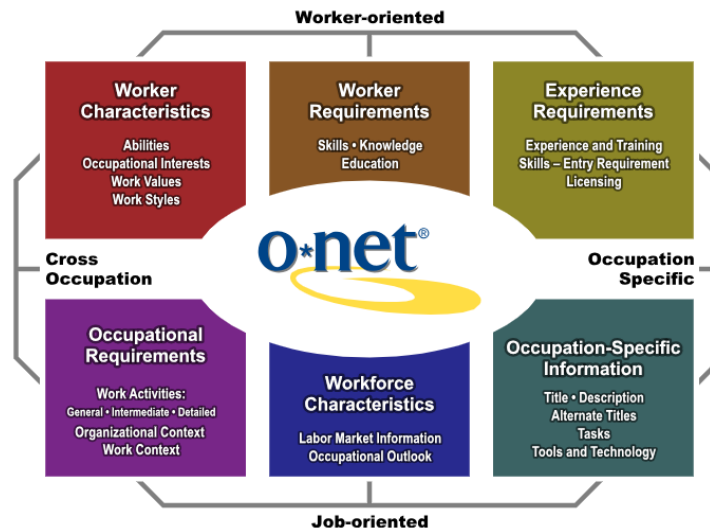


The O*NET® Content Model

The Content Model is the conceptual foundation of O*NET. The Content Model provides a framework that identifies the most important types of information about work and integrates them into a theoretically and empirically sound system.



The Content Model was developed using research on job and organizational analysis. It embodies a view that reflects the character of occupations (via job-oriented descriptors) and people (via worker-oriented descriptors). The Content Model also allows occupational information to be applied across jobs, sectors, or industries (cross-occupational descriptors) and within occupations (occupational-specific descriptors). These descriptors are organized into six major domains, which enable the user to focus on areas of information that specify the key attributes and characteristics of workers and occupations.

Note for Daniel and Asaf

1. The lowest level of detail (for example, Abilities, Verbal abilities, Oral Comprehension) is the one that is presented in the corresponding database table (in this case, the Worker Characteristics table).
2. Selected tables to be used are marked with GREEN

Worker Characteristics

Enduring characteristics that may influence both performance and the capacity to acquire knowledge and skills required for effective work performance.

Worker characteristics comprise enduring qualities of individuals that may influence how they approach tasks and how they acquire work-relevant knowledges and skills.

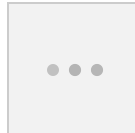
Traditionally, analyzing abilities has been the most common technique for comparing jobs in terms of these worker characteristics. However, recent research supports the inclusion of other types of worker characteristics. In particular, interests, values, and work styles have received support in the organizational literature. Interests and values reflect preferences for work environments and outcomes. Work style variables represent typical procedural differences in the way work is performed.

- Abilities

- Enduring attributes of the individual that influence performance
 - [Cognitive Abilities](#)
 - Abilities that influence the acquisition and application of knowledge in problem solving
 - [Verbal Abilities](#)
 - Abilities that influence the acquisition and application of verbal information in problem solving



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



- Written Comprehension
- The ability to read and understand information and ideas presented in writing.



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



- Written Expression
- The ability to communicate information and ideas in writing so others will understand.

- [Idea Generation and Reasoning Abilities](#)
- Abilities that influence the application and manipulation of information in problem solving

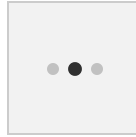


- Fluency of Ideas
- The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).



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.



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.



Deductive Reasoning

- The ability to apply general rules to specific problems to produce answers that make sense.



Inductive Reasoning

- The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).



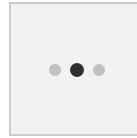
Information Ordering

- 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).

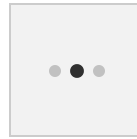


Category Flexibility

- The ability to generate or use different sets of rules for combining or grouping things in different ways.
- [Quantitative Abilities](#)
- Abilities that influence the solution of problems involving mathematical relationships



- Mathematical Reasoning
- The ability to choose the right mathematical methods or formulas to solve a problem.



- Number Facility
- The ability to add, subtract, multiply, or divide quickly and correctly.

- [Memory](#)
- Abilities related to the recall of available information



- Memorization
- The ability to remember information such as words, numbers, pictures, and procedures.

- [Perceptual Abilities](#)
- Abilities related to the acquisition and organization of visual information



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



- 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.



■ 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.

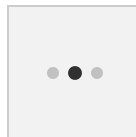
■ [Spatial Abilities](#)

- Abilities related to the manipulation and organization of spatial information



■ Spatial Orientation

- The ability to know your location in relation to the environment or to know where other objects are in relation to you.



■ Visualization

- The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.

■ [Attentiveness](#)

- Abilities related to application of attention



■ Selective Attention

- The ability to concentrate on a task over a period of time without being distracted.



■ Time Sharing

- The ability to shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).

○ [Psychomotor Abilities](#)

- Abilities that influence the capacity to manipulate and control objects

- [Fine Manipulative Abilities](#)

- Abilities related to the manipulation of objects



- 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.



- 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.



- 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.

- [Control Movement Abilities](#)

- Abilities related to the control and manipulation of objects in time and space



- Control Precision

- The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.



- 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

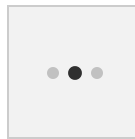
down. It does not involve performing the activities while the whole body is in motion.



- 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.



- 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.
- [Reaction Time and Speed Abilities](#)
- Abilities related to speed of manipulation of objects



- Reaction Time
- The ability to quickly respond (with the hand, finger, or foot) to a signal (sound, light, picture) when it appears.



- Wrist-Finger Speed
- The ability to make fast, simple, repeated movements of the fingers, hands, and wrists.



- Speed of Limb Movement
- The ability to quickly move the arms and legs.

- [Physical Abilities](#)
- Abilities that influence strength, endurance, flexibility, balance and coordination

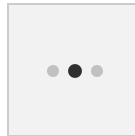
- [Physical Strength Abilities](#)

- Abilities related to the capacity to exert force



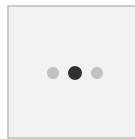
- Static Strength

- The ability to exert maximum muscle force to lift, push, pull, or carry objects.



- Explosive Strength

- The ability to use short bursts of muscle force to propel oneself (as in jumping or sprinting), or to throw an object.



- Dynamic Strength

- The ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue.



- 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.

- [Endurance](#)

- The ability to exert oneself physically over long periods without getting out of breath



- Stamina

- The ability to exert yourself physically over long periods of time without getting winded or out of breath.

- [Flexibility, Balance, and Coordination](#)

- Abilities related to the control of gross body movements



- Extent Flexibility
- The ability to bend, stretch, twist, or reach with your body, arms, and/or legs.



- Dynamic Flexibility
- The ability to quickly and repeatedly bend, stretch, twist, or reach out with your body, arms, and/or legs.



- Gross Body Coordination
- The ability to coordinate the movement of your arms, legs, and torso together when the whole body is in motion.



- Gross Body Equilibrium
- The ability to keep or regain your body balance or stay upright when in an unstable position.

- [Sensory Abilities](#)
- Abilities that influence visual, auditory and speech perception
 - [Visual Abilities](#)
 - Abilities related to visual sensory input



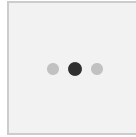
- Near Vision
- The ability to see details at close range (within a few feet of the observer).



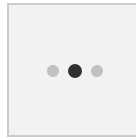
- Far Vision
- The ability to see details at a distance.



- Visual Color Discrimination
- The ability to match or detect differences between colors, including shades of color and brightness.



- Night Vision
- The ability to see under low light conditions.



- Peripheral Vision
- The ability to see objects or movement of objects to one's side when the eyes are looking ahead.

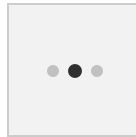


- Depth Perception
- The ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object.



- Glare Sensitivity
- The ability to see objects in the presence of glare or bright lighting.

- [Auditory and Speech Abilities](#)
- Abilities related to auditory and oral input



- Hearing Sensitivity
- The ability to detect or tell the differences between sounds that vary in pitch and loudness.



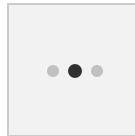
Auditory Attention

- The ability to focus on a single source of sound in the presence of other distracting sounds.



Sound Localization

- The ability to tell the direction from which a sound originated.



Speech Recognition

- The ability to identify and understand the speech of another person.



Speech Clarity

- The ability to speak clearly so others can understand you.

• Occupational Interests (Note: this is under interest table....)

- Preferences for work environments. Occupational Interest Profiles (OIPs) are compatible with Holland's (1985, 1997) model of personality types and work environments.



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.



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.



- 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.



- Social

- Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.



- 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.



- 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.

- **Work Values**

- Global aspects of work composed of specific needs that are important to a person's satisfaction. Occupational Reinforcer Patterns (ORPs) are based on the Theory of Work Adjustment (Dawis & Lofquist, 1984).

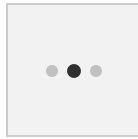


- Achievement

- 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.

- Ability Utilization
- Workers on this job make use of their individual abilities.

- Achievement
- Workers on this job get a feeling of accomplishment.



- 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.
 - Activity
 - Workers on this job are busy all the time.
 - Independence
 - Workers on this job do their work alone.
 - Variety
 - Workers on this job have something different to do every day.
 - Compensation
 - Workers on this job are paid well in comparison with other workers.
 - Security
 - Workers on this job have steady employment.
 - Working Conditions
 - Workers on this job have good working conditions.



- 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.
 - Advancement
 - Workers on this job have opportunities for advancement.
 - Recognition
 - Workers on this job receive recognition for the work they do.
 - Authority
 - Workers on this job give directions and instructions to others.
 - Social Status
 - Workers on this job are looked up to by others in their company and their community.



- 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.
 - Co-workers
 - Workers on this job have co-workers who are easy to get along with.
 - Social Service
 - Workers on this job have work where they do things for other people.
 - Moral Values
 - Workers on this job are never pressured to do things that go against their sense of right and wrong.



- 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.
 - Company Policies and Practices
 - Workers on this job are treated fairly by the company.
 - Supervision, Human Relations
 - Workers on this job have supervisors who back up their workers with management.
 - Supervision, Technical
 - Workers on this job have supervisors who train their workers well.



- Independence
- Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
 - Creativity
 - Workers on this job try out their own ideas.
 - Responsibility
 - Workers on this job make decisions on their own.
 - Autonomy

- Workers on this job plan their work with little supervision.

● Work Styles

- Personal characteristics that can affect how well someone performs a job.
 - [Achievement Orientation](#)
 - Job requires personal goal setting, trying to succeed at those goals, and striving to be competent in own work



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



- Persistence
- Job requires persistence in the face of obstacles.



- Initiative
- Job requires a willingness to take on responsibilities and challenges.

- [Social Influence](#)
- Job requires having an impact on others in the organization, and displaying energy and leadership



- Leadership
- Job requires a willingness to lead, take charge, and offer opinions and direction.

- [Interpersonal Orientation](#)
- Job requires being pleasant, cooperative, sensitive to others, easy to get along with, and having a preference for associating with other organization members



- Cooperation
- Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.



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



- Social Orientation
- Job requires preferring to work with others rather than alone, and being personally connected with others on the job.

- [Adjustment](#)
- Job requires maturity, poise, flexibility, and restraint to cope with pressure, stress, criticism, setbacks, personal and work-related problems, etc.



- Self Control
- Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.



- Stress Tolerance
- Job requires accepting criticism and dealing calmly and effectively with high stress situations.



- Adaptability/Flexibility
- Job requires being open to change (positive or negative) and to considerable variety in the workplace.

- [Conscientiousness](#)
- Job requires dependability, commitment to doing the job correctly and carefully, and being trustworthy, accountable, and attentive to details



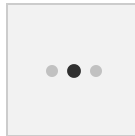
- Dependability

- Job requires being reliable, responsible, and dependable, and fulfilling obligations.



- Attention to Detail

- Job requires being careful about detail and thorough in completing work tasks.



- Integrity

- Job requires being honest and ethical.



- 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.

- [Practical Intelligence](#)

- Job requires generating useful ideas and thinking things through logically



- Innovation

- Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.



- Analytical Thinking

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

Worker Requirements (all in one table entitled CONTENT MODEL REFERENCE)

Descriptors referring to work-related attributes acquired and/or developed through experience and education.

Worker requirements represent developed or acquired attributes of an individual that may be related to work performance such as work-related knowledge and skill.

Knowledge represents the acquisition of facts and principles about a domain of information. Experience lays the foundation for establishing procedures to work with given knowledge. These procedures are more commonly known as skills. Skills may be further divided into basic skills and cross-functional skills. Basic skills, such as reading, facilitate the acquisition of new knowledge. Cross-functional skills, such as problem solving, extend across several domains of activities.

- [Basic Skills](#)
- Developed capacities that facilitate learning or the more rapid acquisition of knowledge
 - [Content](#)
 - Background structures needed to work with and acquire more specific skills in a variety of different domains



■ Reading Comprehension

- Understanding written sentences and paragraphs in work related documents.



■ 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.



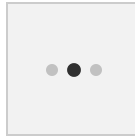
■ Writing

- Communicating effectively in writing as appropriate for the needs of the audience.



■ Speaking

- Talking to others to convey information effectively.



- Mathematics

- Using mathematics to solve problems.

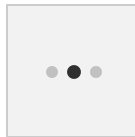


- Science

- Using scientific rules and methods to solve problems.

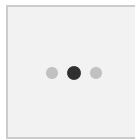
- [Process](#)

- Procedures that contribute to the more rapid acquisition of knowledge and skill across a variety of domains



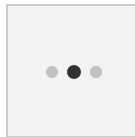
- Critical Thinking

- Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.



- Active Learning

- Understanding the implications of new information for both current and future problem-solving and decision-making.



- Learning Strategies

- Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.



- Monitoring

- Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

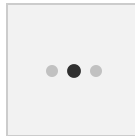
- [Cross-Functional Skills](#)

- Developed capacities that facilitate performance of activities that occur across jobs

- [Social Skills](#)
- Developed capacities used to work with people to achieve goals



- Social Perceptiveness
- Being aware of others' reactions and understanding why they react as they do.



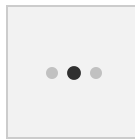
- Coordination
- Adjusting actions in relation to others' actions.



- Persuasion
- Persuading others to change their minds or behavior.



- Negotiation
- Bringing others together and trying to reconcile differences.



- Instructing
- Teaching others how to do something.



- Service Orientation
- Actively looking for ways to help people.

- [Complex Problem Solving Skills](#)
- Developed capacities used to solve novel, ill-defined problems in complex, real-world settings



- Complex Problem Solving
- Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

- [Technical Skills](#)

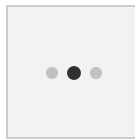
- Developed capacities used to design, set-up, operate, and correct malfunctions involving application of machines or technological systems



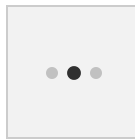
- Operations Analysis
- Analyzing needs and product requirements to create a design.



- Technology Design
- Generating or adapting equipment and technology to serve user needs.



- Equipment Selection
- Determining the kind of tools and equipment needed to do a job.



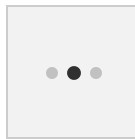
- Installation
- Installing equipment, machines, wiring, or programs to meet specifications.



- Programming
- Writing computer programs for various purposes.



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



- Operation and Control
- Controlling operations of equipment or systems.



- Equipment Maintenance
- Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.



- Troubleshooting
- Determining causes of operating errors and deciding what to do about it.



- Repairing
- Repairing machines or systems using the needed tools.



- Quality Control Analysis
- Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

- [Systems Skills](#)
- Developed capacities used to understand, monitor, and improve socio-technical systems



- Judgment and Decision Making
- Considering the relative costs and benefits of potential actions to choose the most appropriate one.

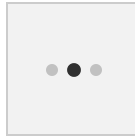


- Systems Analysis
- Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.

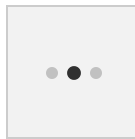


- Systems Evaluation

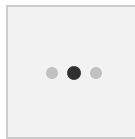
- Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
- [Resource Management Skills](#)
- Developed capacities used to allocate resources efficiently



- Time Management
- Managing one's own time and the time of others.



- Management of Financial Resources
- Determining how money will be spent to get the work done, and accounting for these expenditures.



- Management of Material Resources
- Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.



- Management of Personnel Resources
- Motivating, developing, and directing people as they work, identifying the best people for the job.

- [Knowledge](#)
- Organized sets of principles and facts applying in general domains
 - [Business and Management](#)
 - Knowledge of principles and facts related to business administration and accounting, human and material resource management in organizations, sales and marketing, economics, and office information and organizing systems

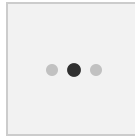


- Administration and Management
- Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique,

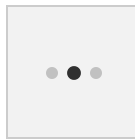
production methods, and coordination of people and resources.



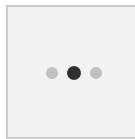
- Clerical
- Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.



- Economics and Accounting
- Knowledge of economic and accounting principles and practices, the financial markets, banking and the analysis and reporting of financial data.



- Sales and Marketing
- Knowledge of principles and methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.



- 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.



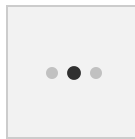
- Personnel and Human Resources
- Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.

- [Manufacturing and Production](#)

- Knowledge of principles and facts related to the production, processing, storage, and distribution of manufactured and agricultural goods

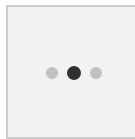


- Production and Processing
- Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.



- Food Production
- Knowledge of techniques and equipment for planting, growing, and harvesting food products (both plant and animal) for consumption, including storage/handling techniques.

- [Engineering and Technology](#)
- Knowledge of the design, development, and application of technology for specific purposes.



- Computers and Electronics
- Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.



- Engineering and Technology
- Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.



- Design
- Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.



- Building and Construction
- Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.

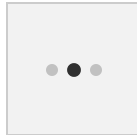


- Mechanical
- Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

- [Mathematics and Science](#)
- Knowledge of the history, theories, methods, and applications of the physical, biological, social, mathematical, and geography



- Mathematics
- Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.



- Physics
- Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures and processes.



- Chemistry
- Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.



- Biology

- Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment.



- 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.



- Sociology and Anthropology
- Knowledge of group behavior and dynamics, societal trends and influences, human migrations, ethnicity, cultures and their history and origins.



- Geography
- Knowledge of principles and methods for describing the features of land, sea, and air masses, including their physical characteristics, locations, interrelationships, and distribution of plant, animal, and human life.

- [Health Services](#)
- Knowledge of principles and facts regarding diagnosing, curing, and preventing disease, and improving and preserving physical and mental health and well-being

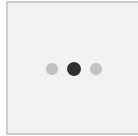


- Medicine and Dentistry
- Knowledge of the information and techniques needed to diagnose and treat human injuries, diseases, and deformities. This includes symptoms, treatment alternatives, drug properties and interactions, and preventive health-care measures.



- Therapy and Counseling

- Knowledge of principles, methods, and procedures for diagnosis, treatment, and rehabilitation of physical and mental dysfunctions, and for career counseling and guidance.



- 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.
- [Arts and Humanities](#)
- Knowledge of facts and principles related to the branches of learning concerned with human thought, language, and the arts.



- English Language
- Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.



- Foreign Language
- Knowledge of the structure and content of a foreign (non-English) language including the meaning and spelling of words, rules of composition and grammar, and pronunciation.



- Fine Arts
- Knowledge of the theory and techniques required to compose, produce, and perform works of music, dance, visual arts, drama, and sculpture.



- History and Archeology
- Knowledge of historical events and their causes, indicators, and effects on civilizations and cultures.



- Philosophy and Theology
- Knowledge of different philosophical systems and religions. This includes their basic principles, values, ethics, ways of thinking, customs, practices, and their impact on human culture.
- [Law and Public Safety](#)
- Knowledge of regulations and methods for maintaining people and property free from danger, injury, or damage; the rules of public conduct established and enforced by legislation, and the political process establishing such rules.



- 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.



- Law and Government
- Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.
- [Communications](#)
- Knowledge of the science and art of delivering information



- Telecommunications
- Knowledge of transmission, broadcasting, switching, control, and operation of telecommunications systems.



- Communications and Media
- Knowledge of media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and entertain via written, oral, and visual media.



- Transportation
- Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.
- [Education](#)
- Prior educational experience required to perform in a job



- Required Level of Education
- The level of education required to perform a job.
- [Job-Related Professional Certification](#)
- Certification: A credential awarded by a certification body based on an individual demonstrating through an examination process that he or she has acquired the designated knowledge, skills, and abilities to perform a specific job.



- Job-Related Professional Certification
- Possession of an occupational or industry certification to perform the job.



- Instructional Program Required
- The instructional program required for this job
- [Education Level in Specific Subjects](#)
- The amount of education required in 15 subject areas to perform in a job. Subject areas cover most of the courses that occur in high school, junior college, college undergraduate degree programs, and other education and training programs
 - Technical Vocational
 - Courses focus on non-business technical skills, such as Agriculture, Industrial Arts, Automobile and Shop, and Electronics
 - Business Vocational
 - Courses focus on basic business skills, such as Word Processing, Filing, Bookkeeping/Basic Accounting
 - English/language Arts
 - Courses focus on reading, interpretation, and writing, such as Literature, Composition, Journalism, and Creative Writing

- Oral Communication
- Courses focus on oral communication and speech, such as Oral Communication, Speech, and Interpersonal Communication
- Languages
- Courses focus on reading, writing, and/or speaking languages other than English, such as French, Chinese, German, Japanese, Latin, Russian, and Spanish
- Basic Math
- Courses focus on basic and applied math, such as General Math and Business Math
- Advanced Math
- Courses focus on advanced topics in math, such as Algebra, Geometry, Calculus, and Statistics
- Physical Science
- Courses focus on the study of matter and/or energy, such as Physics, Chemistry, and Astronomy
- Computer Science
- Courses focus on computers and their uses, such as Programming, Information Systems Management, and Software Applications
- Biological Science
- Courses focus on the study of life and living beings, such as life science, biology, anatomy and physiology
- Applied Science
- Courses focus on the application of science, such as Engineering, Health, and Medicine
- Social Science
- Courses focus on the behavioral sciences, such as Social Studies, Economics, History, Psychology, and Sociology
- Arts
- Courses focus on visual and performing arts, such as Arts and Crafts, Music, Painting, Sculpture, Theater, and Voice
- Humanities
- Courses focus on cultural and philosophical aspects of humans, such as Minority Studies, Philosophy, and Religion
- Physical Education
- Courses focus on physical fitness and sports, such as Aerobics, Jogging, Weight Lifting, and Specific Sports

Experience Requirements

Requirements related to previous work activities and explicitly linked to certain types of work activities.

This domain includes information about the typical experiential backgrounds of workers in an occupation or group of occupations including certification, licensure, and training data. For example, information about the professional or organizational certifications required for entry and advancement in an occupation, preferred education or training, and required apprenticeships will be documented by this part of the model.

- [Experience and Training](#) (See under table Education, Training and experience)
- If someone were being hired to perform this job, how much of the following would be required?



- Related Work Experience
- Amount of related work experience required to get hired for the job?



- On-Site or In-Plant Training
- Amount of on-site or in-plant training (e.g., organized class room instruction) required to perform the job?



- On-the-Job Training
- Amount of on the job training required to perform the job?
- [Apprenticeship](#)
- Apprenticeship is a combination of on-the-job training and related instruction in which workers learn the practical and theoretical aspects of a highly skilled occupation. Apprenticeship programs can be sponsored by individual employers, joint employer and labor groups, and/or employer associations.

----- TBC FROM HERE ON...

- [Basic Skills - Entry Requirement](#)
- Entry requirement for developed capacities that facilitate learning or the more rapid acquisition of knowledge

- [Content - Entry Requirement](#)
 - Entry requirement for background structures needed to work with and acquire more specific skills in a variety of different domains
 - [Process - Entry Requirement](#)
 - Entry requirement for procedures that contribute to the more rapid acquisition of knowledge and skill across a variety of domains
- [Cross-Functional Skills - Entry Requirement](#)
- Entry requirement for developed capacities that facilitate performance of activities that occur across jobs
- [Licensing](#)
- Licenses, certificates, or registrations that are awarded to show that a job holder has gained certain skills. This includes requirements for obtaining these credentials, and the organization or agency requiring their possession.