of medical cases, within the limits of confidentiality laws.

### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Time Management:** Managing one's own time and the time of others.
4. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
5. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
6. **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
7. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

### *Abilities Required*

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1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
3. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
4. **Finger Dexterity** The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.
5. **Near Vision:** The ability to see details at close range (within a few feet of the observer).



6. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
7. Speech Recognition: The ability to identify and understand the speech of another person.
8. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
9. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
10. Selective Attention: The ability to concentrate on a task over a period of time without being distracted.

### *Work Activities*

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1. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
2. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
4. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
7. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
8. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
9. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Integrity Job requires being honest and ethical.
4. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Persistence Job requires persistence in the face of obstacles.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.

### *Work Values*

---

1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Microbiologist

**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.**



## *Common Tasks*

1. Investigate the relationship between organisms and disease including the control of epidemics and the effects of antibiotics on microorganisms.
2. Prepare technical reports and recommendations based upon research outcomes.
3. Supervise biological technologists and technicians and other scientists.
4. Provide laboratory services for health departments, for community environmental health programs and for physicians needing information for diagnosis and treatment.
5. Use a variety of specialized equipment such as electron microscopes, gas chromatographs and high pressure liquid chromatographs, electrophoresis units, thermocyclers, fluorescence activated cell sorters and phosphoimagers.
6. Examine physiological, morphological, and cultural characteristics, using microscope, to identify and classify microorganisms in human, water, and food specimens.
7. Study growth, structure, development, and general characteristics of bacteria and other microorganisms to understand their relationship to human, plant, and animal health.
8. Isolate and maintain cultures of bacteria or other microorganisms in prescribed or developed media, controlling moisture, aeration, temperature, and nutrition.
9. Observe action of microorganisms upon living tissues of plants, higher animals, and other microorganisms, and on dead organic matter.
10. Study the structure and function of human, animal and plant tissues, cells, pathogens and



toxins.

### *Skills Required*

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1. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
2. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
3. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
5. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
6. **Science:** Using scientific rules and methods to solve problems.
7. **Speaking:** Talking to others to convey information effectively.
8. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
10. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

### *Abilities Required*

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1. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
2. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
3. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
4. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
5. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures,



mathematical operations).

6. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
7. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
8. **Flexibility of Closure:** The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
9. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
10. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.

### *Work Activities*

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1. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
2. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
3. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
4. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
5. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
6. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
7. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
8. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
10. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.



### *Work Styles*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Integrity Job requires being honest and ethical.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Persistence Job requires persistence in the face of obstacles.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

### *Work Values*

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1. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Midwife

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**Provide prenatal care and childbirth assistance.**

## *Common Tasks*

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1. Assist maternal patients to find physical positions that will facilitate childbirth.
2. Monitor maternal condition during labor by checking vital signs, monitoring uterine contractions, or performing physical examinations.
3. Provide comfort and relaxation measures for mothers in labor through interventions such as massage, breathing techniques, hydrotherapy, and music.
4. Set up or monitor the administration of oxygen or medications.
5. Assess birthing environments to ensure cleanliness, safety, and the availability of appropriate supplies.
6. Assess the status of post-date pregnancies to determine treatments and interventions.
7. Collect specimens for use in laboratory tests.
8. Conduct ongoing prenatal health assessments, tracking changes in physical and emotional health.
9. Develop, implement, or evaluate individualized plans for midwifery care.
10. Establish and follow emergency or contingency plans for mothers and newborns.
11. Estimate patients' due dates and re-evaluate as necessary based on examination results.
12. Evaluate patients' laboratory and medical records, requesting assistance from other



- practitioners when necessary.
13. Respond to breech birth presentations by applying methods such as exercises and external version.
  14. Identify, monitor, or treat pregnancy-related problems such as hypertension, gestational diabetes, pre-term labor, and retarded fetal growth.
  15. Identify tubal and ectopic pregnancies and refer patients for treatments.
  16. Inform patients of how to prepare and supply birth sites.
  17. Monitor fetal growth and well-being through heartbeat detection, body measurement, and palpation.
  18. Maintain documentation of all patients' contacts, reviewing and updating records as necessary.
  19. Obtain complete health and medical histories from patients including medical, surgical, reproductive, or mental health histories.
  20. Perform post-partum health assessments of mothers and babies at regular intervals.
  21. Provide information about the physical and emotional processes involved in the pregnancy, labor, birth, and postpartum periods.
  22. Provide necessary medical care for infants at birth, including emergency care such as resuscitation.
  23. Provide, or refer patients to other providers for, education or counseling on topics such as genetic testing, newborn care, contraception, and breastfeeding.
  24. Refer patients to specialists for procedures such as ultrasounds and biophysical profiles.
  25. Suture perineal lacerations.
  26. Test patients' hemoglobin, hematocrit, and blood glucose levels.
  27. Compile and evaluate clinical practice statistics.
  28. Complete birth certificates.
  29. Counsel women regarding the nutritional requirements of pregnancy.
  30. Collaborate in research studies.
  31. Incorporate research findings into practice as appropriate.
  32. Provide information about community health and social resources.



33. Provide postpartum patients with contraceptive and family planning information.
34. Recommend the use of vitamin and mineral supplements to enhance the health of patients and children.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
4. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical
5. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
6. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

### *Interest*

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1. Realistic Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.
2. Social: Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.
3. Conventional Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.
4. Artistic Artistic occupations frequently involve working with forms, designs and patterns. They often require self-expression and the work can be done without following a clear set of rules.





5. Investigative: Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.
6. Enterprising: Enterprising occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business.

# Multi-Media Artist and Animator

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**Create special effects, animation, or other visual images using film, video, computers, or other electronic tools and media for use in products or creations, such as computer games, movies, music videos, and commercials.**

## *Common Tasks*

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1. Design complex graphics and animation, using independent judgment, creativity, and computer equipment.
2. Create two-dimensional and three-dimensional images depicting objects in motion or illustrating a process, using computer animation or modeling programs.
3. Make objects or characters appear lifelike by manipulating light, color, texture, shadow, and transparency, or manipulating static images to give the illusion of motion.
4. Assemble, typeset, scan and produce digital camera-ready art or film negatives and printer's proofs.
5. Apply story development, directing, cinematography, and editing to animation to create storyboards that show the flow of the animation and map out key scenes and characters.
6. Script, plan, and create animated narrative sequences under tight deadlines, using computer software and hand drawing techniques.
7. Create basic designs, drawings, and illustrations for product labels, cartons, direct mail, or television.
8. Create pen-and-paper images to be scanned, edited, colored, textured or animated by computer.
9. Develop briefings, brochures, multimedia presentations, web pages, promotional products, technical illustrations, and computer artwork for use in products, technical manuals, literature, newsletters and slide shows.
10. Use models to simulate the behavior of animated objects in the finished sequence.



### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Time Management:** Managing one's own time and the time of others.
3. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
4. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
5. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
6. **Operations Analysis:** Analyzing needs and product requirements to create a design.
7. **Speaking:** Talking to others to convey information effectively.
8. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
9. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
10. **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.

### *Abilities Required*

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1. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
2. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
3. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
4. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. **Visualization** The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
6. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.



7. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
8. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
10. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.

### *Work Activities*

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1. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
5. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
6. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
7. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
8. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. **Judging the Qualities of Things, Services, or People** Assessing the value, importance, or quality of things or people.
10. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
4. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
7. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Natural Sciences Manager

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**Plan, direct, or coordinate activities in such fields as life sciences, physical sciences, mathematics, statistics, and research and development in these fields.**

## *Common Tasks*

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1. Confer with scientists, engineers, regulators, and others to plan and review projects and to provide technical assistance.
2. Develop client relationships and communicate with clients to explain proposals, present research findings, establish specifications or discuss project status.
3. Plan and direct research, development, and production activities.
4. Prepare project proposals.
5. Design and coordinate successive phases of problem analysis, solution proposals, and testing.
6. Review project activities and prepare and review research, testing, and operational reports.
7. Hire, supervise and evaluate engineers, technicians, researchers and other staff.
8. Determine scientific and technical goals within broad outlines provided by top management and make detailed plans to accomplish these goals.
9. Develop and implement policies, standards and procedures for the architectural, scientific and technical work performed to ensure regulatory compliance and operations enhancement.
10. Develop innovative technology and train staff for its implementation.

### *Skills Required*

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1. Science: Using scientific rules and methods to solve problems.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
5. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
6. Mathematics: Using mathematics to solve problems.
7. Time Management: Managing one's own time and the time of others.
8. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
9. Coordination: Adjusting actions in relation to others' actions.
10. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. Speech Clarity: The ability to speak clearly so others can understand you.
5. Written Comprehension: The ability to read and understand information and ideas presented in writing.
6. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
7. Speech Recognition: The ability to identify and understand the speech of another person.



8. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
9. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
10. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.

### *Work Activities*

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1. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
5. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
6. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
7. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
8. **Scheduling Work and Activities:** Scheduling events, programs, and activities, as well as the work of others.
9. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
10. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.

### *Work Styles*

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1. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.





2. Initiative Job requires a willingness to take on responsibilities and challenges.
3. Integrity Job requires being honest and ethical.
4. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Persistence Job requires persistence in the face of obstacles.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.



# Network and Computer Systems Administrator

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**Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system. Maintain network hardware and software.**

**Monitor network to ensure network availability to all system users and perform necessary maintenance to support network availability. May supervise other network support and client server specialists and plan, coordinate, and implement network security measures.**

## *Common Tasks*

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1. Maintain and administer computer networks and related computing environments including computer hardware, systems software, applications software, and all configurations.
2. Perform data backups and disaster recovery operations.
3. Diagnose, troubleshoot, and resolve hardware, software, or other network and system problems, and replace defective components when necessary.
4. Plan, coordinate, and implement network security measures to protect data, software, and hardware.
5. Configure, monitor, and maintain email applications or virus protection software.
6. Operate master consoles to monitor the performance of computer systems and networks, and to coordinate computer network access and use.
7. Load computer tapes and disks, and install software and printer paper or forms.
8. Design, configure, and test computer hardware, networking software and operating system software.
9. Monitor network performance to determine whether adjustments need to be made, and to determine where changes will need to be made in the future.
10. Confer with network users about how to solve existing system problems.



### *Skills Required*

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1. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Systems Analysis:** Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
4. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
5. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
6. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. **Systems Evaluation Identifying:** Measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
8. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
9. **Operation Monitoring:** Watching gauges, dials, or other indicators to make sure a machine is working properly.
10. **Programming:** Writing computer programs for various purposes.

### *Abilities Required*

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1. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
2. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
3. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
5. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.



6. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
7. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
8. Written Comprehension: The ability to read and understand information and ideas presented in writing.
9. Speech Recognition: The ability to identify and understand the speech of another person.
10. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
4. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
7. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
8. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
9. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
10. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.

### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
3. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.
5. **Analytical Thinking** Job requires analyzing information and using logic to address work-related issues and problems.
6. **Integrity** Job requires being honest and ethical.
7. **Self-Control** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
8. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. **Initiative** Job requires a willingness to take on responsibilities and challenges.
10. **Persistence** Job requires persistence in the face of obstacles.

### *Work Values*

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1. **Working Conditions** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. **Support** Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Network Designer

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**Determine user requirements and design specifications for computer networks. Plan and implement network upgrades.**



## *Common Tasks*

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1. Communicate with customers, sales staff, or marketing staff to determine customer needs.
2. Develop or recommend network security measures, such as firewalls, network security audits, or automated security probes.
3. Prepare detailed network specifications, including diagrams, charts, equipment configurations, and recommended technologies.
4. Develop network-related documentation.
5. Supervise engineers and other staff in the design or implementation of network solutions.
6. Develop conceptual, logical, or physical network designs.
7. Evaluate network designs to determine whether customer requirements are met efficiently and effectively.
8. Develop disaster recovery plans.
9. Develop and implement solutions for network problems.
10. Determine specific network hardware or software requirements, such as platforms, interfaces, bandwidths, or routine schemas.
11. Abilities Required



12. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
13. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
14. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
15. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
16. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
17. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
18. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
19. **Speech Clarity:** The ability to speak clearly so others can understand you.
20. **Speech Recognition:** The ability to identify and understand the speech of another person.
21. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.

### *Work Activities*

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1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
5. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.



7. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
8. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
9. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
10. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.

### *Work Styles*

---

1. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
2. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.
3. **Initiative Job** requires a willingness to take on responsibilities and challenges.
4. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.
5. **Cooperation Job** requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. **Adaptability/Flexibility Job** requires being open to change (positive or negative) and to considerable variety in the workplace.
7. **Persistence Job** requires persistence in the face of obstacles.
8. **Achievement/Effort Job** requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. **Integrity Job** requires being honest and ethical.
10. **Stress Tolerance Job** requires accepting criticism and dealing calmly and effectively with high stress situations.

### *Work Values*

---

1. **Achievement Occupations** that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. **Independence Occupations** that satisfy this work value allow employees to work on their own





and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Network Systems and Data Communications

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## Network Systems and Data Communications Analysts

Analyze, design, test, and evaluate network systems, such as local area networks (LAN), wide area networks (WAN), Internet, intranet, and other data communications systems. Perform network modeling, analysis, and planning. Research and recommend network and data communications hardware and software. Includes telecommunications specialists who deal with the interfacing of computer and communications equipment. May supervise computer programmers.



### *Common Tasks*

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1. Maintain needed files by adding and deleting files on the network server and backing up files to guarantee their safety in the event of problems with the network.
2. Test and evaluate hardware and software to determine efficiency, reliability, and compatibility with existing system, and make purchase recommendations.
3. Design and implement systems, network configurations, and network architecture, including hardware and software technology, site locations, and integration of technologies.
4. Assist users to diagnose and solve data communication problems.
5. Monitor system performance and provide security measures, troubleshooting and maintenance as needed.
6. Work with other engineers, systems analysts, programmers, technicians, scientists and top-level managers in the design, testing and evaluation of systems.
7. Identify areas of operation that need upgraded equipment such as modems, fiber optic cables, and telephone wires.
8. Consult customers, visit workplaces or conduct surveys to determine present and future user needs.
9. Train users in use of equipment.
10. Maintain the peripherals, such as printers, that are connected to the network.



### *Skills Required*

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1. **Equipment Selection:** Determining the kind of tools and equipment needed to do a job.
2. **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.
3. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
4. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
5. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
6. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. **Installation** Installing equipment, machines, wiring, or programs to meet specifications.
8. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
9. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. **Technology Design:** Generating or adapting equipment and technology to serve user needs.

### *Abilities Required*

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1. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
2. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
4. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
6. **Oral Expression:** The ability to communicate information and ideas in speaking so others will



understand.

7. Near Vision: The ability to see details at close range (within a few feet of the observer).
8. Speech Clarity: The ability to speak clearly so others can understand you.
9. Written Comprehension: The ability to read and understand information and ideas presented in writing.
10. Finger Dexterity: The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
6. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
7. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
8. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
9. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
10. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.

### *Work Styles*

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1. Attention to Detail: Job requires being careful about detail and thorough in completing work tasks.



2. Integrity Job requires being honest and ethical.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
5. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Persistence Job requires persistence in the face of obstacles.
10. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.

### *Work Values*

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1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Neurologist

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**Diagnose, treat, and help prevent diseases and disorders of the nervous system.**

## *Common Tasks*

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1. Examine patients to obtain information about functional status of areas such as vision, physical strength, coordination, reflexes, sensations, language skills, cognitive abilities, and mental status.
2. Identify and treat major neurological system diseases and disorders such as central nervous system infection, cranio spinal trauma, dementia, and stroke.
3. Perform or interpret the outcomes of procedures or diagnostic tests such as lumbar punctures, electroencephalography, electromyography, and nerve conduction velocity tests.
4. Coordinate neurological services with other health care team activities.
5. Communicate with other health care professionals regarding patients' conditions and care.
6. Determine brain death using accepted tests and procedures.
7. Develop treatment plans based on diagnoses and on evaluation of factors such as age and general health, or procedural risks and costs.
8. Diagnose neurological conditions based on interpretation of examination findings, histories, or test results.
9. Inform patients or families of neurological diagnoses and prognoses, or benefits, risks and costs of various treatment plans.
10. Interview patients to obtain information such as complaints, symptoms, medical histories, and family histories.

## *Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

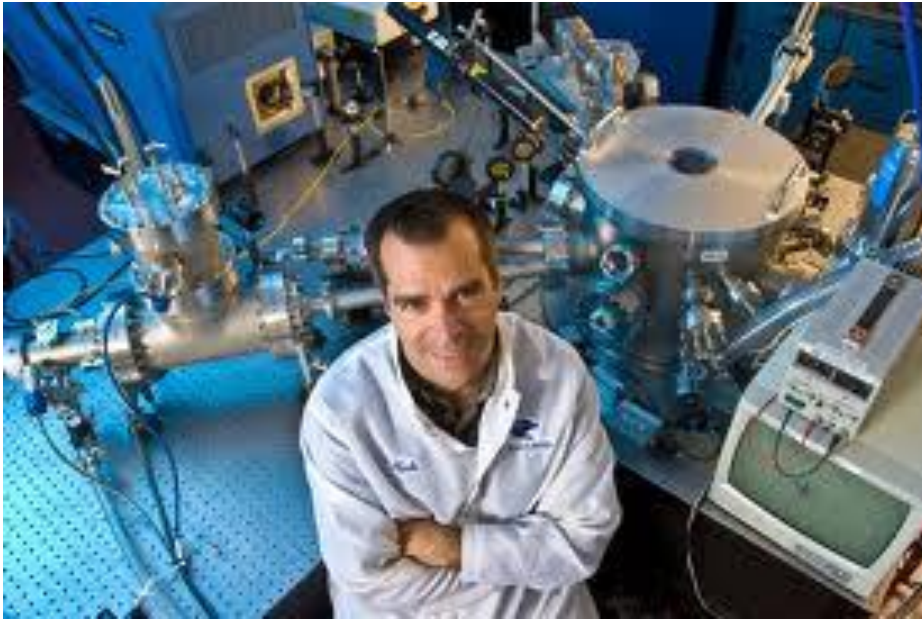
### *Interests*

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1. Investigative: Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.
2. Social: Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.
3. Realistic: Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.

# Nuclear Engineer

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**Conduct research on nuclear engineering problems or apply principles and theory of nuclear science to problems concerned with release, control, and utilization of nuclear energy and nuclear waste disposal.**

## *Common Tasks*

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1. Examine accidents to obtain data that can be used to design preventive measures.
2. Monitor nuclear facility operations to identify any design, construction, or operation practices that violate safety regulations and laws or that could jeopardize the safety of operations.
3. Keep abreast of developments and changes in the nuclear field by reading technical journals and by independent study and research.
4. Perform experiments that will provide information about acceptable methods of nuclear material usage, nuclear fuel reclamation, and waste disposal.
5. Design and oversee construction and operation of nuclear reactors and power plants and nuclear fuels reprocessing and reclamation systems.
6. Design and develop nuclear equipment such as reactor cores, radiation shielding, and associated instrumentation and control mechanisms.
7. Initiate corrective actions or order plant shutdowns in emergency situations.
8. Recommend preventive measures to be taken in the handling of nuclear technology, based on data obtained from operations monitoring or from evaluation of test results.
9. Write operational instructions to be used in nuclear plant operation and nuclear fuel and waste handling and disposal.





10. Conduct tests of nuclear fuel behavior and cycles and performance of nuclear machinery and equipment, to optimize performance of existing plants.

### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. **Quality Control Analysis:** Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
4. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
5. **Operation Monitoring:** Watching gauges, dials, or other indicators to make sure a machine is working properly.
6. **Time Management:** Managing one's own time and the time of others.
7. **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
8. **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.
9. **Coordination:** Adjusting actions in relation to others' actions.
10. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.

### *Abilities Required*

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1. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
3. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
4. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or



- conclusions (includes finding a relationship among seemingly unrelated events).
6. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
  7. Speech Clarity: The ability to speak clearly so others can understand you.
  8. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
  9. Speech Recognition: The ability to identify and understand the speech of another person.
  10. Written Expression: The ability to communicate information and ideas in writing so others will understand.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
4. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
7. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
8. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
9. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
10. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.



### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Integrity Job requires being honest and ethical.
3. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
4. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Persistence Job requires persistence in the face of obstacles.
9. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

### *Work Values*

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1. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.



## Nurse

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**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. Includes**

**advance practice nurses such as: nurse practitioners, clinical nurse specialists, certified nurse midwives, and certified registered nurse anesthetists. Advanced practice nursing is practiced by rns who have specialized formal, post-basic education and who function in highly autonomous and specialized roles.**

### *Tasks*

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1. Monitor, record and report symptoms and changes in patients' conditions.
  2. Maintain accurate, detailed reports and records.
  3. Record patients' medical information and vital signs.
  4. Order, interpret, and evaluate diagnostic tests to identify and assess patient's condition.
  5. Modify patient treatment plans as indicated by patients' responses and conditions.
  6. Direct and supervise less skilled nursing or health care personnel or supervise a particular unit.
  7. Consult and coordinate with health care team members to assess, plan, implement and evaluate patient care plans.
  8. Monitor all aspects of patient care, including diet and physical activity.
  9. Instruct individuals, families and other groups on topics such as health education, disease prevention and childbirth, and develop health improvement programs.
  10. Prepare patients for, and assist with, examinations and treatments.
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### *Skills Required*

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1. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Coordination: Adjusting actions in relation to others' actions.
4. Speaking: Talking to others to convey information effectively.
5. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
6. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
7. Service Orientation: Actively looking for ways to help people.
8. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
9. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. Writing: Communicating effectively in writing as appropriate for the needs of the audience.

### *Abilities Required:*

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1. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
3. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
5. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
6. Oral Expression: The ability to communicate information and ideas in speaking so others will



understand.

7. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
8. **Speech Clarity:** The ability to speak clearly so others can understand you.
9. **Speech Recognition:** The ability to identify and understand the speech of another person.
10. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.

### *Work Activities*

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1. **Assisting and Caring for Others:** Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
2. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
6. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
7. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
8. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
9. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
10. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.

### *Work Styles*

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1. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
2. Integrity Job requires being honest and ethical.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
6. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Initiative Job requires a willingness to take on responsibilities and challenges.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Nutritionist

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**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.**

## *Common Tasks*

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1. Counsel individuals and groups on basic rules of good nutrition, healthy eating habits, and nutrition monitoring to improve their quality of life.
2. Assess nutritional needs, diet restrictions and current health plans to develop and implement dietary-care plans and provide nutritional counseling.
3. Advise patients and their families on nutritional principles, dietary plans and diet modifications, and food selection and preparation.
4. Consult with physicians and health care personnel to determine nutritional needs and diet restrictions of patient or client.
5. Monitor food service operations to ensure conformance to nutritional, safety, sanitation and quality standards.
6. Organize, develop, analyze, test, and prepare special meals such as low-fat, low-cholesterol and chemical-free meals.
7. Develop curriculum and prepare manuals, visual aids, course outlines, and other materials used in teaching.
8. Make recommendations regarding public policy, such as nutrition labeling, food fortification, and nutrition standards for school programs.
9. Purchase food in accordance with health and safety codes.
10. Plan and conduct training programs in dietetics, nutrition, and institutional management and administration for medical students, health-care personnel and the general public.



*Skills Required:*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Instructing:** Teaching others how to do something.
3. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
4. **Speaking:** Talking to others to convey information effectively.
5. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
6. **Time Management:** Managing one's own time and the time of others.
7. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
8. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
9. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.

*Abilities Required:*

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1. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
2. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
4. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
5. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
6. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It



does not involve solving the problem, only recognizing there is a problem.

7. **Speech Clarity:** The ability to speak clearly so others can understand you.
8. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
9. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. **Originality:** The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

### *Work Activities:*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
3. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
5. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
6. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
7. **Training and Teaching Others:** Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.
8. **Assisting and Caring for Others:** Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
9. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
10. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.



### *Work Styles:*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Integrity** Job requires being honest and ethical.
3. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
4. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
5. **Concern for Others** Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
6. **Analytical Thinking** Job requires analyzing information and using logic to address work-related issues and problems.
7. **Self-Control** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
8. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. **Initiative** Job requires a willingness to take on responsibilities and challenges.
10. **Achievement/Effort** Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values:*

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1. **Relationships** Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. **Independence** Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Obstetrician and Gynecologist

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**Diagnose, treat, and help prevent diseases of women, especially those affecting the reproductive system and the process of childbirth.**

## *Common Tasks*

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1. Care for and treat women during prenatal, natal, and postnatal periods.
2. Explain procedures and discuss test results or prescribed treatments with patients.
3. Treat diseases of female organs.
4. Monitor patients' conditions and progress and reevaluate treatments as necessary.
5. Perform cesarean sections or other surgical procedures as needed to preserve patients' health and deliver babies safely.
6. Prescribe or administer therapy, medication, and other specialized medical care to treat or prevent illness, disease, or injury.
7. Analyze records, reports, test results, or examination information to diagnose medical condition of patient.
8. Collect, record, and maintain patient information, such as medical histories, reports, and examination results.
9. Advise patients and community members concerning diet, activity, hygiene, and disease prevention.
10. Refer patient to medical specialist or other practitioner when necessary.



### *Skills Required:*

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1. Science: Using scientific rules and methods to solve problems.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Speaking: Talking to others to convey information effectively.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. Service Orientation: Actively looking for ways to help people.
10. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.

### *Abilities Required:*

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1. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
6. Speech Clarity: The ability to speak clearly so others can understand you.



7. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
8. **Speech Recognition:** The ability to identify and understand the speech of another person.
9. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
10. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.

### *Work Activities Required:*

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1. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
2. **Assisting and Caring for Others:** Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
3. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
4. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
5. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
6. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
7. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
8. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
9. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
10. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.



### *Work Styles:*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Integrity Job requires being honest and ethical.
5. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
6. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Persistence Job requires persistence in the face of obstacles.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Online Merchant

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**Plan, direct, or coordinate retail activities of businesses operating 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.**



## *Common Tasks*

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1. Calculate revenue, sales, and expenses, using financial accounting or spreadsheet software.
2. Compose descriptions of merchandise for posting to online storefront, auction sites, or other shopping websites.
3. Prepare or organize online storefront marketing material, including product descriptions or subject lines, optimizing content to search engine criteria.
4. Purchase new or used items from online or physical sources for resale via retail or auction web site.
5. Receive and process payments from customers, using electronic transaction services.
6. Calculate purchase subtotals, taxes, and shipping costs for submission to customers.
7. Compose images of products, using video and still cameras, lighting equipment, props, or photo and video editing software.
8. Correspond with online customers via electronic mail, telephone, or other electronic messaging to address questions and complaints about products, policies, or shipping methods.
9. Design customer interface of online storefront, using web programming and e-commerce software.
10. Determine location for product listings to maximize exposure to online traffic.



### *Work Values*

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1. **Independence** Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. **Working Conditions** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

### *Interests*

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1. **Enterprising** Enterprising occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business.
2. **Conventional** Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.
3. **Realistic** Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.



## Operations Research Analyst

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**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.**

### *Common Tasks*

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1. Formulate mathematical or simulation models of problems, relating constants and variables, restrictions, alternatives, conflicting objectives, and their numerical parameters.
2. Collaborate with others in the organization to ensure successful implementation of chosen problem solutions.
3. Analyze information obtained from management to conceptualize and define operational problems.
4. Perform validation and testing of models to ensure adequacy and reformulate models as necessary.
5. Collaborate with senior managers and decision makers to identify and solve a variety of problems and to clarify management objectives.
6. Define data requirements and gather and validate information, applying judgment and statistical tests.
7. Study and analyze information about alternative courses of action to determine which plan will offer the best outcomes.
8. Prepare management reports defining and evaluating problems and recommending solutions.
9. Break systems into their component parts, assign numerical values to each component, and examine the mathematical relationships between them.



10. Specify manipulative or computational methods to be applied to models.

### *Skills Required*

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1. Mathematics: Using mathematics to solve problems.
2. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Operations Analysis: Analyzing needs and product requirements to create a design.
5. Systems Analysis: Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
6. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
7. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
8. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
9. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. Writing: Communicating effectively in writing as appropriate for the needs of the audience.

### *Abilities Required*

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1. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
2. Written Comprehension: The ability to read and understand information and ideas presented in writing.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.



6. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
7. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
8. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
9. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
10. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

### *Work Activities*

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1. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
2. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
4. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
5. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
7. **Provide Consultation and Advice to Others:** Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.
8. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
9. **Estimating the Quantifiable Characteristics of Products, Events, or Information:** Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
10. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.



### *Work Styles*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Integrity Job requires being honest and ethical.
4. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
7. Persistence Job requires persistence in the face of obstacles.
8. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Ophthalmologist

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**Diagnose, treat, and help prevent diseases and injuries of the eyes and related structures.**

## *Common Tasks*

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1. Diagnose or treat injuries, disorders, or diseases of the eye and eye structures including the cornea, sclera, conjunctiva, or eyelids.
2. Prescribe ophthalmologic treatments or therapies such as chemotherapy, cryotherapy, and low vision therapy.
3. Perform comprehensive examinations of the visual system to determine the nature or extent of ocular disorders.
4. Perform ophthalmic surgeries such as cataract, glaucoma, refractive, corneal, vitro-retinal, eye muscle, and oculoplastic surgeries.
5. Perform laser surgeries to alter, remove, reshape, or replace ocular tissue.
6. Develop treatment plans based on patients' histories and goals, the nature and severity of disorders, and treatment risks and benefits.
7. Perform, order, or interpret the results of diagnostic or clinical tests.
8. Prescribe corrective lenses such as glasses and contact lenses.
9. Prescribe or administer topical or systemic medications to treat ophthalmic conditions and to manage pain.
10. Provide or direct the provision of postoperative care.

## *Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

*Interest:*

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1. Investigative: Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.
2. Social: Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.
3. Realistic: Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.

# Optometrist

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**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.**

## *Common Tasks*

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1. Examine eyes, using observation, instruments and pharmaceutical agents, to determine visual acuity and perception, focus and coordination and to diagnose diseases and other abnormalities such as glaucoma or color blindness.
2. Prescribe medications to treat eye diseases if state laws permit.
3. Prescribe, supply, fit and adjust eyeglasses, contact lenses and other vision aids.
4. Analyze test results and develop a treatment plan.
5. Educate and counsel patients on contact lens care, visual hygiene, lighting arrangements and safety factors.
6. Remove foreign bodies from the eye.
7. Consult with and refer patients to ophthalmologist or other health care practitioner if additional medical treatment is determined necessary.
8. Provide patients undergoing eye surgeries, such as cataract and laser vision correction, with pre- and post-operative care.
9. Prescribe therapeutic procedures to correct or conserve vision.
10. Provide vision therapy and low vision rehabilitation.





### *Skills Required:*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. **Speaking:** Talking to others to convey information effectively.
4. **Coordination:** Adjusting actions in relation to others' actions.
5. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
6. **Service Orientation:** Actively looking for ways to help people.
7. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
8. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
10. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.

### *Abilities Required:*

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1. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
3. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
4. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
6. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.



7. Flexibility of Closure: The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
8. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. Selective Attention: The ability to concentrate on a task over a period of time without being distracted.
10. Speech Clarity: The ability to speak clearly so others can understand you.

### *Work Activities:*

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1. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
2. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
3. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
4. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
5. Assisting and Caring for Others: Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
6. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
7. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
8. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
9. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.



### *Work Styles:*

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1. Integrity Job requires being honest and ethical.
2. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
3. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
9. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values:*

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1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition.

# Orthodontist

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**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.**

## *Common Tasks*

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1. Fit dental appliances in patients' mouths to alter the position and relationship of teeth and jaws or to realign teeth.
2. Study diagnostic records, such as medical or dental histories, plaster models of the teeth, photos of a patient's face and teeth, and X-rays, to develop patient treatment plans.
3. Diagnose teeth and jaw or other dental-facial abnormalities.
4. Examine patients to assess abnormalities of jaw development, tooth position, and other dental-facial structures.
5. Prepare diagnostic and treatment records.
6. Adjust dental appliances to produce and maintain normal function.
7. Provide patients with proposed treatment plans and cost estimates.
8. Instruct dental officers and technical assistants in orthodontic procedures and techniques.
9. Coordinate orthodontic services with other dental and medical services.
10. Design and fabricate appliances, such as space maintainers, retainers, and labial and lingual arch wires.

## *Skills Required:*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Coordination: Adjusting actions in relation to others' actions.
4. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
5. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. Time Management: Managing one's own time and the time of others.
7. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
9. Speaking: Talking to others to convey information effectively.
10. Instructing: Teaching others how to do something.

### *Abilities Required:*

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1. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Arm-Hand Steadiness The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
4. Finger Dexterity The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.
5. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Near Vision: The ability to see details at close range (within a few feet of the observer).



8. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
9. Speech Recognition: The ability to identify and understand the speech of another person.
10. Written Comprehension: The ability to read and understand information and ideas presented in writing.

### *Work Activities:*

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1. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
2. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
3. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
4. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
5. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
6. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
7. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
8. Selling or Influencing Others: Convincing others to buy merchandise/goods or to otherwise change their minds or actions.
9. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
10. Assisting and Caring for Others: Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.

### *Work Styles:*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.



3. Integrity Job requires being honest and ethical.
4. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
5. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
6. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
7. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
8. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Initiative Job requires a willingness to take on responsibilities and challenges.

### *Work Values:*

---

1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Paralegal and Legal Assistant

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**Assist lawyers by researching legal precedent, investigating facts, or preparing legal documents. Conduct research to support a legal proceeding, to formulate a defense, or to initiate legal action.**

## *Common Tasks*

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1. Prepare affidavits or other documents, such as legal correspondence, and organize and maintain documents in paper or electronic filing system.
2. Prepare for trial by performing tasks such as organizing exhibits.
3. Prepare legal documents, including briefs, pleadings, appeals, wills, contracts, and real estate closing statements.
4. Meet with clients and other professionals to discuss details of case.
5. File pleadings with court clerk.
6. Gather and analyze research data, such as statutes, decisions, and legal articles, codes, and documents.
7. Call upon witnesses to testify at hearing.
8. Investigate facts and law of cases and search pertinent sources, such as public records, to determine causes of action and to prepare cases.
9. Direct and coordinate law office activity, including delivery of subpoenas.
10. Keep and monitor legal volumes to ensure that law library is up-to-date.

## *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Time Management: Managing one's own time and the time of others.
3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
5. Speaking: Talking to others to convey information effectively.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Coordination: Adjusting actions in relation to others' actions.
8. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
9. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
10. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Written Expression: The ability to communicate information and ideas in writing so others will understand.
5. Near Vision: The ability to see details at close range (within a few feet of the observer).
6. Speech Clarity: The ability to speak clearly so others can understand you.
7. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).



8. **Speech Recognition:** The ability to identify and understand the speech of another person.
9. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.

### *Work Activities*

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1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
4. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
5. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
7. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
8. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
10. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

### *Work Styles*

---

1. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
2. **Cooperation Job** requires being pleasant with others on the job and displaying a good-



natured, cooperative attitude.

3. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. **Integrity** Job requires being honest and ethical.
5. **Initiative** Job requires a willingness to take on responsibilities and challenges.
6. **Independence** Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
7. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
8. **Concern for Others** Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
9. **Persistence** Job requires persistence in the face of obstacles.
10. **Self-Control** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

### *Work Values*

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1. **Relationships** Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. **Support** Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. **Working Conditions** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Pathologist

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**Diagnose presence and stage of diseases using laboratory techniques and patient specimens. Study the nature, cause, and development of diseases. May perform autopsies.**

## *Common Tasks*

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1. Diagnose diseases or study medical conditions using techniques such as gross pathology, histology, cytology, cytopathology, clinical chemistry, immunology, flow cytometry, and molecular biology.
2. Examine microscopic samples to identify diseases or other abnormalities.
3. Consult with physicians about ordering and interpreting tests or providing treatments.
4. Communicate pathologic findings to surgeons or other physicians.
5. Write pathology reports summarizing analyses, results, and conclusions.
6. Analyze and interpret results from tests such as microbial or parasite tests, urine analyses, hormonal assays, fine needle aspirations (fnas), and polymerase chain reactions (pcrs).
7. Conduct genetic analyses of deoxyribonucleic acid ( DNA) or chromosomes to diagnose small biopsies and cell samples.
8. Diagnose infections, such as Hepatitis B and Acquired
9. Immune Deficiency Syndrome (AIDS), by conducting tests to detect the antibodies that patients' immune systems make to fight such infections.
10. Identify the etiology, pathogenesis, morphological change, and clinical significance of diseases.
11. Obtain specimens by performing procedures such as biopsies and fine need aspirations (fnas) of superficial nodules.

*Work Values:*

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1. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. **Independence** Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. **Recognition** Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

*Tools:*

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1. **Blood gas analyzers** In vitro blood gas analyzers
2. **Dropping pipettes** Automated pipettes; Disposable plastic pipettes; Gravimetric pipettes
3. **Immunology analyzers** Automated immunoassay analyzers; Chemiluminescent immunoassay analyzers; Fluorescence polarization immunoassay analyzers
4. **Microtomes** Freezing microtomes; Rotary microtomes; Sliding microtomes; Ultra microtomes
5. **Non vacuum blood collection tubes or containers** Sterile screw-cap cups; Sterile screw-cap glass tubes; Sterile screw-cap plastic tubes
6. **Temperature cycling chambers or thermal cyclers** Polymerase chain reaction PCR equipment; Thermal cyclers
7. **Vacuum blood collection tubes or containers** Clot tubes; Sterile vacutainer tubes

*Interests:*

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1. **Investigative:** Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.
2. **Realistic:** Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.



## Pediatrician

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**Diagnose, treat, and help prevent children's diseases and injuries.**

### *Common Tasks*

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1. Examine patients or order, perform, and interpret diagnostic tests to obtain information on medical condition and determine diagnosis.
2. Examine children regularly to assess their growth and development.
3. Prescribe or administer treatment, therapy, medication, vaccination, and other specialized medical care to treat or prevent illness, disease, or injury in infants and children.
4. Collect, record, and maintain patient information, such as medical history, reports, and examination results.
5. Advise patients, parents or guardians, and community members concerning diet, activity, hygiene, and disease prevention.
6. Treat children who have minor illnesses, acute and chronic health problems, and growth and development concerns.
7. Explain procedures and discuss test results or prescribed treatments with patients and parents or guardians.
8. Monitor patients' conditions and progress and reevaluate treatments as necessary.
9. Plan and execute medical care programs to aid in the mental and physical growth and development of children and adolescents.
10. Refer patient to medical specialist or other practitioner when necessary.

### *Skills Required:*

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1. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.



2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
5. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
6. Science: Using scientific rules and methods to solve problems.
7. Speaking: Talking to others to convey information effectively.
8. Coordination: Adjusting actions in relation to others' actions.
9. Instructing: Teaching others how to do something.
10. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

### *Abilities Required:*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. Written Comprehension: The ability to read and understand information and ideas presented in writing.
6. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
7. Written Expression: The ability to communicate information and ideas in writing so others will understand.
8. Speech Clarity: The ability to speak clearly so others can understand you.



9. Near Vision: The ability to see details at close range (within a few feet of the observer).
10. Speech Recognition: The ability to identify and understand the speech of another person.

### *Work Activities:*

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1. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
2. Assisting and Caring for Others: Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
5. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.
7. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
8. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
9. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
10. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.



### *Work Styles:*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Integrity Job requires being honest and ethical.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
8. Social Orientation Job requires preferring to work with others rather than alone, and being personally connected with others on the job.
9. Initiative Job requires a willingness to take on responsibilities and challenges.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

# Personal Financial Advisor

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**Advise clients on financial plans utilizing 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 to establish investment strategies.**



## *Common Tasks*

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1. Sell financial products such as stocks, bonds, mutual funds, and insurance if licensed to do so.
2. Build and maintain client bases, keeping current client plans up-to-date and recruiting new clients on an ongoing basis.
3. Analyze financial information obtained from clients to determine strategies for meeting clients' financial objectives.
4. Answer clients' questions about the purposes and details of financial plans and strategies.
5. Review clients' accounts and plans regularly to determine whether life changes, economic changes, or financial performance indicate a need for plan reassessment.
6. Interview clients to determine their current income, expenses, insurance coverage, tax status, financial objectives, risk tolerance, and other information needed to develop a financial plan.
7. Recommend strategies clients can use to achieve their financial goals and objectives, including specific recommendations in such areas as cash management, insurance coverage, and investment planning.
8. Implement financial planning recommendations, or refer clients to someone who can assist them with plan implementation.
9. Research and investigate available investment opportunities to determine whether they fit into financial plans.



10. Explain and document for clients the types of services that are to be provided, and the responsibilities to be taken by the personal financial advisor.

### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Time Management:** Managing one's own time and the time of others.
3. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
4. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. **Speaking:** Talking to others to convey information effectively.
6. **Mathematics:** Using mathematics to solve problems.
7. **Service Orientation:** Actively looking for ways to help people.
8. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
9. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. **Management of Financial Resources:** Determining how money will be spent to get the work done, and accounting for these expenditures.

### *Abilities Required*

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1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
5. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.



6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Speech Clarity: The ability to speak clearly so others can understand you.
8. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
9. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.
10. Speech Recognition: The ability to identify and understand the speech of another person.

### *Work Activities*

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
3. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
4. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. Judging the Qualities of Things, Services, or People Assessing the value, importance, or quality of things or people.
6. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
7. Developing Objectives and Strategies: Establishing long-range objectives and specifying the strategies and actions to achieve them.
8. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
9. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.
10. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.

### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Persistence Job requires persistence in the face of obstacles.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
10. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

### *Work Values*

---

1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Personnel Recruiter

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**Seek out, interview, and screen applicants to fill existing and future job openings and promote career opportunities within an organization.**

## *Common Tasks*

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1. Interview applicants to obtain information on work history, training, education, and job skills.
2. Review and evaluate applicant qualifications or eligibility for specified licensing, according to established guidelines and designated licensing codes.
3. Screen and refer applicants to hiring personnel in the organization, making hiring recommendations when appropriate.
4. Contact applicants to inform them of employment possibilities, consideration, and selection.
5. Conduct reference and background checks on applicants.
6. Advise managers and employees on staffing policies and procedures.
7. Inform potential applicants about facilities, operations, benefits, and job or career opportunities in organizations.
8. Perform searches for qualified candidates according to relevant job criteria, using computer databases, networking, Internet recruiting resources, cold calls, media, recruiting firms, and employee referrals.
9. Prepare and maintain employment records.
10. Hire applicants and authorize paperwork assigning them to positions.



### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
3. **Speaking:** Talking to others to convey information effectively.
4. **Service Orientation:** Actively looking for ways to help people.
5. **Negotiation:** Bringing others together and trying to reconcile differences.
6. **Time Management:** Managing one's own time and the time of others.
7. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
8. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
10. **Management of Personnel Resources:** Motivating, developing, and directing people as they work, identifying the best people for the job.

### *Abilities Required*

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1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Speech Clarity:** The ability to speak clearly so others can understand you.
4. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
5. **Speech Recognition:** The ability to identify and understand the speech of another person.
6. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
7. **Written Expression:** The ability to communicate information and ideas in writing so others



will understand.

8. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
9. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
10. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.

### *Work Activities*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Staffing Organizational Units** Recruiting, interviewing, selecting, hiring, and promoting employees in an organization.
3. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
5. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
6. **Judging the Qualities of Things, Services, or People** Assessing the value, importance, or quality of things or people.
7. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
8. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
9. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
10. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.



### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Integrity** Job requires being honest and ethical.
3. **Initiative** Job requires a willingness to take on responsibilities and challenges.
4. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
5. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. **Self-Control** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
7. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. **Persistence** Job requires persistence in the face of obstacles.
9. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
10. **Achievement/Effort** Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values*

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1. **Relationships** Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. **Independence** Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.



## Petroleum Engineer

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**Devise methods to improve oil and gas well production and determine the need for new or modified tool designs. Oversee drilling and offer technical advice to achieve economical and satisfactory progress.**

### *Common Tasks*

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1. Assess costs and estimate the production capabilities and economic value of oil and gas wells, to evaluate the economic viability of potential drilling sites.
2. Monitor production rates, and plan rework processes to improve production.
3. Analyze data to recommend placement of wells and supplementary processes to enhance production.
4. Specify and supervise well modification and stimulation programs to maximize oil and gas recovery.
5. Direct and monitor the completion and evaluation of wells, well testing, or well surveys.
6. Assist engineering and other personnel to solve operating problems.
7. Develop plans for oil and gas field drilling, and for product recovery and treatment.
8. Maintain records of drilling and production operations.
9. Confer with scientific, engineering, and technical personnel to resolve design, research, and testing problems.
10. Write technical reports for engineering and management personnel.

### *Skills Required:*

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1. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of



alternative solutions, conclusions or approaches to problems.

3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
5. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
6. Mathematics: Using mathematics to solve problems.
7. Coordination: Adjusting actions in relation to others' actions.
8. Science: Using scientific rules and methods to solve problems.
9. Troubleshooting: Determining causes of operating errors and deciding what to do about it.
10. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.

### ***Abilities Required:***

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1. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
5. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
6. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
7. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
8. Speech Clarity: The ability to speak clearly so others can understand you.



9. Flexibility of Closure: The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
10. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.

### *Work Activities:*

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1. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
2. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. Estimating the Quantifiable Characteristics of Products, Events, or Information: Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
7. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
8. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
9. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
10. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.

### *Work Styles:*

---

1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.



3. Initiative Job requires a willingness to take on responsibilities and challenges.
4. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
5. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
6. Integrity Job requires being honest and ethical.
7. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
8. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
10. Persistence Job requires persistence in the face of obstacles.

#### *Work Values:*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Pharmacist

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**Compound and dispense medications following prescriptions issued by physicians, dentists, or other authorized medical practitioners.**

## *Common Tasks*

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1. Review prescriptions to assure accuracy, to ascertain the needed ingredients, and to evaluate their suitability.
2. Provide information and advice regarding drug interactions, side effects, dosage and proper medication storage.
3. Assess the identity, strength and purity of medications.
4. Maintain records, such as pharmacy files, patient profiles, charge system files, inventories, control records for radioactive nuclei, and registries of poisons, narcotics, and controlled drugs.
5. Compound and dispense medications as prescribed by doctors and dentists, by calculating, weighing, measuring, and mixing ingredients, or oversee these activities.
6. Plan, implement, and maintain procedures for mixing, packaging, and labeling pharmaceuticals, according to policy and legal requirements, to ensure quality, security, and proper disposal.
7. Teach pharmacy students serving as interns in preparation for their graduation or licensure.
8. Advise customers on the selection of medication brands, medical equipment and health-care supplies.
9. Provide specialized services to help patients manage conditions such as diabetes, asthma, smoking cessation, or high blood pressure.



10. Collaborate with other health care professionals to plan, monitor, review, and evaluate the quality and effectiveness of drugs and drug regimens, providing advice on drug applications and characteristics.

### ***Skills Required:***

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Speaking:** Talking to others to convey information effectively.
3. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
4. **Mathematics:** Using mathematics to solve problems.
5. **Science:** Using scientific rules and methods to solve problems.
6. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
7. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
8. **Instructing:** Teaching others how to do something.
9. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
10. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.

### ***Abilities Required:***

---

1. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
3. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
4. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.



6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Near Vision: The ability to see details at close range (within a few feet of the observer).
8. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
9. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### *Work Activities:*

---

1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
3. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
4. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
6. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
7. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.
8. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
9. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
10. Assisting and Caring for Others: Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.





### *Work Styles:*

---

1. Integrity Job requires being honest and ethical.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
6. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Initiative Job requires a willingness to take on responsibilities and challenges.

### *Work Values:*

---

1. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

# Photographer

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**Photograph persons, subjects, merchandise, or other commercial products. May develop negatives and produce finished prints.**



## *Common Tasks*

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1. Take pictures of individuals, families, and small groups, either in studio or on location.
2. Adjust apertures, shutter speeds, and camera focus based on a combination of factors such as lighting, field depth, subject motion, film type, and film speed.
3. Use traditional or digital cameras, along with a variety of equipment such as tripods, filters, and flash attachments.
4. Create artificial light, using flashes and reflectors.
5. Determine desired images and picture composition, selecting and adjusting subjects, equipment, and lighting to achieve desired effects.
6. Scan photographs into computers for editing, storage, and electronic transmission.
7. Test equipment prior to use to ensure that it is in good working order.
8. Review sets of photographs to select the best work.
9. Estimate or measure light levels, distances, and numbers of exposures needed, using measuring devices and formulas.
10. Manipulate and enhance scanned or digital images to create desired effects, using computers and specialized software.

## *Skills Required*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
3. Persuasion: Persuading others to change their minds or behavior.
4. Speaking: Talking to others to convey information effectively.
5. Time Management: Managing one's own time and the time of others.
6. Coordination: Adjusting actions in relation to others' actions.
7. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
9. Equipment Selection: Determining the kind of tools and equipment needed to do a job.
10. Service Orientation: Actively looking for ways to help people.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Visualization The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
4. Originality: The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
5. Near Vision: The ability to see details at close range (within a few feet of the observer).
6. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
7. Speech Clarity: The ability to speak clearly so others can understand you.
8. Visual Color Discrimination The ability to match or detect differences between colors, including shades of color and brightness.



9. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
10. **Arm-Hand Steadiness** The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.

### *Work Activities*

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1. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
2. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
3. **Inspecting Equipment, Structures, or Material:** Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
4. **Training and Teaching Others:** Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.
5. **Selling or Influencing Others:** Convincing others to buy merchandise/goods or to otherwise change their minds or actions.
6. **Performing General Physical Activities:** Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
7. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
8. **Coaching and Developing Others:** Identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills.
9. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
10. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.

### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
3. **Cooperation** Job requires being pleasant with others on the job and displaying a good-



natured, cooperative attitude.

4. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
5. Integrity Job requires being honest and ethical.
6. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
9. Persistence Job requires persistence in the face of obstacles.
10. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Photonics Engineer

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**Apply knowledge of engineering and mathematical theory and methods to design technologies specializing in light information and light energy.**

## *Common Tasks*

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1. Design, integrate, or test photonics systems and components.
2. Develop optical or imaging systems such as optical imaging products, optical components, image processes, signal process technologies, and optical systems.
3. Analyze system performance or operational requirements.
4. Write reports or research proposals.
5. Assist in the transition of photonic prototypes to production.
6. Develop and test photonic prototypes or models.
7. Conduct testing to determine functionality and optimization or to establish limits of photonics systems or components.
8. Design electro-optical sensing or imaging systems.
9. Read current literature, talk with colleagues, continue education, or participate in professional organizations or conferences to keep abreast of developments in the field.
10. Conduct research on new photonics technologies.

### *Abilities Required*

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1. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
2. **Mathematical Reasoning:** The ability to choose the right mathematical methods or formulas to solve a problem.
3. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
4. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
6. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. **Number Facility:** The ability to add, subtract, multiply, or divide quickly and correctly.
8. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
9. **Originality:** The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
10. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.

### *Work Activities*

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1. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
2. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
3. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
4. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
5. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.



6. Estimating the Quantifiable Characteristics of Products, Events, or Information: Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
7. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
8. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
9. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
10. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.

### *Work Styles*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
4. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Integrity Job requires being honest and ethical.
7. Persistence Job requires persistence in the face of obstacles.
8. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.



### *Work Values*

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1. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. **Independence** Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. **Working Conditions** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Physical Therapist

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**Assess, plan, organize, and participate in rehabilitative programs that improve mobility, relieve pain, increase strength, and decrease or prevent deformity of patients suffering from disease or injury.**

## *Common Tasks*

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1. Perform and document an initial exam, evaluating data to identify problems and determine a diagnosis prior to intervention.
2. Plan, prepare and carry out individually designed programs of physical treatment to maintain, improve or restore physical functioning, alleviate pain and prevent physical dysfunction in patients.
3. Record prognosis, treatment, response, and progress in patient's chart or enter information into computer.
4. Identify and document goals, anticipated progress and plans for reevaluation.
5. Administer manual exercises, massage or traction to help relieve pain, increase patient strength, or decrease or prevent deformity or crippling.
6. Evaluate effects of treatment at various stages and adjust treatments to achieve maximum benefit.
7. Test and measure patient's strength, motor development and function, sensory perception, functional capacity, and respiratory and circulatory efficiency and record data.
8. Instruct patient and family in treatment procedures to be continued at home.
9. Confer with the patient, medical practitioners and appropriate others to plan, implement and assess the intervention program.
10. Review physician's referral and patient's medical records to help determine diagnosis and physical therapy treatment required.



### *Skills Required:*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Speaking:** Talking to others to convey information effectively.
3. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
4. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
6. **Time Management:** Managing one's own time and the time of others.
7. **Coordination:** Adjusting actions in relation to others' actions.
8. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
10. **Service Orientation:** Actively looking for ways to help people.

### *Abilities Required:*

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1. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
2. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
4. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
6. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.



7. **Speech Clarity:** The ability to speak clearly so others can understand you.
8. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
9. **Speech Recognition:** The ability to identify and understand the speech of another person.
10. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.

### ***Work Activities:***

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1. **Assisting and Caring for Others:** Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
2. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
3. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
4. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
5. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
6. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
7. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
8. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
9. **Performing General Physical Activities:** Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
10. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.

### ***Work Styles:***

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1. **Concern for Others** Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.



2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Integrity Job requires being honest and ethical.
4. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
5. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
6. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
7. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
8. Social Orientation Job requires preferring to work with others rather than alone, and being personally connected with others on the job.
9. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

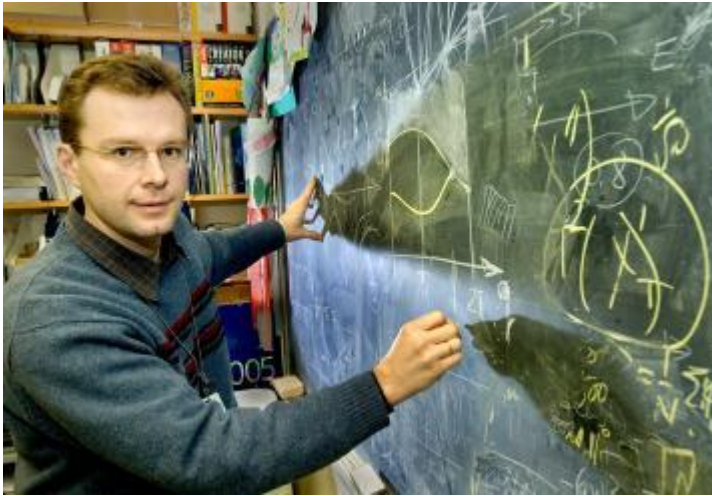
### *Work Values:*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Physicist

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**Conduct research into the phases of physical phenomena, develop theories and laws on the basis of observation and experiments, and devise methods to apply laws and theories to industry and other fields.**

## *Common Tasks*

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1. Perform complex calculations as part of the analysis and evaluation of data, using computers.
2. Describe and express observations and conclusions in mathematical terms.
3. Analyze data from research conducted to detect and measure physical phenomena.
4. Report experimental results by writing papers for scientific journals or by presenting information at scientific conferences.
5. Design computer simulations to model physical data so that it can be better understood.
6. Collaborate with other scientists in the design, development, and testing of experimental, industrial, or medical equipment, instrumentation, and procedures.
7. Direct testing and monitoring of contamination of radioactive equipment, and recording of personnel and plant area radiation exposure data.
8. Observe the structure and properties of matter, and the transformation and propagation of energy, using equipment such as masers, lasers, and telescopes, in order to explore and identify the basic principles governing these phenomena.
9. Develop theories and laws on the basis of observation and experiments, and apply these theories and laws to problems in areas such as nuclear energy, optics, and aerospace technology.
10. Teach physics to students.

### *Skills Required*

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1. Science: Using scientific rules and methods to solve problems.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Mathematics: Using mathematics to solve problems.
4. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
7. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
8. Speaking: Talking to others to convey information effectively.
9. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
10. Programming: Writing computer programs for various purposes.

### *Abilities Required*

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1. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
2. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
3. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Written Comprehension: The ability to read and understand information and ideas presented in writing.
6. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
7. Oral Expression: The ability to communicate information and ideas in speaking so others will



understand.

8. **Originality:** The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
9. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
10. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### *Work Activities*

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1. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
2. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
4. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
6. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
7. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
8. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
9. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
10. **Estimating the Quantifiable Characteristics of Products, Events, or Information:** Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.

### *Work Styles*

---

1. **Attention to Detail** Job requires being careful about detail and thorough in completing work





tasks.

2. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
3. Initiative Job requires a willingness to take on responsibilities and challenges.
4. Persistence Job requires persistence in the face of obstacles.
5. Integrity Job requires being honest and ethical.
6. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
7. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
8. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.

### *Work Values*

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1. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.



## Political Scientist

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**Study the origin, development, and operation of political systems. Research a wide range of subjects, such as relations between the United States and foreign countries, the beliefs and institutions of foreign nations, or the politics of small towns or a major metropolis.**

**May study topics, such as public opinion, political decision making, 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.**

### *Common Tasks*

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1. Teach political science.
2. Disseminate research results through academic publications, written reports, or public presentations.
3. Identify issues for research and analysis.
4. Develop and test theories, using information from interviews, newspapers, periodicals, case law, historical papers, polls, and/or statistical sources.
5. Maintain current knowledge of government policy decisions.
6. Collect, analyze, and interpret data such as election results and public opinion surveys; report on findings, recommendations, and conclusions.
7. Interpret and analyze policies, public issues, legislation, and/or the operations of governments, businesses, and organizations.
8. Evaluate programs and policies, and make related recommendations to institutions and organizations.
9. Write drafts of legislative proposals, and prepare speeches, correspondence, and policy papers for governmental use.
10. Forecast political, economic, and social trends.

### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Speaking: Talking to others to convey information effectively.
5. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
6. Instructing: Teaching others how to do something.
7. Time Management: Managing one's own time and the time of others.
8. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
9. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
10. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.

### *Abilities Required*

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1. Written Comprehension: The ability to read and understand information and ideas presented in writing.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. Written Expression: The ability to communicate information and ideas in writing so others will understand.
5. Speech Clarity: The ability to speak clearly so others can understand you.
6. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
7. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.



8. Near Vision: The ability to see details at close range (within a few feet of the observer).
9. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
10. Speech Recognition: The ability to identify and understand the speech of another person.

### *Work Activities*

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
3. Training and Teaching Others: Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.
4. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
5. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
6. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
7. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
8. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.
9. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
10. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.

### *Work Styles*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Integrity Job requires being honest and ethical.
3. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.



4. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Persistence Job requires persistence in the face of obstacles.
7. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
8. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
9. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Precision Agriculture Technician

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**Apply geospatial technologies, including geographic information systems (GIS) and Global Positioning System (GPS), to agricultural production and management activities, such as pest scouting, site-specific pesticide application, yield mapping, and variable-rate irrigation. May use computers to develop and analyze maps and remote sensing images to compare physical topography with data on soils, fertilizer, pests or weather.**

## *Common Tasks*

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1. Collect information about soil and field attributes, yield data, or field boundaries, using field data recorders and basic geographic information systems (GIS).
2. Create, layer, and analyze maps showing precision agricultural data such as crop yields, soil characteristics, input applications, terrain, drainage patterns and field management history.
3. Document and maintain records of precision agriculture information.
4. Compile and analyze geospatial data to determine agricultural implications of factors such as soil quality, terrain, field productivity, fertilizers, and weather conditions.
5. Divide agricultural fields into geo-referenced zones based on soil characteristics and production potentials.
6. Develop soil sampling grids or identify sampling sites, using geospatial technology, for soil testing on characteristics such as nitrogen, phosphorus, and potassium content, pH, and micronutrients.
7. Compare crop yield maps with maps of soil test data, chemical application patterns, or other information to develop site-specific crop management plans.
8. Apply knowledge of government regulations when making agricultural recommendations.
9. Draw and read maps such as soil, contour, and plat maps.
10. Recommend best crop varieties and seeding rates for specific field areas, based on analysis of geospatial data.



### *Abilities Required*

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1. Near Vision: The ability to see details at close range (within a few feet of the observer).
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Written Expression: The ability to communicate information and ideas in writing so others will understand.
8. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
10. Speech Clarity: The ability to speak clearly so others can understand you.

### *Work Activities*

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1. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
4. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
5. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
7. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
9. **Provide Consultation and Advice to Others:** Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.
10. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.





### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Persistence Job requires persistence in the face of obstacles.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values*

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1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.

# Psychiatrist

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**Diagnose, treat, and help prevent disorders of the mind.**

## *Common Tasks*

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1. Prescribe, direct, and administer psychotherapeutic treatments or medications to treat mental, emotional, or behavioral disorders.
2. Analyze and evaluate patient data and test findings to diagnose nature and extent of mental disorder.
3. Collaborate with physicians, psychologists, social workers, psychiatric nurses, or other professionals to discuss treatment plans and progress.
4. Design individualized care plans, using a variety of treatments.
5. Gather and maintain patient information and records, including social and medical history obtained from patients, relatives, and other professionals.
6. Counsel outpatients and other patients during office visits.
7. Examine or conduct laboratory or diagnostic tests on patient to provide information on general physical condition and mental disorder.
8. Advise and inform guardians, relatives, and significant others of patients' conditions and treatment.
9. Teach, take continuing education classes, attend conferences and seminars, and conduct research and publish findings to increase understanding of mental, emotional, and behavioral states and disorders.



10. Review and evaluate treatment procedures and outcomes of other psychiatrists and medical professionals.

### *Skills Required:*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Social Perceptiveness:** Being aware of others' reactions and understanding why they react as they do.
3. **Speaking:** Talking to others to convey information effectively.
4. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
6. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
7. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
8. **Judgment and Decision Making:** Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. **Monitoring:** Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
10. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.



### *Abilities Required:*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
5. Written Expression: The ability to communicate information and ideas in writing so others will understand.
6. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
7. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. Speech Recognition: The ability to identify and understand the speech of another person.
9. Speech Clarity: The ability to speak clearly so others can understand you.
10. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### *Work Activities:*

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1. Assisting and Caring for Others: Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
4. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
5. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.



6. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
7. Judging the Qualities of Things, Services, or People Assessing the value, importance, or quality of things or people.
8. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
10. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.

### *Work Styles:*

---

1. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. Integrity Job requires being honest and ethical.
3. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
4. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
6. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
7. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Persistence Job requires persistence in the face of obstacles.

*Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Public Relations Managers

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**Plan and direct public relations programs designed to create and maintain a favorable public image for employer or client; or if engaged in fundraising, plan and direct activities to solicit and maintain funds for special projects and nonprofit organizations.**

## *Common Tasks*

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1. Establish and maintain effective working relationships with clients, government officials, and media representatives and use these relationships to develop new business opportunities.
2. Write interesting and effective press releases, prepare information for media kits and develop and maintain company internet or intranet web pages.
3. Identify main client groups and audiences, determine the best way to communicate publicity information to them, and develop and implement a communication plan.
4. Assign, supervise and review the activities of public relations staff.
5. Develop and maintain the company's corporate image and identity, which includes the use of logos and signage.
6. Respond to requests for information about employers' activities or status.
7. Manage communications budgets.
8. Direct activities of external agencies, establishments and departments that develop and implement communication strategies and information programs.
9. Draft speeches for company executives, and arrange interviews and other forms of contact for them.
10. Evaluate advertising and promotion programs for compatibility with public relations efforts.



### *Skills Required*

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1. Speaking: Talking to others to convey information effectively.
2. Time Management: Managing one's own time and the time of others.
3. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
4. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
5. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
6. Coordination: Adjusting actions in relation to others' actions.
7. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. Persuasion: Persuading others to change their minds or behavior.
9. Service Orientation: Actively looking for ways to help people.
10. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.

### *Abilities Required*

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Speech Clarity: The ability to speak clearly so others can understand you.
3. Written Expression: The ability to communicate information and ideas in writing so others will understand.
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Written Comprehension: The ability to read and understand information and ideas presented in writing.
6. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
7. Speech Recognition: The ability to identify and understand the speech of another person.





8. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
9. **Fluency of Ideas:** The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
10. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

### *Work Activities*

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1. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
2. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
3. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
5. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
6. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
7. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
8. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
9. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
10. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.

### *Work Styles*

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1. **Attention to Detail** Job requires being careful about detail and thorough in completing work



tasks.

2. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. **Integrity** Job requires being honest and ethical.
4. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. **Initiative** Job requires a willingness to take on responsibilities and challenges.
7. **Achievement/Effort** Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. **Concern for Others** Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
10. **Independence** Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values*

---

1. **Working Conditions** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. **Independence** Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. **Relationships** Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

# Public Relations Specialist

---

**Plan and direct public relations programs designed to create and maintain a favorable public image for employer or client; or if engaged in fundraising, plan and direct activities to solicit and maintain funds for special projects and nonprofit organizations.**



## *Common Tasks*

---

1. Establish and maintain effective working relationships with clients, government officials, and media representatives and use these relationships to develop new business opportunities.
2. Write interesting and effective press releases, prepare information for media kits and develop and maintain company internet or intranet web pages.
3. Identify main client groups and audiences, determine the best way to communicate publicity information to them, and develop and implement a communication plan.
4. Assign, supervise and review the activities of public relations staff.
5. Develop and maintain the company's corporate image and identity, which includes the use of logos and signage.
6. Respond to requests for information about employers' activities or status.
7. Manage communications budgets.
8. Direct activities of external agencies, establishments and departments that develop and implement communication strategies and information programs.
9. Draft speeches for company executives, and arrange interviews and other forms of contact for them.
10. Evaluate advertising and promotion programs for compatibility with public relations efforts.

## *Skills Required*

---



1. Speaking: Talking to others to convey information effectively.
2. Time Management: Managing one's own time and the time of others.
3. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
4. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
5. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
6. Coordination: Adjusting actions in relation to others' actions.
7. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. Persuasion: Persuading others to change their minds or behavior.
9. Service Orientation: Actively looking for ways to help people.
10. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.

### *Abilities Required*

---

1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Speech Clarity: The ability to speak clearly so others can understand you.
3. Written Expression: The ability to communicate information and ideas in writing so others will understand.
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Written Comprehension: The ability to read and understand information and ideas presented in writing.
6. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
7. Speech Recognition: The ability to identify and understand the speech of another person.
8. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.



9. Fluency of Ideas: The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
10. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

### *Work Activities*

---

1. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
2. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
3. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
4. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
5. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
6. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
7. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
8. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
9. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
10. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.

### *Work Styles*

---

1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling



obligations.

3. Integrity Job requires being honest and ethical.
4. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
10. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values*

---

1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

# Radio and Television Announcer

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**Talk on radio or television. May interview guests, act as master of ceremonies, read news flashes, identify station by giving call letters, or announce song title and artist.**

## *Common Tasks*

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1. Prepare and deliver news, sports, and/or weather reports, gathering and rewriting material so that it will convey required information and fit specific time slots.
2. Read news flashes to inform audiences of important events.
3. Identify stations, and introduce or close shows, using memorized or read scripts, and/or ad-libs.
4. Select program content, in conjunction with producers and assistants, based on factors such as program specialties, audience tastes, or requests from the public.
5. Study background information in order to prepare for programs or interviews.
6. Comment on music and other matters, such as weather or traffic conditions.
7. Interview show guests about their lives, their work, or topics of current interest.
8. Discuss various topics over the telephone with viewers or listeners.
9. Host civic, charitable, or promotional events that are broadcast over television or radio.
10. Make promotional appearances at public or private events in order to represent their employers.



### *Skills Required*

---

1. Speaking: Talking to others to convey information effectively.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Time Management: Managing one's own time and the time of others.
4. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
5. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
6. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
7. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
9. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
10. Coordination: Adjusting actions in relation to others' actions.

### *Abilities Required*

---

1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Speech Clarity: The ability to speak clearly so others can understand you.
3. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
5. Speech Recognition: The ability to identify and understand the speech of another person.
6. Written Expression: The ability to communicate information and ideas in writing so others will understand.
7. Originality: The ability to come up with unusual or clever ideas about a given topic or





situation, or to develop creative ways to solve a problem.

8. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
9. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
10. **Near Vision:** The ability to see details at close range (within a few feet of the observer).

### *Work Activities*

---

1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
3. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
4. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
5. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
7. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
9. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.

### *Work Styles*

---

1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Integrity** Job requires being honest and ethical.
3. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
4. **Initiative** Job requires a willingness to take on responsibilities and challenges.
5. **Self-Control** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
6. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
9. **Independence** Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. **Innovation** Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.

### *Work Values*

---

1. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. **Recognition** Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. **Independence** Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Radiologist

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**Examine and diagnose disorders and diseases using x-rays and radioactive materials. May treat patients.**

## *Common Tasks*

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1. Perform or interpret the outcomes of diagnostic imaging procedures including magnetic resonance imaging (MRI), computer tomography (CT), positron emission tomography (PET), nuclear cardiology treadmill studies, mammography, or ultrasound.
2. Perform interventional procedures such as image-guided biopsy, percutaneous transluminal angioplasty, transhepatic biliary drainage, and nephrostomy catheter placement.
3. Communicate examination results or diagnostic information to referring physicians, patients, or families.
4. Coordinate radiological services with other medical activities.
5. Provide counseling to radiologic patients to explain the processes, risks, benefits, or alternative treatments.
6. Develop or monitor procedures to ensure adequate quality control of images.
7. Document the performance, interpretation, or outcomes of all procedures performed.
8. Evaluate medical information to determine patients' risk factors, such as allergies to contrast agents, or to make decisions regarding the appropriateness of procedures.
9. Confer with medical professionals regarding image-based diagnoses.
10. Instruct radiologic staff in desired techniques, positions, or projections.

### *Work Values*

---

1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Regulatory Affairs Specialist

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**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.**

## *Common Tasks*

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1. Coordinate, prepare, or review regulatory submissions for domestic or international projects.
2. Provide technical review of data or reports that will be incorporated into regulatory submissions to assure scientific rigor, accuracy, and clarity of presentation.
3. Review product promotional materials, labeling, batch records, specification sheets, or test methods for compliance with applicable regulations and policies.
4. Maintain current knowledge base of existing and emerging regulations, standards, or guidance documents.
5. Interpret regulatory rules or rule changes and ensure that they are communicated through corporate policies and procedures.
6. Determine the types of regulatory submissions or internal documentation that are required in situations such as proposed device changes and labeling changes.
7. Advise project teams on subjects such as premarket regulatory requirements, export and labeling requirements, and clinical study compliance issues.
8. Prepare or maintain technical files as necessary to obtain and sustain product approval.
9. Coordinate efforts associated with the preparation of regulatory documents or submissions.
10. Prepare or direct the preparation of additional information or responses as requested by regulatory agencies.

## *Abilities Required*

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1. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
2. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
3. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
4. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
5. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
6. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
7. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
10. **Speech Clarity:** The ability to speak clearly so others can understand you.

### *Work Activities*

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1. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
4. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
5. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize,



organize, and accomplish your work.

7. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
8. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
9. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
10. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.

### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
5. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
6. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Persistence Job requires persistence in the face of obstacles.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values*

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1. **Working Conditions** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. **Independence** Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. **Support** Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.



# Rehabilitation Counselor

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**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, 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.**



## *Common Tasks*

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1. Monitor and record clients' progress to ensure that goals and objectives are met.
2. Confer with clients to discuss their options and goals so that rehabilitation programs and plans for accessing needed services can be developed.
3. Prepare and maintain records and case files, including documentation such as clients' personal and eligibility information, services provided, narratives of client contacts, and relevant correspondence.
4. Arrange for physical, mental, academic, vocational, and other evaluations to obtain information for assessing clients' needs and developing rehabilitation plans.
5. Analyze information from interviews, educational and medical records, consultation with other professionals, and diagnostic evaluations to assess clients' abilities, needs, and eligibility for services.
6. Develop rehabilitation plans that fit clients' aptitudes, education levels, physical abilities, and career goals.
7. Maintain close contact with clients during job training and placements to resolve problems and evaluate placement adequacy.
8. Develop and maintain relationships with community referral sources, such as schools and community groups.



9. Locate barriers to client employment, such as inaccessible work sites, inflexible schedules, and transportation problems, and work with clients to develop strategies for overcoming these barriers.
10. Arrange for on-site job coaching or assistive devices, such as specially equipped wheelchairs, to help clients adapt to work or school environments.

### *Skills Required*

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1. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
2. Time Management: Managing one's own time and the time of others.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Speaking: Talking to others to convey information effectively.
5. Coordination: Adjusting actions in relation to others' actions.
6. Service Orientation: Actively looking for ways to help people.
7. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
8. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
9. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
10. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Speech Recognition: The ability to identify and understand the speech of another person.
4. Speech Clarity: The ability to speak clearly so others can understand you.
5. Written Expression: The ability to communicate information and ideas in writing so others



will understand.

6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Near Vision: The ability to see details at close range (within a few feet of the observer).
8. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
9. Written Comprehension: The ability to read and understand information and ideas presented in writing.
10. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.

### *Work Activities*

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1. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
4. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. Provide Consultation and Advice to Others: Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.
6. Coaching and Developing Others: Identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills.
7. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
8. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
9. Performing Administrative Activities: Performing day-to-day administrative tasks such as maintaining information files and processing paperwork.
10. Scheduling Work and Activities: Scheduling events, programs, and activities, as well as the work of others.

### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Self-Control** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
3. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
4. **Concern for Others** Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
5. **Integrity** Job requires being honest and ethical.
6. **Social Orientation** Job requires preferring to work with others rather than alone, and being personally connected with others on the job.
7. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.
8. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. **Initiative** Job requires a willingness to take on responsibilities and challenges.
10. **Independence** Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.

### *Work Values*

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1. **Relationships** Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. **Support** Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.



## Reporter and Correspondent

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**Collect and analyze facts about newsworthy events by interview, investigation, or observation. Report and write stories for newspaper, news magazine, radio, or television.**

### *Common Tasks*

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1. Report and write news stories for publication or broadcast, describing the background and details of events.
2. Arrange interviews with people who can provide information about a particular story.
3. Review copy and correct errors in content, grammar, and punctuation, following prescribed editorial style and formatting guidelines.
4. Review and evaluate notes taken about event aspects in order to isolate pertinent facts and details.
5. Determine a story's emphasis, length, and format, and organize material accordingly.
6. Research and analyze background information related to stories in order to be able to provide complete and accurate information.
7. Gather information about events through research, interviews, experience, and attendance at political, news, sports, artistic, social, and other functions.
8. Investigate breaking news developments such as disasters, crimes, and human interest stories.
9. Research and report on specialized fields such as medicine, science and technology, politics, foreign affairs, sports, arts, consumer affairs, business, religion, crime, or education.
10. Receive assignments or evaluate leads and tips in order to develop story ideas.



### *Skills Required*

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1. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Time Management: Managing one's own time and the time of others.
5. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
6. Speaking: Talking to others to convey information effectively.
7. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
8. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
9. Coordination: Adjusting actions in relation to others' actions.
10. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
3. Speech Clarity: The ability to speak clearly so others can understand you.
4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
5. Written Expression: The ability to communicate information and ideas in writing so others will understand.
6. Speech Recognition: The ability to identify and understand the speech of another person.
7. Inductive Reasoning: The ability to combine pieces of information to form general rules or



conclusions (includes finding a relationship among seemingly unrelated events).

8. Near Vision: The ability to see details at close range (within a few feet of the observer).
9. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
10. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### *Work Activities*

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1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
3. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.
4. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
5. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
6. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
7. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
8. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
9. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
10. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Initiative Job requires a willingness to take on responsibilities and challenges.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Persistence Job requires persistence in the face of obstacles.
5. Integrity Job requires being honest and ethical.
6. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Risk Management Specialist

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**Analyze and make decisions on risk management issues by identifying, measuring and managing operational and enterprise risks for an organization.**

## *Common Tasks*

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1. Confer with traders to identify and communicate risks associated with specific trading strategies and positions.
2. Identify and analyze areas of potential risk to the assets, earning capacity, or success of organizations.
3. Identify key risks and mitigating factors of potential investments, such as asset types and values, legal and ownership structures, professional reputations, customer bases, or industry segments.
4. Conduct statistical analyses to quantify risk, using statistical analysis software and econometric models.
5. Document, and ensure communication of, key risks.
6. Devise systems and processes to monitor validity of risk modeling outputs.
7. Develop and implement risk-assessment models and methodologies.
8. Gather risk-related data from internal or external resources.
9. Plan, and contribute to development of, risk management systems.
10. Produce reports and presentations that outline findings, explain risk positions, and recommend changes.

### *Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

### *Tools*

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1. Desktop computers Notebook computers Laptop computers
2. Photocopiers Photocopying equipment
3. Scanners Computer data input scanners
4. Special purpose telephones Multi-line telephone systems

### *Technology*

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1. Analytical or scientific software Aptech Systems GAUSS software; SAS software; statacorp Stata; The mathworks MATLAB
2. Data base user interface and query software Microsoft Access; Structured query language SQL
3. Development environment software Microsoft Visual Basic; Ruby \*
4. Information retrieval or search software Factiva; Standard & Poor's Capital IQ Compustat; Standard & Poor's Capital IQ software
5. Object or component oriented development software C++; Practical extraction and reporting language Perl

### *Interests*

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1. **Conventional** Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.
2. **Enterprising** Enterprising occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business.
3. **Investigative:** Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.

# Robotic Engineer

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**Research, design, develop, and test robotic applications.**

## *Common Tasks*

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1. Build, configure, and test robots.
2. Design robotic systems such as automatic vehicle control, autonomous vehicles, advanced displays, advanced sensing, robotic platforms, computer vision, and telematics systems.
3. Design software to control robotic systems for applications such as military defense and manufacturing.
4. Design automated robotic systems to increase production volume and precision in high-throughput operations such as automated ribonucleic acid (RNA) analysis; or sorting, moving, and stacking production materials.
5. Analyze and evaluate robotic systems or prototypes.
6. Automate assays on laboratory robotics.
7. Conduct research into the feasibility, design, operation, or performance of robotic mechanisms, components, or systems such as planetary rovers, multiple mobile robots, reconfigurable robots, and man-machine interactions.
8. Conduct research on robotic technology to create new robotic systems or system capabilities.
9. Debug robotics programs.
10. Design end-of-arm tooling.

## *Work Values:*

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1. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

### *Abilities*

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1. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. Visualization The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
6. Written Comprehension: The ability to read and understand information and ideas presented in writing.
7. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
8. Finger Dexterity The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.
9. Near Vision: The ability to see details at close range (within a few feet of the observer).
10. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.



2. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment: Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.
5. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
6. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
7. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
8. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
9. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
10. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.

# Rotary Drill Operator, Oil and Gas

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**Set up or operate a variety of drills to remove petroleum products from the earth and to find and remove core samples for testing during oil and gas exploration.**



## *Common Tasks*

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1. Train crews, and introduce procedures to make drill work more safe and effective.
2. Observe pressure gauge and move throttles and levers in order to control the speed of rotary tables, and to regulate pressure of tools at bottoms of boreholes.
3. Count sections of drill rod in order to determine depths of boreholes.
4. Push levers and brake pedals in order to control gasoline, diesel, electric, or steam draw works that lower and raise drill pipes and casings in and out of wells.
5. Connect sections of drill pipe, using hand tools and powered wrenches and tongs.
6. Maintain records of footage drilled, location and nature of strata penetrated, materials and tools used, services rendered, and time required.
7. Maintain and adjust machinery in order to ensure proper performance.
8. Start and examine operation of slush pumps in order to ensure circulation and consistency of drilling fluid or mud in well.
9. Locate and recover lost or broken bits, casings, and drill pipes from wells, using special tools.
10. Weigh clay, and mix with water and chemicals to make drilling mud.

## *Skills Required*

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1. **Equipment Maintenance** Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
2. **Instructing:** Teaching others how to do something.
3. **Operation Monitoring:** Watching gauges, dials, or other indicators to make sure a machine is working properly.
4. **Repairing** Repairing machines or systems using the needed tools.
5. **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.
6. **Learning Strategies:** Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
7. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
8. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
10. **Coordination:** Adjusting actions in relation to others' actions.

### ***Abilities Required***

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1. **Control Precision:** The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
2. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
4. **Arm-Hand Steadiness** The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
5. **Manual Dexterity** The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
6. **Multilimb Coordination:** The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.
7. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern



according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

8. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
9. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
10. Finger Dexterity The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.

### *Work Activities*

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1. Inspecting Equipment, Structures, or Material: Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
2. Controlling Machines and Processes Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
3. Handling and Moving Objects Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
4. Performing General Physical Activities: Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
5. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
6. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
7. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
8. Repairing and Maintaining Mechanical Equipment Servicing, repairing, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily on the basis of mechanical (not electronic) principles.
9. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
10. Operating Vehicles, Mechanized Devices, or Equipment Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.

### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
3. **Leadership** Job requires a willingness to lead, take charge, and offer opinions and direction.
4. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
5. **Initiative** Job requires a willingness to take on responsibilities and challenges.
6. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
7. **Integrity** Job requires being honest and ethical.
8. **Analytical Thinking** Job requires analyzing information and using logic to address work-related issues and problems.
9. **Self-Control** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
10. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.

### *Work Values*

---

1. **Support** Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. **Relationships** Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. **Working Conditions** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

# Security Management Specialist

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**Conduct security assessments for organizations, and design security systems and processes. May specialize in areas such as physical security, personnel security, and information security. May work in fields such as health care, banking, gaming, security engineering, or manufacturing.**

## *Common Tasks*

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1. Conduct security audits to identify potential problems related to physical security, staff safety, or asset protection.
2. Design or implement security systems, video surveillance, motion detection, or closed-circuit television systems to ensure proper installation and operation.
3. Design security policies, programs, or practices to ensure adequate security relating to issues such as protection of assets, alarm response, and access card use.
4. Develop or review specifications for design or construction of security systems.
5. Recommend improvements in security systems or procedures.
6. Engineer, install, maintain, or repair security systems, programmable logic controls, or other security-related electronic systems.
7. Inspect fire, intruder detection, or other security systems.
8. Inspect security design features, installations, or programs to ensure compliance with applicable standards or regulations.
9. Monitor the work of contractors in the design, construction, and startup phases of security systems.
10. Prepare, maintain, or update security procedures, security system drawings, or related documentation.

## *Work Values*

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1. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
2. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

### *Interests*

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1. Realistic: Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.
2. Investigative: Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.
3. Conventional Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.

# Ship Engineer

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**Supervise and coordinate activities of crew engaged in operating and maintaining engines, boilers, deck machinery, and electrical, sanitary, and refrigeration equipment aboard ship.**



## *Common Tasks*

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1. Monitor the availability, use, and condition of lifesaving equipment and pollution preventatives, in order to ensure that international regulations are followed.
2. Monitor engine, machinery, and equipment indicators when vessels are underway, and report abnormalities to appropriate shipboard staff.
3. Maintain electrical power, heating, ventilation, refrigeration, water, and sewerage systems.
4. Record orders for changes in ship speed and direction, and note gauge readings and test data, such as revolutions per minute and voltage output, in engineering logs and bellbooks.
5. Perform and participate in emergency drills as required.
6. Maintain complete records of engineering department activities, including machine operations.
7. Start engines to propel ships, and regulate engines and power transmissions to control speeds of ships, according to directions from captains or bridge computers.
8. Monitor and test operations of engines and other equipment so that malfunctions and their causes can be identified.
9. Maintain and repair engines, electric motors, pumps, winches and other mechanical and electrical equipment, or assist other crew members with maintenance and repair duties.
10. Perform general marine vessel maintenance and repair work such as repairing leaks, finishing interiors, refueling, and maintaining decks.



### *Skills Required*

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1. **Equipment Maintenance** Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
2. **Operation Monitoring:** Watching gauges, dials, or other indicators to make sure a machine is working properly.
3. **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.
4. **Repairing** Repairing machines or systems using the needed tools.
5. **Installation** Installing equipment, machines, wiring, or programs to meet specifications.
6. **Operation and Control:** Controlling operations of equipment or systems.
7. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. **Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.
9. **Instructing:** Teaching others how to do something.
10. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.

### *Abilities Required*

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1. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
4. **Control Precision:** The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
5. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
6. **Speech Clarity:** The ability to speak clearly so others can understand you.
7. **Arm-Hand Steadiness** The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.



8. **Speech Recognition:** The ability to identify and understand the speech of another person.
9. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
10. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.

### *Work Activities*

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1. **Inspecting Equipment, Structures, or Material:** Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
2. **Repairing and Maintaining Mechanical Equipment** Servicing, repairing, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily on the basis of mechanical (not electronic) principles.
3. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
4. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
5. **Controlling Machines and Processes** Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
6. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
7. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
9. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
10. **Performing General Physical Activities:** Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.

### *Work Styles*

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1. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.





2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
4. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
5. Persistence Job requires persistence in the face of obstacles.
6. Integrity Job requires being honest and ethical.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

### *Work Values*

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1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.



## Sociologist

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**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.**

### *Common Tasks*

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1. Prepare publications and reports containing research findings.
2. Analyze and interpret data in order to increase the understanding of human social behavior.
3. Plan and conduct research to develop and test theories about societal issues such as crime, group relations, poverty, and aging.
4. Collect data about the attitudes, values, and behaviors of people in groups, using observation, interviews, and review of documents.
5. Develop, implement, and evaluate methods of data collection, such as questionnaires or interviews.
6. Teach sociology.
7. Direct work of statistical clerks, statisticians, and others who compile and evaluate research data.
8. Consult with and advise individuals such as administrators, social workers, and legislators regarding social issues and policies, as well as the implications of research findings.
9. Collaborate with research workers in other disciplines.
10. Develop approaches to the solution of groups' problems, based on research findings in sociology and related disciplines.

### *Skills Required*

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1. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.



2. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
5. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. Science: Using scientific rules and methods to solve problems.
7. Time Management: Managing one's own time and the time of others.
8. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
9. Speaking: Talking to others to convey information effectively.
10. Instructing: Teaching others how to do something.

### *Abilities Required*

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Written Comprehension: The ability to read and understand information and ideas presented in writing.
3. Written Expression: The ability to communicate information and ideas in writing so others will understand.
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Speech Clarity: The ability to speak clearly so others can understand you.
6. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
7. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
8. Speech Recognition: The ability to identify and understand the speech of another person.
9. Near Vision: The ability to see details at close range (within a few feet of the observer).



10. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

### *Work Activities*

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1. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
2. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
3. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
4. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
5. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
6. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
7. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
8. **Training and Teaching Others:** Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.
9. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
10. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.

### *Work Styles*

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1. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.
2. **Achievement/Effort Job** requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
3. **Independence Job** requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
4. **Initiative Job** requires a willingness to take on responsibilities and challenges.



5. Persistence Job requires persistence in the face of obstacles.
6. Integrity Job requires being honest and ethical.
7. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
8. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
9. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.



# Software Quality Assurance Engineer and Tester

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**Develop and execute software test plans in order to identify software problems and their causes.**



## *Common Tasks*

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1. Design test plans, scenarios, scripts, or procedures.
2. Test system modifications to prepare for implementation.
3. Develop testing programs that address areas such as database impacts, software scenarios, regression testing, negative testing, error or bug retests, or usability.
4. Document software defects, using a bug tracking system, and report defects to software developers.
5. Identify, analyze, and document problems with program function, output, online screen, or content.
6. Monitor bug resolution efforts and track successes.
7. Create or maintain databases of known test defects.
8. Plan test schedules or strategies in accordance with project scope or delivery dates.
9. Participate in product design reviews to provide input on functional requirements, product designs, schedules, or potential problems.
10. Review software documentation to ensure technical accuracy, compliance, or completeness, or to mitigate risks.

## *Skills Required*

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1. Quality Control Analysis: Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.



3. **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
5. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. **Time Management:** Managing one's own time and the time of others.
7. **Active Learning:** Understanding the implications of new information for both current and future problem-solving and decision-making.
8. **Troubleshooting:** Determining causes of operating errors and deciding what to do about it.
9. **Systems Analysis:** Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
10. **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

### *Abilities Required*

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1. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
2. **Deductive Reasoning:** The ability to apply general rules to specific problems to produce answers that make sense.
3. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. **Near Vision:** The ability to see details at close range (within a few feet of the observer).
5. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
6. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.
7. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
8. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
9. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern



according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

10. Speech Recognition: The ability to identify and understand the speech of another person.

### *Work Activities*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
7. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
8. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
9. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
10. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
3. Integrity Job requires being honest and ethical.





4. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Persistence Job requires persistence in the face of obstacles.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.



## Sound Engineering Technician

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**Operate machines and equipment to record, synchronize, mix, or reproduce music, voices, or sound effects in sporting arenas, theater productions, recording studios, or movie and video productions.**

### *Common Tasks*

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1. Confer with producers, performers, and others to determine and achieve the desired sound for a production, such as a musical recording or a film.
2. Set up, test, and adjust recording equipment for recording sessions and live performances; tear down equipment after event completion.
3. Regulate volume level and sound quality during recording sessions, using control consoles.
4. Prepare for recording sessions by performing activities such as selecting and setting up microphones.
5. Report equipment problems and ensure that required repairs are made.
6. Mix and edit voices, music, and taped sound effects for live performances and for prerecorded events, using sound mixing boards.
7. Synchronize and equalize prerecorded dialogue, music, and sound effects with visual action of motion pictures or television productions, using control consoles.
8. Record speech, music, and other sounds on recording media, using recording equipment.
9. Reproduce and duplicate sound recordings from original recording media, using sound editing and duplication equipment.
10. Separate instruments, vocals, and other sounds, and combine sounds later during the mixing or postproduction stage.



### *Skills Required*

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1. Operation and Control: Controlling operations of equipment or systems.
2. Operation Monitoring: Watching gauges, dials, or other indicators to make sure a machine is working properly.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Troubleshooting: Determining causes of operating errors and deciding what to do about it.
5. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
6. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
7. Coordination: Adjusting actions in relation to others' actions.
8. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
9. Equipment Selection: Determining the kind of tools and equipment needed to do a job.
10. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.

### *Abilities Required*

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1. Auditory Attention: The ability to focus on a single source of sound in the presence of other distracting sounds.
2. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
3. Hearing Sensitivity: The ability to detect or tell the differences between sounds that vary in pitch and loudness.
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Selective Attention: The ability to concentrate on a task over a period of time without being distracted.
6. Speech Recognition: The ability to identify and understand the speech of another person.



7. **Speech Clarity:** The ability to speak clearly so others can understand you.
8. **Control Precision:** The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
9. **Flexibility of Closure:** The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.
10. **Inductive Reasoning:** The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

### *Work Activities*

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1. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
2. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
5. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
6. **Repairing and Maintaining Electronic Equipment** Servicing, repairing, calibrating, regulating, fine-tuning, or testing machines, devices, and equipment that operate primarily on the basis of electrical or electronic (not mechanical) principles.
7. **Controlling Machines and Processes** Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
8. **Inspecting Equipment, Structures, or Material:** Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
9. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
10. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.

### *Work Styles*

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1. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.



2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
4. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
8. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
9. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Value*

---

1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Statistician

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**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.**

## *Common Tasks*

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1. Report results of statistical analyses, including information in the form of graphs, charts, and tables.
2. Process large amounts of data for statistical modeling and graphic analysis, using computers.
3. Identify relationships and trends in data, as well as any factors that could affect the results of research.
4. Analyze and interpret statistical data to identify significant differences in relationships among sources of information.
5. Prepare data for processing by organizing information, checking for any inaccuracies, and adjusting and weighting the raw data.
6. Evaluate the statistical methods and procedures used to obtain data to ensure validity, applicability, efficiency, and accuracy.
7. Evaluate sources of information to determine any limitations in terms of reliability or usability.
8. Plan data collection methods for specific projects and determine the types and sizes of sample groups to be used.



9. Design research projects that apply valid scientific techniques and use information obtained from baselines or historical data to structure uncompromised and efficient analyses.
10. Develop an understanding of fields to which statistical methods are to be applied to determine whether methods and results are appropriate.

### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Mathematics: Using mathematics to solve problems.
5. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
7. Speaking: Talking to others to convey information effectively.
8. Time Management: Managing one's own time and the time of others.
9. Science: Using scientific rules and methods to solve problems.
10. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

### *Abilities Required*

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1. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
2. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.
3. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
5. Near Vision: The ability to see details at close range (within a few feet of the observer).



6. **Category Flexibility:** The ability to generate or use different sets of rules for combining or grouping things in different ways.
7. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
8. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
9. **Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.
10. **Written Comprehension:** The ability to read and understand information and ideas presented in writing.

### *Work Activities*

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1. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
2. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
5. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
6. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
7. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
8. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
9. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
10. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.



### *Work Styles*

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1. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
5. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Integrity Job requires being honest and ethical.
8. Persistence Job requires persistence in the face of obstacles.
9. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
10. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

### *Work Values*

---

1. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.



## Surgeon

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**Treat diseases, injuries, and deformities by invasive methods, such as manual manipulation or by using instruments and appliances.**

### *Common Tasks*

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1. Analyze patient's medical history, medication allergies, physical condition, and examination results to verify operation's necessity and to determine best procedure.
2. Operate on patients to correct deformities, repair injuries, prevent and treat diseases, or improve or restore patients' functions.
3. Follow established surgical techniques during the operation.
4. Prescribe preoperative and postoperative treatments and procedures, such as sedatives, diets, antibiotics, and preparation and treatment of the patient's operative area.
5. Examine patient to obtain information on medical condition and surgical risk.
6. Diagnose bodily disorders and orthopedic conditions and provide treatments, such as medicines and surgeries, in clinics, hospital wards, and operating rooms.
7. Direct and coordinate activities of nurses, assistants, specialists, residents, and other medical staff.
8. Provide consultation and surgical assistance to other physicians and surgeons.
9. Refer patient to medical specialist or other practitioners when necessary.
10. Examine instruments, equipment, and operating room to ensure sterility.

### *Skills Required:*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related



documents.

2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
5. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
7. Science: Using scientific rules and methods to solve problems.
8. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
9. Time Management: Managing one's own time and the time of others.
10. Coordination: Adjusting actions in relation to others' actions.

### ***Abilities Required:***

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1. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
2. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
5. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
6. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
7. Near Vision: The ability to see details at close range (within a few feet of the observer).



8. **Speech Clarity:** The ability to speak clearly so others can understand you.
9. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
10. **Finger Dexterity** The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.

### *Work Activities:*

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1. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
2. **Assisting and Caring for Others:** Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.
3. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
4. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
5. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
7. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
8. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
9. **Performing for or Working directly with the Public:** Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
10. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

### *Work Styles:*

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1. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
2. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.



3. Integrity Job requires being honest and ethical.
4. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.
5. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
6. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
7. Initiative Job requires a willingness to take on responsibilities and challenges.
8. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
9. Persistence Job requires persistence in the face of obstacles.
10. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

#### *Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.



## Surveyor

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**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.**

### *Common Tasks*

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1. Verify the accuracy of survey data including measurements and calculations conducted at survey sites.
2. Search legal records, survey records, and land titles to obtain information about property boundaries in areas to be surveyed.
3. Calculate heights, depths, relative positions, property lines, and other characteristics of terrain.
4. Prepare and maintain sketches, maps, reports, and legal descriptions of surveys to describe, certify, and assume liability for work performed.
5. Direct or conduct surveys to establish legal boundaries for properties, based on legal deeds and titles.
6. Prepare or supervise preparation of all data, charts, plots, maps, records, and documents related to surveys.
7. Write descriptions of property boundary surveys for use in deeds, leases, or other legal documents.
8. Compute geodetic measurements and interpret survey data to determine positions, shapes, and elevations of geomorphic and topographic features.
9. Determine longitudes and latitudes of important features and boundaries in survey areas using theodolites, transits, levels, and satellite-based global positioning systems (GPS).



10. Record the results of surveys including the shape, contour, location, elevation, and dimensions of land or land features.

### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Mathematics: Using mathematics to solve problems.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Speaking: Talking to others to convey information effectively.
5. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
6. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
7. Coordination: Adjusting actions in relation to others' actions.
8. Time Management: Managing one's own time and the time of others.
9. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
10. Management of Personnel Resources: Motivating, developing, and directing people as they work, identifying the best people for the job.

### *Abilities Required*

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1. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
2. Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
5. Speech Clarity: The ability to speak clearly so others can understand you.
6. Written Comprehension: The ability to read and understand information and ideas presented in writing.



7. **Written Expression:** The ability to communicate information and ideas in writing so others will understand.
8. **Information Ordering:** The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. **Oral Comprehension:** The ability to listen to and understand information and ideas presented through spoken words and sentences.
10. **Speech Recognition:** The ability to identify and understand the speech of another person.

### *Work Activities*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. **Making Decisions and Solving Problems:** Analyzing information and evaluating results to choose the best solution and solve problems.
4. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
5. **Processing Information:** Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. **Analyzing Data or Information:** Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
7. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
8. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
9. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
10. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.

### *Work Styles*

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1. **Attention to Detail Job** requires being careful about detail and thorough in completing work





tasks.

2. Integrity Job requires being honest and ethical.
3. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Persistence Job requires persistence in the face of obstacles.
7. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.



# Sustainability Specialist

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**Address organizational sustainability issues, such as waste stream management, green building practices, and green procurement plans.**

## *Common Tasks*

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1. Develop sustainability project goals, objectives, initiatives, or strategies in collaboration with other sustainability professionals.
2. Monitor or track sustainability indicators, such as energy usage, natural resource usage, waste generation, and recycling.
3. Assess or propose sustainability initiatives, considering factors such as cost effectiveness, technical feasibility, and acceptance.
4. Collect information about waste stream management or green building practices to inform decision-makers.
5. Create marketing or outreach media, such as brochures or web sites, to communicate sustainability issues, procedures, or objectives.
6. Create or maintain plans or other documents related to sustainability projects.
7. Develop reports or presentations to communicate the effectiveness of sustainability initiatives.
8. Identify or procure needed resources to implement sustainability programs or projects.
9. Provide technical or administrative support for sustainability programs or issues.
10. Write grant applications, rebate applications, or project proposals to secure funding for sustainability projects.





## Tax Examiner, Collector, and Revenue Agent

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**Determine tax liability or collect taxes from individuals or business firms according to prescribed laws and regulations.**

### *Common Tasks*

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1. Collect taxes from individuals or businesses according to prescribed laws and regulations.
2. Maintain knowledge of tax code changes, and of accounting procedures and theory to properly evaluate financial information.
3. Maintain records for each case, including contacts, telephone numbers, and actions taken.
4. Confer with taxpayers or their representatives to discuss the issues, laws, and regulations involved in returns, and to resolve problems with returns.
5. Contact taxpayers by mail or telephone to address discrepancies and to request supporting documentation.
6. Send notices to taxpayers when accounts are delinquent.
7. Notify taxpayers of any overpayment or underpayment, and either issue a refund or request further payment.
8. Conduct independent field audits and investigations of income tax returns to verify information or to amend tax liabilities.
9. Review filed tax returns to determine whether claimed tax credits and deductions are allowed by law.
10. Review selected tax returns to determine the nature and extent of audits to be performed on them.

### *Skills Required*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.



2. Mathematics: Using mathematics to solve problems.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
5. Speaking: Talking to others to convey information effectively.
6. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
7. Service Orientation: Actively looking for ways to help people.
8. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
9. Instructing: Teaching others how to do something.
10. Time Management: Managing one's own time and the time of others.

### *Abilities Required*

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- Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
  1. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
  2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
  3. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
  4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
  5. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
  6. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
  7. Near Vision: The ability to see details at close range (within a few feet of the observer).



8. Speech Clarity: The ability to speak clearly so others can understand you.
9. Speech Recognition: The ability to identify and understand the speech of another person.

### *Work Activities*

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1. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
4. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
6. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
7. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
8. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
9. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
10. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.

### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.



4. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
5. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
6. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
8. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
9. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
10. Concern for Others Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.

### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

# Tax Preparer



**Prepare tax returns for individuals or small businesses but do not have the background or responsibilities of an accredited or certified public accountant.**

## Common Tasks

1. Compute taxes owed or overpaid, using adding machines or personal computers, and complete entries on forms, following tax form instructions and tax tables.
2. Prepare or assist in preparing simple to complex tax returns for individuals or small businesses.
3. Use all appropriate adjustments, deductions, and credits to keep clients' taxes to a minimum.
4. Interview clients to obtain additional information on taxable income and deductible expenses and allowances.
5. Review financial records such as income statements and documentation of expenditures to determine forms needed to prepare tax returns.
6. Furnish taxpayers with sufficient information and advice to ensure correct tax form completion.
7. Consult tax law handbooks or bulletins to determine procedures for preparation of atypical returns.
8. Calculate form preparation fees according to return complexity and processing time required.
9. Check data input or verify totals on forms prepared by others to detect errors in arithmetic, data entry, or procedures.



### *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
3. Speaking: Talking to others to convey information effectively.
4. Time Management: Managing one's own time and the time of others.
5. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
6. Mathematics: Using mathematics to solve problems.
7. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
10. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.

### *Abilities Required*

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1. Near Vision: The ability to see details at close range (within a few feet of the observer).
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
5. Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.
6. Speech Clarity: The ability to speak clearly so others can understand you.





7. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
8. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
9. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
10. Speech Recognition: The ability to identify and understand the speech of another person.

### *Work Activities*

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1. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
2. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
3. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
5. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
6. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
7. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
8. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
9. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
10. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.



### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
5. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
6. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Independence Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. Persistence Job requires persistence in the face of obstacles.

### *Work Values*

---

1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.

# Technical Writer

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**Write technical materials, such as equipment manuals, appendices, or operating and maintenance instructions. May assist in layout work.**

## *Common Tasks*

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1. Organize material and complete writing assignment according to set standards regarding order, clarity, conciseness, style, and terminology.
2. Maintain records and files of work and revisions.
3. Edit, standardize, or make changes to material prepared by other writers or establishment personnel.
4. Confer with customer representatives, vendors, plant executives, or publisher to establish technical specifications and to determine subject material to be developed for publication.
5. Review published materials and recommend revisions or changes in scope, format, content, and methods of reproduction and binding.
6. Select photographs, drawings, sketches, diagrams, and charts to illustrate material.
7. Study drawings, specifications, mockups, and product samples to integrate and delineate technology, operating procedure, and production sequence and detail.
8. Interview production and engineering personnel and read journals and other material to become familiar with product technologies and production methods.
9. Observe production, developmental, and experimental activities to determine operating procedure and detail.
10. Arrange for typing, duplication, and distribution of material.

## *Skills Required*

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1. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
2. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
3. Time Management: Managing one's own time and the time of others.
4. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
5. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
7. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
8. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
10. Coordination: Adjusting actions in relation to others' actions.

### *Abilities Required*

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1. Written Comprehension: The ability to read and understand information and ideas presented in writing.
2. Written Expression: The ability to communicate information and ideas in writing so others will understand.
3. Near Vision: The ability to see details at close range (within a few feet of the observer).
4. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
5. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
6. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
7. Information Ordering: The ability to arrange things or actions in a certain order or pattern



according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

8. **Problem Sensitivity:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
9. **Originality:** The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
10. **Speech Clarity:** The ability to speak clearly so others can understand you.

### *Work Activities*

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1. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
2. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. **Documenting/Recording Information:** Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
4. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
5. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
6. **Evaluating Information to Determine Compliance with Standards:** Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
7. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
8. **Identifying Objects, Actions, and Events:** Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
9. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
10. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.

### *Work Styles*

---

1. **Adaptability/Flexibility** Job requires being open to change (positive or negative) and to considerable variety in the workplace.
2. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
3. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. **Persistence** Job requires persistence in the face of obstacles.
6. **Stress Tolerance** Job requires accepting criticism and dealing calmly and effectively with high stress situations.
7. **Innovation** Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
8. **Analytical Thinking** Job requires analyzing information and using logic to address work-related issues and problems.
9. **Independence** Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
10. **Initiative** Job requires a willingness to take on responsibilities and challenges.

### *Work Values*

---

1. **Independence** Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. **Working Conditions** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Telecommunications Specialist

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**Design or configure voice and data communications systems, supervise installation, and arrange for post-installation service and maintenance.**



## *Common Tasks*

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1. Install, or coordinate installation of, new or modified hardware, software, or programming modules of telecommunications systems.
2. Assess existing facilities' needs for new or modified telecommunications systems.
3. Communicate with telecommunications vendors to obtain pricing and technical specifications for available hardware, software, or services.
4. Consult with users, administrators, and engineers to identify business and technical requirements for proposed system modifications or technology purchases.
5. Work with personnel and facilities management staff to install, remove, or relocate user connectivity equipment and devices.
6. Document procedures for hardware and software installation and use.
7. Document technical specifications and operating standards for telecommunications equipment.
8. Document user support activity, such as system problems, corrective actions, resolution status, and completed equipment installations.
9. Implement controls to provide security for operating systems, software, and data.
10. Implement or perform preventive maintenance, backup, or recovery procedures.
11. Implement system renovation projects in collaboration with technical staff, engineering



consultants, installers, and vendors.

12. Inspect sites to determine physical configuration, such as device locations and conduit pathways.
13. Instruct in use of voice and data communications systems, such as voicemail and videoconferencing systems.
14. Manage user access to systems and equipment through account management and password administration.
15. Monitor and analyze system performance, such as network traffic, security, and capacity.
16. Order or maintain inventory of telecommunications equipment, including telephone sets, headsets, cellular phones, switches, trunks, printed circuit boards, network routers, and cabling.
17. Use computer-aided design (CAD) software to prepare or evaluate network diagrams, floor plans, or site configurations for existing facilities, renovations, or new systems.
18. Prepare purchase requisitions for computer hardware and software, networking and telecommunications equipment, test equipment, cabling, or tools.
19. Prepare system activity and performance reports.
20. Provide user support by diagnosing network and device problems and implementing technical or procedural solutions.
21. Review and evaluate requests from engineers, managers, and technicians for system modifications.
22. Supervise maintenance of telecommunications equipment.
23. Test and evaluate hardware and software to determine efficiency, reliability, or compatibility with existing systems.
24. Develop, maintain, or implement telecommunications disaster recovery plans to ensure business continuity.
25. Estimate costs for system or component implementation and operation.
26. Keep abreast of changes in industry practices and emerging telecommunications technology by reviewing current literature, talking with colleagues, participating in educational programs, attending meetings or workshops, or participating in professional organizations or conferences.



# Telemarketer

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**Solicit orders for goods or services over the telephone.**

## *Common Tasks*

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1. Deliver prepared sales talks, reading from scripts that describe products or services, in order to persuade potential customers to purchase a product or service or to make a donation.
2. Contact businesses or private individuals by telephone in order to solicit sales for goods or services, or to request donations for charitable causes.
3. Explain products or services and prices, and answer questions from customers.
4. Obtain customer information such as name, address, and payment method, and enter orders into computers.
5. Record names, addresses, purchases, and reactions of prospects contacted.
6. Adjust sales scripts to better target the needs and interests of specific individuals.
7. Obtain names and telephone numbers of potential customers from sources such as telephone directories, magazine reply cards, and lists purchased from other organizations.
8. Answer telephone calls from potential customers who have been solicited through advertisements.
9. Telephone or write letters to respond to correspondence from customers or to follow up initial sales contacts.
10. Maintain records of contacts, accounts, and orders.

## *Skills Required:*

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1. **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. **Speaking:** Talking to others to convey information effectively.
3. **Persuasion:** Persuading others to change their minds or behavior.





4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Time Management: Managing one's own time and the time of others.
6. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. Negotiation: Bringing others together and trying to reconcile differences.
8. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
9. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
10. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.

### ***Abilities Required:***

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Speech Clarity: The ability to speak clearly so others can understand you.
4. Speech Recognition: The ability to identify and understand the speech of another person.
5. Selective Attention: The ability to concentrate on a task over a period of time without being distracted.
6. Written Comprehension: The ability to read and understand information and ideas presented in writing.

### ***Work Activities:***

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1. Selling or Influencing Others: Convincing others to buy merchandise/goods or to otherwise change their minds or actions.
2. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
3. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or



e-mail.

4. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
5. Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others, and maintaining them over time.
6. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
7. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
9. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
10. Resolving Conflicts and Negotiating with Others: Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.

### *Work Styles:*

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1. Integrity Job requires being honest and ethical.
2. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
3. Persistence Job requires persistence in the face of obstacles.
4. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
5. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
6. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
7. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
8. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
9. Initiative Job requires a willingness to take on responsibilities and challenges.



10. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.

#### *Work Values:*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.



# Training and Development Specialist

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**Conduct training and development programs for employees.**

## *Common Tasks*

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1. Monitor, evaluate and record training activities and program effectiveness.
2. Offer specific training programs to help workers maintain or improve job skills.
3. Assess training needs through surveys, interviews with employees, focus groups, or consultation with managers, instructors or customer representatives.
4. Develop alternative training methods if expected improvements are not seen.
5. Organize and develop, or obtain, training procedure manuals and guides and course materials such as handouts and visual materials.
6. Present information, using a variety of instructional techniques and formats such as role playing, simulations, team exercises, group discussions, videos and lectures.
7. Evaluate training materials prepared by instructors, such as outlines, text, and handouts.
8. Design, plan, organize and direct orientation and training for employees or customers of industrial or commercial establishment.
9. Monitor training costs to ensure budget is not exceeded, and prepare budget reports to justify expenditures.
10. Select and assign instructors to conduct training.

## *Skills Required*

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1. Speaking: Talking to others to convey information effectively.
2. Instructing: Teaching others how to do something.
3. Learning Strategies: Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.



4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
6. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
7. Social Perceptiveness: Being aware of others' reactions and understanding why they react as they do.
8. Coordination: Adjusting actions in relation to others' actions.
9. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
10. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.

### *Abilities Required*

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Speech Clarity: The ability to speak clearly so others can understand you.
4. Written Comprehension: The ability to read and understand information and ideas presented in writing.
5. Written Expression: The ability to communicate information and ideas in writing so others will understand.
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Near Vision: The ability to see details at close range (within a few feet of the observer).
8. Speech Recognition: The ability to identify and understand the speech of another person.
9. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
10. Originality: The ability to come up with unusual or clever ideas about a given topic or



situation, or to develop creative ways to solve a problem.

### *Work Activities*

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1. **Training and Teaching Others:** Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.
2. **Communicating with Supervisors, Peers, or Subordinates:** Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
3. **Establishing and Maintaining Interpersonal Relationships:** Developing constructive and cooperative working relationships with others, and maintaining them over time.
4. **Organizing, Planning, and Prioritizing Work:** Developing specific goals and plans to prioritize, organize, and accomplish your work.
5. **Coaching and Developing Others:** Identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills.
6. **Getting Information:** Observing, receiving, and otherwise obtaining information from all relevant sources.
7. **Interacting with Computers:** Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
8. **Updating and Using Relevant Knowledge:** Keeping up-to-date technically and applying new knowledge to your job.
9. **Interpreting the Meaning of Information for Others:** Translating or explaining what information means and how it can be used.
10. **Thinking Creatively:** Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.

### *Work Styles*

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1. **Dependability** Job requires being reliable, responsible, and dependable, and fulfilling obligations.
2. **Attention to Detail** Job requires being careful about detail and thorough in completing work tasks.
3. **Cooperation** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
4. **Initiative** Job requires a willingness to take on responsibilities and challenges.
5. **Integrity** Job requires being honest and ethical.



6. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
7. Leadership Job requires a willingness to lead, take charge, and offer opinions and direction.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
10. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.

### *Work Values*

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1. Relationships Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.



# Transportation Engineer

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**Develop plans for surface transportation projects according to established engineering standards and state or federal construction policy. Prepare plans, estimates, or specifications to design transportation facilities. Plan alterations and modifications of existing streets, highways, or freeways to improve traffic flow.**

## *Common Tasks*

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1. Design or prepare plans for new transportation systems or parts of systems, such as airports, commuter trains, highways, streets, bridges, drainage structures, and roadway lighting.
2. Supervise the maintenance or repair of transportation systems or system components.
3. Analyze environmental impact statements for transportation projects.
4. Check construction plans, design calculations, or cost estimations to ensure completeness, accuracy, and conformity to engineering standards and practices.
5. Confer with contractors, utility companies, or government agencies to discuss plans, specifications, or work schedules.
6. Direct the surveying, staking, and laying-out of construction projects.
7. Estimate transportation project costs.
8. Inspect completed transportation projects to ensure safety or compliance with applicable standards or regulations.
9. Investigate or test specific construction project materials to determine compliance to specifications or standards.
10. Investigate traffic problems and recommend methods to improve traffic flow and safety.

## *Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. Support Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.

### *Tools & Technology*

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#### **Tools used in this occupation:**

- Digital cameras
- Laser printers Computer laser printers
- Notebook computers Laptop computers
- Special purpose telephones Multi-line telephone systems
- Two way radios Mobile radios

#### **Technology used in this occupation:**

- Analytical or scientific software Citilabs Cube; mctrans HCS+; mctrans TSIS-CORSIM; Trafficware synchrogreen
- Computer aided design CAD software Autodesk autocad software; Bentley GEOPAK Civil Engineering Suite; Bentley Microstation; Trafficware simtraffic
- Map creation software Bentley inroads software; ESRI arcgis software
- Office suite software Microsoft Office software
- Project management software Microsoft Project

# Urologist



**Diagnose, treat, and help prevent benign and malignant medical and surgical disorders of the genitourinary system and the renal glands.**

## *Common Tasks*

1. Diagnose or treat diseases or disorders of genitourinary organs and tracts including erectile dysfunction (ED), infertility, incontinence, bladder cancer, prostate cancer, urethral stones, or premature ejaculation.
2. Examine patients using equipment, such as radiograph (x-ray) machines and fluoroscopes, to determine the nature and extent of disorder or injury.
3. Order and interpret the results of diagnostic tests, such as prostate specific antigen (PSA) screening, to detect prostate cancer.
4. Perform abdominal, pelvic, or retroperitoneal surgeries.
5. Perform brachytherapy, cryotherapy, high intensity focused ultrasound (HIFU), or photodynamic therapy to treat prostate or other cancers.
6. Prescribe medications to treat patients with erectile dysfunction (ED), infertility, or ejaculation problems.
7. Prescribe or administer antibiotics, antiseptics, or compresses to treat infection or injury.
8. Treat lower urinary tract dysfunctions using equipment such as diathermy machines, catheters, cystoscopes, and radium emanation tubes.
9. Treat urologic disorders using alternatives to traditional surgery such as extracorporeal shock wave lithotripsy, laparoscopy, and laser techniques.



10. Direct the work of nurses, residents, or other staff to provide patient care.

### *Work Values*

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1. **Achievement** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. **Recognition** Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.
3. **Working Conditions** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

### *Interests*

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1. **Investigative:** Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.
2. **Social:** Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.
3. **Realistic:** Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.

# Validation Engineer

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**Design and plan protocols for equipment and processes to produce products meeting internal and external purity, safety, and quality requirements.**

## *Common Tasks*

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1. Analyze validation test data to determine whether systems or processes have met validation criteria and to identify root causes of production problems.
2. Prepare validation and performance qualification protocols for new or modified manufacturing processes, systems, or equipment for pharmaceutical, electronics, and other types of production.
3. Coordinate the implementation or scheduling of validation testing with affected departments and personnel.
4. Study product characteristics or customer requirements and confer with management to determine validation objectives and standards.
5. Create, populate, or maintain databases for tracking validation activities, test results, or validated systems.
6. Prepare, maintain, or review validation and compliance documentation such as engineering change notices, schematics, and protocols.
7. Resolve testing problems by modifying testing methods or revising test objectives and standards.
8. Prepare detailed reports and design statements based on results of validation and qualification tests or reviews of procedures and protocols.
9. Identify deviations from established product or process standards and provide



recommendations for resolving deviations.

10. Direct validation activities such as protocol creation or testing.

### *Abilities Required*

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1. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
2. Written Comprehension: The ability to read and understand information and ideas presented in writing.
3. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
4. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
5. Written Expression: The ability to communicate information and ideas in writing so others will understand.
6. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
7. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
8. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
9. Near Vision: The ability to see details at close range (within a few feet of the observer).
10. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

### *Work Activities*

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1. Evaluating Information to Determine Compliance with Standards: Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
2. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.



4. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
5. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
6. Monitor Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
7. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
8. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
9. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
10. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.

### *Work Styles*

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1. Integrity Job requires being honest and ethical.
2. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
3. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
4. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
5. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
6. Initiative Job requires a willingness to take on responsibilities and challenges.
7. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
8. Persistence Job requires persistence in the face of obstacles.
9. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to



considerable variety in the workplace.

### *Work Values*

---

1. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
2. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
3. Independence Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.



## Veterinarian

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**Diagnose and treat diseases and dysfunctions of animals. May engage in a particular function, such as research and development, consultation, administration, technical writing, sale or production of commercial products, or**

**rendering of technical services to commercial firms or other organizations. Includes veterinarians who inspect livestock.**

### *Common Tasks*

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1. Treat sick or injured animals by prescribing medication, setting bones, dressing wounds, or performing surgery.
2. Examine animals to detect and determine the nature of diseases or injuries.
3. Provide care to a wide range of animals or specialize in a particular species, such as horses or exotic birds.
4. Inoculate animals against various diseases such as rabies and distemper.
5. Advise animal owners regarding sanitary measures, feeding, general care, medical conditions, and treatment options.
6. Operate diagnostic equipment such as radiographic and ultrasound equipment, and interpret the resulting images.
7. Educate the public about diseases that can be spread from animals to humans.
8. Collect body tissue, feces, blood, urine, or other body fluids for examination and analysis.
9. Attend lectures, conferences, and continuing education courses.
10. Euthanize animals.

### *Skills Required*

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1. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
2. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
3. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
4. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
5. Speaking: Talking to others to convey information effectively.
6. Science: Using scientific rules and methods to solve problems.
7. Time Management: Managing one's own time and the time of others.
8. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
9. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
10. Mathematics: Using mathematics to solve problems.

### *Abilities Required*

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1. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
2. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
3. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
4. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
5. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
6. Near Vision: The ability to see details at close range (within a few feet of the observer).
7. Speech Clarity: The ability to speak clearly so others can understand you.
8. Information Ordering: The ability to arrange things or actions in a certain order or pattern



according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).

9. Speech Recognition: The ability to identify and understand the speech of another person.
10. Written Comprehension: The ability to read and understand information and ideas presented in writing.

### *Work Activities*

---

1. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
2. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
3. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
4. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
5. Performing for or Working directly with the Public: Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.
6. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
7. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.
9. Communicating with Persons outside Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
10. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.

### *Work Styles*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.



2. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
3. Integrity Job requires being honest and ethical.
4. Self-Control Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
5. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
6. Persistence Job requires persistence in the face of obstacles.
7. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
8. Initiative Job requires a willingness to take on responsibilities and challenges.
9. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
10. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.

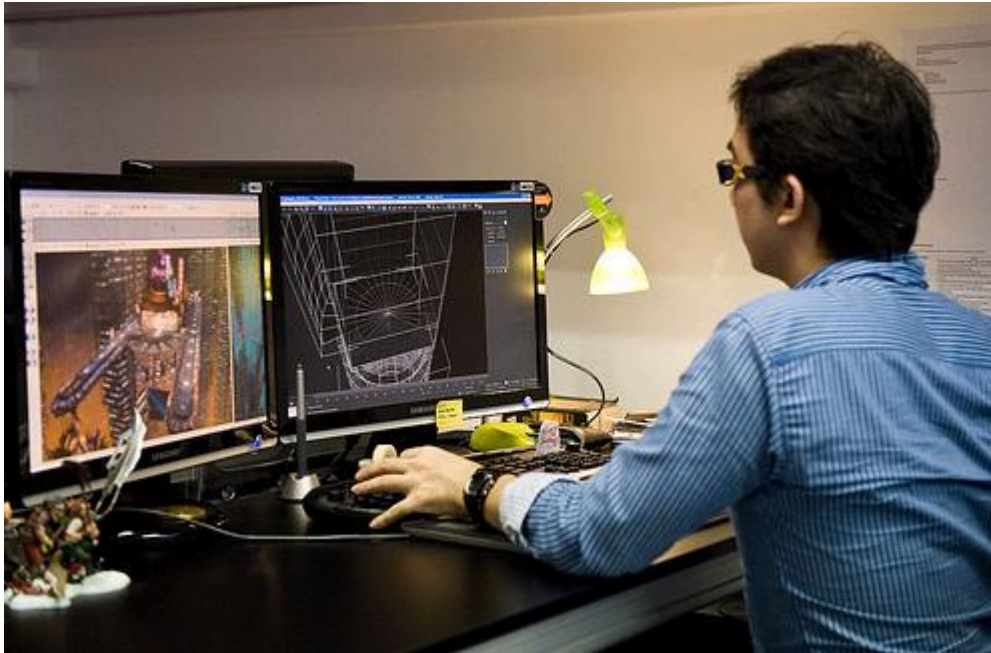
### *Work Values*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
3. Recognition Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

# Video Game Designer

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**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.**

## *Common Tasks*

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1. Create core game features including storylines, role-play mechanics, and character biographies for a new video game or game franchise.
2. Document all aspects of formal game design, using mock-up screenshots, sample menu layouts, gameplay flowcharts, and other graphical devices.
3. Collaborate with artists to achieve appropriate visual style.
4. Conduct regular design reviews throughout the game development process.
5. Consult with multiple stakeholders to define requirements and implement online features.
6. Create and manage documentation, production schedules, prototyping goals, and communication plans in collaboration with production staff.
7. Create gameplay prototypes for presentation to creative and technical staff and management.
8. Determine supplementary virtual features, such as currency, item catalog, menu design, and audio direction.



9. Develop and maintain design level documentation, including mechanics, guidelines, and mission outlines.
10. Devise missions, challenges, or puzzles to be encountered in game play.

### *Education background*

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This occupation may require a background in the following science, technology, engineering, and mathematics (STEM) educational disciplines:

- Computer Science Computer Graphics

### *Wages & Employment Trends*

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#### **National**

Median wages data collected from Computer Specialists, All Other.

Employment data collected from Computer Specialists, All Other.

Industry data collected from Computer Specialists, All Other.

#### **Median wages (2009)**

\$37.02 hourly, \$77,010 annual

#### **Employment (2008)**

209,000 employees

#### **Projected growth (2008-2018)**

Average (7% to 13%)

#### **Projected job openings (2008-2018)**

72,600

#### **Top industries (2008)**

Government, Professional, Scientific, and Technical Services



## Water Resource Specialist

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**Design or implement programs and strategies related to water resource issues such as supply, quality, and regulatory compliance issues.**

### *Common Tasks*

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1. Conduct, or oversee the conduct of, chemical, physical, and biological water quality monitoring or sampling to ensure compliance with water quality standards.
2. Develop strategies for watershed operations to meet water supply and conservation goals or to ensure regulatory compliance with clean water laws or regulations.
3. Analyze storm water systems to identify opportunities for water resource improvements.
4. Conduct cost-benefit studies for watershed improvement projects or water management alternatives.
5. Conduct, or oversee the conduct of, investigations on matters such as water storage, wastewater discharge, pollutants, permits, or other compliance and regulatory issues.
6. Conduct technical studies for water resources on topics such as pollutants and water treatment options.
7. Develop or implement standardized water monitoring and assessment methods.
8. Develop plans to protect watershed health or rehabilitate watersheds.
9. Identify and characterize specific causes or sources of water pollution.
10. Identify methods for distributing purified wastewater into rivers, streams, or oceans



## *Tools & Technology*

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### Tools

- Water samplers Automated water sampling equipment, Total dissolved solids TDS meters, water quality test kits
- Nitrate meters Nitrogen or nitrate or nitrite analyzer
- Flow sensors Water flow meters
- Commercial fishing nets Plankton nets, seines
- Binocular light compound microscopes

### Technology

- Analytical or scientific software ESRI ArcGIS Spatial Analyst; HEC-HMS\*; MWH Soft H2ONET MSX; Wallingford Software InfoWater
- Data base user interface and query software Database software; Scientific Software Group RiverMorph; Structured query language SQL
- Map creation software ESRI ArcGIS software; ESRI ArcPad; ESRI ArcView; Google Earth Pro
- Word processing software Microsoft Word
- Office suite software Microsoft Office software



# Water, Wastewater Engineer

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**Design or oversee projects involving provision of fresh 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.**

## *Common Tasks*

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1. Design domestic or industrial water or wastewater treatment plants, including advanced facilities with sequencing batch reactors (SBR), membranes, lift stations, head-works, surge overflow basins, ultraviolet disinfection systems, aerobic digesters, sludge lagoons, or control buildings.
2. Design pumping systems, pumping stations, pipelines, force mains, or sewers for the collection of wastewater.
3. Design sludge treatment plants.
4. Design water distribution systems for potable and non-potable water.
5. Design water or wastewater lift stations, including water wells.
6. Design water run-off collection networks, water supply channels, or water supply system networks.
7. Design water storage tanks or other water storage facilities.
8. Analyze and recommend chemical, biological, or other wastewater treatment methods to prepare water for industrial or domestic use.

9. Analyze and recommend sludge treatment or disposal methods.
10. Analyze storm water or floodplain drainage systems to control erosion, stabilize river banks, repair channel streams, or design bridges.

### Tools & Technology

#### Tools used in this occupation:

- Desktop computers
- Laser printers Computer laser printers
- Notebook computers Laptop computers
- Plotter printers Large-format plotters
- Scanners Computer data input scanners; Digitizers



#### Technology used in this occupation:

- Analytical or scientific software HEC-RAS \*; kypipe; NIWA Tideda; Wallingford Software infoworks WS
- Computer aided design CAD software Autodesk autocad software; Bentley sewercad; Eagle Point LANDCADD; hydrocad Software Solutions hydrocad
- Map creation software ESRI arcgis software; mapinfo software
- Office suite software Microsoft Office software
- Project management software Microsoft Project

\* Software developed by a government agency and/or distributed as freeware or shareware.

#### Education

This occupation may require a background in the following science, technology, engineering, and mathematics (STEM) educational disciplines:

- Engineering Water Resources Engineering

## Web Administrator



**Manage web environment design, deployment, development and maintenance activities. Perform testing and quality assurance of web sites and web applications.**

### *Common Tasks*

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1. Back up or modify applications and related data to provide for disaster recovery.
2. Determine sources of web page or server problems, and take action to correct such problems.
3. Review or update web page content or links in a timely manner, using appropriate tools.
4. Monitor systems for intrusions or denial of service attacks, and report security breaches to appropriate personnel.
5. Implement web site security measures, such as firewalls or message encryption.
6. Administer internet/intranet infrastructure, including components such as web, file transfer protocol (FTP), news and mail servers.
7. Collaborate with development teams to discuss, analyze, or resolve usability issues.
8. Test backup or recovery plans regularly and resolve any problems.
9. Monitor web developments through continuing education, reading, or participation in professional conferences, workshops, or groups.
10. Implement updates, upgrades, and patches in a timely manner to limit loss of service.

### *Skills Required:*

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1. Operations Analysis: Analyzing needs and product requirements to create a design.
2. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
3. Troubleshooting: Determining causes of operating errors and deciding what to do about it.
4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
6. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.



7. Systems Analysis: Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
8. Time Management: Managing one's own time and the time of others.
9. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
10. Writing: Communicating effectively in writing as appropriate for the needs of the audience.

### ***Abilities Required:***

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1. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
2. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. Written Comprehension: The ability to read and understand information and ideas presented in writing.
4. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
5. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
6. Written Expression: The ability to communicate information and ideas in writing so others will understand.
7. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
8. Near Vision: The ability to see details at close range (within a few feet of the observer).
9. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
10. Speech Recognition: The ability to identify and understand the speech of another person.

### ***Work Activities:***

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new



knowledge to your job.

3. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
4. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
5. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
6. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
7. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
8. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
9. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
10. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.

### *Work Styles:*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Initiative Job requires a willingness to take on responsibilities and challenges.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
5. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.
6. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.



8. Persistence Job requires persistence in the face of obstacles.
9. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
10. Integrity Job requires being honest and ethical.

### *Work Values:*

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1. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

# Web Developer

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**Develop and design web applications and web sites. Create and specify architectural and technical parameters. Direct web site content creation, enhancement and maintenance.**

## *Common Tasks*

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1. Design, build, or maintain web sites, using authoring or scripting languages, content creation tools, management tools, and digital media.
2. Perform or direct web site updates.
3. Write, design, or edit web page content, or direct others producing content.
4. Confer with management or development teams to prioritize needs, resolve conflicts, develop content criteria, or choose solutions.
5. Back up files from web sites to local directories for instant recovery in case of problems.
6. Identify problems uncovered by testing or customer feedback, and correct problems or refer problems to appropriate personnel for correction.
7. Evaluate code to ensure that it is valid, is properly structured, meets industry standards and is compatible with browsers, devices, or operating systems.
8. Maintain understanding of current web technologies or programming practices through continuing education, reading, or participation in professional conferences, workshops, or groups.
9. Analyze user needs to determine technical requirements.
10. Develop or validate test routines and schedules to ensure that test cases mimic external interfaces and address all browser and device types.

## *Skills Required:*

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1. Troubleshooting: Determining causes of operating errors and deciding what to do about it.
2. Programming: Writing computer programs for various purposes.
3. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
4. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
5. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
6. Time Management: Managing one's own time and the time of others.
7. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
8. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. Technology Design: Generating or adapting equipment and technology to serve user needs.
10. Operations Analysis: Analyzing needs and product requirements to create a design.

### ***Abilities Required:***

---

1. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.
2. Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
3. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
4. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
5. Near Vision: The ability to see details at close range (within a few feet of the observer).
6. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.





7. Speech Recognition: The ability to identify and understand the speech of another person.
8. Written Comprehension: The ability to read and understand information and ideas presented in writing.
9. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
10. Selective Attention: The ability to concentrate on a task over a period of time without being distracted.

### *Work Activities:*

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1. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.
4. Thinking Creatively: Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
5. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
6. Making Decisions and Solving Problems: Analyzing information and evaluating results to choose the best solution and solve problems.
7. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
8. Identifying Objects, Actions, and Events: Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
9. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
10. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.



### *Work Styles:*

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1. Attention to Detail Job requires being careful about detail and thorough in completing work tasks.
2. Analytical Thinking Job requires analyzing information and using logic to address work-related issues and problems.
3. Dependability Job requires being reliable, responsible, and dependable, and fulfilling obligations.
4. Integrity Job requires being honest and ethical.
5. Initiative Job requires a willingness to take on responsibilities and challenges.
6. Adaptability/Flexibility Job requires being open to change (positive or negative) and to considerable variety in the workplace.
7. Cooperation Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
8. Achievement/Effort Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.
9. Stress Tolerance Job requires accepting criticism and dealing calmly and effectively with high stress situations.
10. Innovation Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.

### *Work Values:*

---

1. Independence Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
2. Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.
3. Achievement Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

# Zoologist and Wildlife Biologist

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**Study the origins, behavior, diseases, genetics, and life processes of animals and wildlife. May specialize in wildlife research and management, including the collection and analysis of biological data to determine the environmental effects of present and potential use of land and water areas.**

## *Common Tasks*

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1. Study animals in their natural habitats, assessing effects of environment and industry on animals, interpreting findings and recommending alternative operating conditions for industry.
2. Inventory or estimate plant and wildlife populations.
3. Analyze characteristics of animals to identify and classify them.
4. Make recommendations on management systems and planning for wildlife populations and habitat, consulting with stakeholders and the public at large to explore options.
5. Disseminate information by writing reports and scientific papers or journal articles, and by making presentations and giving talks for schools, clubs, interest groups and park interpretive programs.
6. Study characteristics of animals such as origin, interrelationships, classification, life histories and diseases, development, genetics, and distribution.



7. Perform administrative duties such as fundraising, public relations, budgeting, and supervision of zoo staff.
8. Organize and conduct experimental studies with live animals in controlled or natural surroundings.
9. Oversee the care and distribution of zoo animals, working with curators and zoo directors to determine the best way to contain animals, maintain their habitats and manage facilities.
10. Coordinate preventive programs to control the outbreak of wildlife diseases.

### *Skills Required*

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1. Science: Using scientific rules and methods to solve problems.
2. Writing: Communicating effectively in writing as appropriate for the needs of the audience.
3. Reading Comprehension: Understanding written sentences and paragraphs in work related documents.
4. Active Listening: Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
5. Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
6. Coordination: Adjusting actions in relation to others' actions.
7. Judgment and Decision Making: Considering the relative costs and benefits of potential actions to choose the most appropriate one.
8. Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
9. Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
10. Monitoring: Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

### *Abilities Required*

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1. Oral Expression: The ability to communicate information and ideas in speaking so others will understand.
2. Deductive Reasoning: The ability to apply general rules to specific problems to produce answers that make sense.



3. Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
4. Information Ordering: The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
5. Oral Comprehension: The ability to listen to and understand information and ideas presented through spoken words and sentences.
6. Written Comprehension: The ability to read and understand information and ideas presented in writing.
7. Written Expression: The ability to communicate information and ideas in writing so others will understand.
8. Speech Clarity: The ability to speak clearly so others can understand you.
9. Category Flexibility: The ability to generate or use different sets of rules for combining or grouping things in different ways.
10. Near Vision: The ability to see details at close range (within a few feet of the observer).

### *Work Activities*

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1. Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
2. Getting Information: Observing, receiving, and otherwise obtaining information from all relevant sources.
3. Interacting with Computers: Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.
4. Organizing, Planning, and Prioritizing Work: Developing specific goals and plans to prioritize, organize, and accomplish your work.
5. Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
6. Processing Information: Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
7. Analyzing Data or Information: Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
8. Updating and Using Relevant Knowledge: Keeping up-to-date technically and applying new knowledge to your job.



9. **Communicating with Persons outside Organization:** Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.
10. **Monitor Processes, Materials, or Surroundings:** Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.

### *Work Styles*

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1. **Integrity Job** requires being honest and ethical.
2. **Dependability Job** requires being reliable, responsible, and dependable, and fulfilling obligations.
3. **Attention to Detail Job** requires being careful about detail and thorough in completing work tasks.
4. **Independence Job** requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
5. **Initiative Job** requires a willingness to take on responsibilities and challenges.
6. **Cooperation Job** requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
7. **Analytical Thinking Job** requires analyzing information and using logic to address work-related issues and problems.
8. **Self-Control Job** requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
9. **Stress Tolerance Job** requires accepting criticism and dealing calmly and effectively with high stress situations.
10. **Achievement/Effort Job** requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.

### *Work Values*

---

1. **Achievement Occupations** that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
2. **Recognition Occupations** that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.



Working Conditions Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

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