

Emerging Skills by Occupational Group

Emerging Skills Overview

Job skills are personal abilities that help workers carry out job-related tasks. However, depending on the occupation, the required skills can be very different. For instance, construction workers need a unique set of skills different from accountants, teachers, or production workers.

In an effort to maintain updated skills lists, the Occupation Information (O*NET) surveys job incumbents who are provided an opportunity to provide tasks that they feel are not represented in the current skills list for their respective occupations. Based on a review and analysis of these proposed new tasks, revisions are made to existing tasks and emerging skills are identified. This report contains those new tasks/skills and revisions by occupational group.

Source: CWIA analysis of the Occupation Information (O*NET) data.

Emerging Skills by Occupational Group

(Bold entries were added since the previous list, shaded entries were revised and the remaining entries still emerging)

(Architecture and Engineering Occupations: SOC 17-0000)

Emerging Skill
Develop software for aerospace systems.
Design and deliver technology, such as prosthetic devices, to assist people with disabilities.
Develop computer models of chemical processes.
Develop software to control electrical systems.
Evaluate the operation and maintenance of water/wastewater systems to identify ways to improve their efficiency.
Direct the purchase, modification, installation, testing, maintenance, and operation of fire prevention and protection systems.
Conduct analyses of ships, such as stability, structural, weight, or vibration analyses.
Present technical information at conferences.
Analyze meteorological data.
Design electrical interconnections.
Design wind turbine components.
Estimate energy production by analyzing wind data.
Create bills of materials.
Design electrical and mechanical systems used for avionic instrumentation applications.
Create engineering drawings, schematics or blueprints.
Adjust and operate surveying instruments such as prisms, theodolites, electronic distance measuring equipment, or electronic data collectors.
Conduct surveys to ascertain the locations of natural features and man-made structures on the Earth's surface, underground, and underwater, using electronic distance-measuring equipment, such as GPS, and other surveying instruments.
Prepare cost estimates for mapping projects.

(Arts, Design, Entertainment, Sports, and Media Occupations: SOC 27-0000)

Emerging Skill
Pack products for shipping.
Prepare digital files for printing.
Research the target audience of projects.
Write or edit copy for clients.
Research health and safety code requirements to inform design.
Monitor time during live broadcasts.
Schedule guests to appear on shows.
Select news content that is relevant and important to viewers.
Direct shows, productions, and plays.
Teach acting classes.
Inspect game sites for compliance with regulations or safety requirements.
Prepare pointe shoes (e.g., by sewing) for use in rehearsals and performance.
Compose instrumental or vocal music.
Practice playing musical instruments.
Produce recordings of music.
Stay abreast of the latest trends in music and music technology.
Post and update content on the company's website and social media outlets.

Respond to questions from the public.
Write text, such as headlines, stories, articles, editorials, or newsletters.
Work with staff to develop advertising concepts.

(Building, Grounds Cleaning, and Maintenance Occupations: SOC 37-0000)

Emerging Skill
Move furniture.
Establish driving routes for pesticide applications.
Record information about pesticide applications, such as the type used and amount applied.

(Business and Financial Occupations: SOC 13-0000)

Emerging Skill
Send samples of clients' work and other promotional material to potential employers to obtain auditions, sponsorships and endorsement deals.
Attend mediations or trials.
Contact vendors to locate replacement parts for vehicles.
Discuss insurance claims with customers or damage claimants.
Review repair cost estimates and negotiate with automobile repair shops to secure agreement on cost of repairs.
Develop guidelines for nondiscriminatory employment practices, such as affirmative action plans and equal opportunity employment policies.
Train employees on equal opportunity laws, guidelines, or policies, such as discrimination, diversity, harassment, or affirmative action.
Administer employee benefit plans.
Contact potential clients, meet with professional and trade associations, and produce brochures and other publications to promote conference, convention, and trade show services.
Plan and develop programs, agendas, budgets, menus, and services according to customer requirements.
Develop and administer compensation programs such as merit or incentive pay.
Prepare adjusting journal entries.
Review accounts for discrepancies and reconcile differences.
Assist in the training of new staff.
Explain real and personal property taxes to property owners.
Contact customers regarding delinquent accounts to collect payments.
Examine documents to determine degree of risk from factors such as applicant health, financial standing and value, and condition of property.
Schedule appointments with clients.

(Community and Social Services Occupations: SOC 21-0000)

Emerging Skill
Collaborate with mental health professionals and other staff members to perform clinical assessments or develop treatment plans.
Perform crisis interventions to help ensure the safety of the patients and others.
Supervise rehabilitation counselors and staff.
Educate clients about end of life symptoms and options to assist them in making informed decisions.
Assess clients' cognitive abilities, and physical and emotional needs to determine appropriate interventions.
Develop and implement behavioral management and care plans for clients.

(Computer and Math Occupations: SOC 15-0000)

Emerging Skill
Develop websites.
Train users on the use and function of computer programs.
Review research literature.
Determine whether statistical methods are appropriate based on user needs or on research questions of interest.
Prepare and structure data warehouses for storing data.

(Construction and Extraction Occupations: SOC 47-0000)

Emerging Skill
Conduct pressure tests on vessels, such as boilers.
Cut and install vinyl composition tile or vinyl base.
Buff and vacuum floors to ensure their cleanliness prior to the application of finish.
Clean tools and equipment, such as brushes and rollers.
Hang wallpaper.
Repair hydraulic or air pumps.
Repair or remove and replace system components.
Unload rebar from trucks.
Use forklifts or cranes to move construction material, such as rebar.
Assemble or inspect hoisting equipment or rigging, such as cables, pulleys, or hooks, to move heavy equipment or materials.
Lift steel beams, girders, or columns using cranes or forklifts, or by signaling hoisting equipment operators to lift or position structural steel members.
Cut or weld metal.
Operate heavy equipment, such as backhoes.
Pump, clean, and repair septic tanks, sewer lines, or related structures such as manholes, culverts, and catch basins.
Determine amount of air leakage in buildings using a blower door machine.
Test combustible appliances, such as gas appliances.
Maintain and perform safety inspections on rigs, equipment, and other tools.
Monitor methane gas levels in mines to avoid carbon monoxide poisoning.
Check roof or ribs for hazardous conditions.
Clean equipment, such as dust collectors.
Clean trucks used in the fields.
Lay gas and oil pipelines.

(Education and Library Occupations: SOC 25-0000)

Emerging Skill
Mentor new faculty.
Develop and maintain website for on-line courses.
Conduct faculty performance evaluations.
Develop department and course schedules.
Review manuscripts for professional journals.
Maintain or repair lab equipment.
Clean laboratory facilities.
Write letters of recommendation for students.
Conduct ethnographic field research.

Recruit and hire new faculty.
Select and invite guest speakers to speak to classes.
Maintain or repair studio facilities.
Direct theatre productions and projects.
Review manuscripts for publication in professional journals.
Schedule courses.
Teach writing or communication classes.
Correspond with students through email to address their questions and concerns.
Conduct faculty performance evaluations.
Coach athletic teams.
Collaborate with other teachers that provide instruction to special education students to ensure that the students receive appropriate supports.
Develop or write Individualized Education Programs (IEPs) for students.
Collaborate with other educational personnel to provide inclusive activities or programs for children with disabilities.
Enter information on museum collections into computer databases.
Open and close the library.
Edit audiovisual material to enhance viewing quality.
Maintain inventory of audiovisual equipment.
Supervise student workers.
Train faculty and media staff on the use of audiovisual equipment.
Troubleshoot problems with audiovisual equipment.

(Farming, Fishing, and Forestry Occupations: SOC 45-0000)

Emerging Skill
Bathe and groom animals.
Exercise animals to keep them in healthy condition.
Purchase and stock supplies of feed and medicines.
Plant, spray, weed, fertilize, water, and prune plants, shrubs, and trees, using gardening tools.
Create field maps using geographic information systems technology.
Move logs using heavy equipment such as log loaders.

(Food Preparation and Serving Occupations: SOC 35-0000)

Emerging Skill
Monitor and record food temperatures to ensure safety of food.
Rotate and store food supplies.
Provide customers with directions or answers to questions.
Clean and organize eating, service, and kitchen areas and sweep and mop floors.
Greet and seat customers.
Assist other restaurant workers by serving food and beverages, or by bussing tables.

(Healthcare Practitioners and Technical Occupations: SOC 29-0000)

Emerging Skill
Provide guidance to patients on exercises they can perform to improve mobility.
Take x-rays.
Evaluate and treat problems related to the temporomandibular joint (TMJ).
Advise patients to comply with treatment plans.

Examine patients to diagnose oral health conditions and diseases.
Place invasive intravascular monitors into patients.
Teach anesthesiology principles to residents.
Teach residents or medical students about pediatric topics.
Perform mental health evaluations to provide information to courts of law on patients' mental states.
Direct or support quality improvement projects or safety programs.
Teach self-advocacy skills to clients.
Attend high-risk and caesarian section infant deliveries to provide neonatal respiratory care as needed.
Evaluate oral motor function in infants.
Supervise students or assistants.
Provide coaching and mentoring to other caregivers to help facilitate their professional growth and development.
Instruct student nurse-midwives, medical students, or residents on the birthing process.
Archive diagnostic material, such as histologic slides and blocks.
Perform quality control analyses to ensure accuracy of test results.
Attend continuing education courses to maintain or update skills.
Perform general administrative tasks, such as answering telephones, scheduling appointments, or ordering supplies or equipment.
Schedule patients for nuclear medicine exams and procedures.
Comfort patients during exams or request sedatives or other medication from physicians for patients with anxiety or claustrophobia.
Review physicians' orders to confirm prescribed exams.
Attend interdisciplinary meetings with other health care professionals to discuss patient care.
Observe and monitor patient food intake and body weight, and report changes, progress, and dietary problems to dietician.
Enter prescription information into computer databases.
Assist with intubations.
Schedule surgical procedures for patients.
Transport patients to and from the operating room.
Scan patients' health records into electronic formats.
Schedule medical appointments for patients.
Counsel patients and families on communication strategies and the effects of hearing loss.
Educate patients on ophthalmic medical procedures, conditions of the eye, and appropriate use of medications.
Perform ophthalmic triage in the office or via phone to assess severity of patients' conditions.
Analyze incident data to identify trends in injuries, illnesses, accidents or other hazards.
Clean and sanitize athletic training rooms.
Perform annual gynecologic exams, including pap smears and breast exams.
Provide patients with contraceptive and family planning information.

(Healthcare Support Occupations: SOC 31-0000)

Emerging Skill
Assist patients with toileting and incontinent care.
Feed patients.
Document patient information, such as notes on their progress.
Instruct patients in proper body mechanics and in ways to improve functional mobility, such as aquatic exercise.
Perform therapeutic wound care.
Maintain massage areas by restocking supplies or sanitizing equipment.
Order medical supplies for healthcare facilities or laboratories.
Place orders to restock inventory of hospital or laboratory supplies.

(Legal Occupations: SOC 23-0000)

Emerging Skill
Negotiate contractual agreements.
Work in environmental law, representing the state, federal agencies, public interest groups, waste disposal companies, or construction firms.
Schedule hearings.
Issue arrest warrants.
Investigate facts and law of cases and search pertinent sources, such as public records and internet sources, to determine causes of action and to prepare cases.
Log and store exhibits from court proceedings.
Proofread transcripts for correct spelling of words.
Type court orders for judges.

(Life, Physical, and Social Science Occupations: SOC 19-0000)

Emerging Skill
Conduct experiments to investigate the underlying mechanisms involved in plant growth and plant responses to the environment.
Write grant proposals to obtain funding for biological research.
Write grant proposals to obtain funding for research.
Prepare or review reports, manuscripts, or meeting presentations.
Write grant applications to obtain funding.
Develop soil maps.
Coordinate with federal land managers and other agencies and organizations to manage and protect rangelands.
Regulate grazing (e.g., by issuing permits and checking for compliance with standards), and help ranchers plan and organize grazing systems in order to manage, improve and protect rangelands and maximize their use.
Provide care for park program animals.
Train staff on park programs.
Write articles for publication in professional journals.
Write grant applications for funding epidemiologic research.
Write applications for research grants.
Conduct question and answer presentations on astronomy topics with public audiences.
Mentor graduate students and junior colleagues.
Supervise students' research on celestial and astronomical phenomena.
Write research proposals to receive funding.
Develop and deliver training on weather topics.
Develop computer programs to collect meteorological data or to present meteorological information.
Speak to the public to discuss weather topics or answer questions.
Write research papers for publication in scientific journals.
Write grants to obtain funding for restoration projects.
Review environmental, historical, or technical reports and publications for accuracy.
Explain economic impact of policies to the public.
Teach courses in environmental economics.
Write proposals to win new projects.
Conduct assessments of patients' risk for harm to self or others.
Prepare written evaluations of individuals' psychological competence for court hearings.
Supervise and train interns, clinicians in training, and other counselors.
Explain sociological research to the general public.
Write grants to obtain funding for research projects.

Design exhibits of artifacts.
Educate the public about archeology.
Mentor archeology students.
Advise political science students.
Serve on committees.
Supervise other food science technicians.
Evaluate and interpret seismic data with the aid of computers.
Record geological data in a database.
Calibrate, maintain, and repair chemical instrumentation sensing elements and sampling system equipment, using calibration instruments and hand tools.
Document results from radiation and contamination surveys.
Inspect, test, and maintain respiratory protection equipment.
Write radiological work permits.
Analyze data from computers or other digital media sources for evidence related to criminal activity.
Analyze DNA data to identify DNA donor profiles.
Examine footwear, tire tracks or other types of impressions.
Examine physical evidence, such as hair, biological fluids, fiber, wood, or soil residues to obtain information about its source and composition.
Measure and sketch crime scenes to document evidence.
Train others, such as new personnel, on crime scene investigation techniques, including the collection and packaging of evidence.
Map forest tract data using digital mapping systems.

(Installation, Maintenance, and Repair Occupations: SOC 49-0000)

Emerging Skill
Calibrate instruments, such as transmitters.
Perform motor oil changes.
Repair or rebuild transmissions.
Dismount, mount, and repair or replace tires.
Explain repair procedures to customers.
Repair or replace engine mechanical equipment, such as power tilts, water pumps, bilge pumps, or power take-offs.
Install motorcycle accessories.
Estimate costs of repairing bicycles and write service tickets.
Make adjustments to bicycles to improve customer fit and riding position.
Assign work schedules to work crews.
Align machines or equipment, using hoists, jacks, hand tools, squares, rules, micrometers, lasers, or plumb bobs.
Reline furnaces using ramming material.
Set up service for customers, installing, connecting, testing, or adjusting equipment, such as digital subscriber line modems.
Adjust or repair cameras, photographic mechanisms, or equipment such as range and view finders, shutters, light meters, or lens systems, using hand tools.
Inspect, test, or troubleshoot malfunctioning medical or related equipment, following manufacturers' specifications and using test and analysis instruments.
Install medical equipment.
Order supplies, including replacement parts, for timing instruments.
Load machines onto trucks to prepare for transportation.
Test and repair track circuits.

(Management Occupations: SOC 11-0000)

Emerging Skill
Create media notices about events.
Conduct employee safety training.
Manage safety programs at power generation facilities.
Train employees in power plant operations.
Develop cost reduction strategies and savings plans.
Create school improvement plans by using student performance data.
Design or use assessments to monitor student learning outcomes.
Prepare reports on academic or institutional data.
Evaluate fitness and wellness programs to determine their effectiveness.
Deliver death certificates to medical facilities or offices to obtain signatures from legally authorized persons.
Monitor the performance of the gaming floor, relocating games and installing new games as necessary.
Identify and apply for project funding.

(Office and Administrative Support Occupations: SOC 43-0000)

Emerging Skill
Return checks to customers or retrieve checks returned to customers in error, adjusting accounts and answering inquiries about errors as necessary.
Perform general administrative tasks, such as answering telephones, scheduling appointments, or ordering supplies or equipment.
Prepare and file payroll tax returns.
Answer telephones and assist customers with their questions.
Call customers to collect payment on delinquent accounts.
Call customers to collect past due payments.
Recruit participants for focus groups.
Plan or participate in library events and programs, such as story time with children.
Enter and update databases of contact information, such as names, addresses, and phone numbers.
Dig dirt away from meters to take readings.
Install new or replace broken meters.
Stock lobby with retail merchandise.
Receive, unload, open, unpack, or issue sales floor merchandise.
Arrange merchandise on sales floor for sale.
Operate equipment such as forklifts.
Rotate stock.
Stock bins or shelves.
Keep track of employees' time.
Make travel arrangements for attorneys.
Prepare, proofread, or process legal documents, such as summonses, subpoenas, complaints, appeals, motions, or pretrial agreements.
Enter insurance and claims related information into database systems.
Check the facts of stories using the internet.
Design page layouts using text, photographs, graphics, and other elements.
Present results of statistical analyses to stakeholders.
Write code for statistical applications.

(Personal Care and Service Occupations: SOC 39-0000)

Emerging Skill
Teach owners how to train their dogs.
Teach people with visual impairments to use guide dogs.
Advise pet owners on how to care for their pets' health.
Greet customers and make them feel welcome.
Provide race or game information to patrons.
Serve drinks to patrons.
Clean the projection booth.
Perform regular maintenance tasks such as rotating or replacing xenon bulbs, cleaning projectors and lenses, lubricating machinery, and keeping electrical contacts clean and tight.
Create patterns for costumes based on designer's drawings.
Schedule costume fittings for actors.
Maintain or repair athletic equipment.
Clean and disinfect areas in which bodies are prepared and embalmed.
Assist hair stylists with chemical services, such as neutralizing perms and applying hair color.
Launder and fold the towels that are used for drying customers' hair.
Refill and stock work stations with supplies, such as shampoos and conditioners.
Rinse out hair color or permanent solutions from customers' hair.
Sweep hair from the salon floor.
Order flowers for guests.
Shop for groceries, clothing, and other items needed for children's care.
Administer bedside or personal care, such as assistance with ambulation, dressing, feeding, or personal hygiene.

(Production Occupations: 51-0000)

Emerging Skill
Evaluate employee performance.
Clean and sanitize meat cases and cutting equipment.
Clean meat cutting equipment.
Order tooling for jobs.
Use equipment designed to join sheet metal, such as spot welders.
Clean work area.
Program computer numerical control machines.
Write programs for computer numerical control (CNC) machines to cut metal and plastic materials.
Fit and assemble parts to make, repair, or modify dies, jigs, gauges, and tools, using machine tools, hand tools, or welders.
Correct color in photographs or digital images.
Inspect finished products to ensure that shoes have been completed according to specifications.
Fit garments on clients, altering as needed.
Weigh ingredients, such as dye, to be mixed together for use in textile processing.
Inspect products to ensure that the quality standards and specifications are met.
Operate heavy equipment, such as bulldozers and front-end loaders.
Perform tests of water chemistry in boilers.
Load products into tanks for shipment.
Order parts or supplies for orthotic or prosthetic devices.
Tint lenses according to customer specifications.
Adjust digital images using software.
Attach handles to pottery pieces.
Design spaces to display pottery for sale.

Load glazed pieces into kilns for firing and unload finished pieces.
Mix and apply glazes to pottery pieces using tools such as spray guns.
Operate gas or electric kilns to fire pottery pieces.
Pack and ship pottery to stores or galleries for retail.
Buff tires according to specifications for width and undertread depth.

(Protective Service Occupations: SOC 33-0000)

Emerging Skill
Conduct evaluations of employees' performance.
Analyze burn conditions and results, and prepare postburn reports.
Plan, direct, and supervise prescribed burn projects.
Administer first aid and cardiopulmonary resuscitation to injured persons or provide emergency medical care such as basic or advanced life support.
Train new employees to control and suppress forest fires.
Teach fire investigation techniques to other firefighter personnel.
Conduct wildland firefighting training.
Educate the public about fire safety and prevention.
Arrest persons in court when arrest warrants have been issued.
Provide assistance to the public, such as directions to court offices.
Take fingerprints of arrestees, prisoners, or the general public.
Analyze and process evidence at crime scenes, during autopsies, or in the laboratory, wearing protective equipment and using powders and chemicals.
Create sketches and diagrams by hand or with computer software to depict crime scenes.
Analyze intelligence data to identify patterns and trends in criminal activity.
Conduct presentations of analytic findings.
Perform traffic control duties such as setting up barricades and temporary signs, placing bags on parking meters to limit their use, or directing traffic or pedestrians.
Conduct community programs for all ages concerning topics such as drugs and violence.
Serve documents to parties named in legal proceedings.
Develop and maintain log of surveillance observations.
Inspect and monitor audio or video surveillance equipment to ensure it is working appropriately.
Review video surveillance footage.

(Sales and Related Occupations: SOC 41-0000)

Emerging Skill
Answer incoming phone calls.
Help customers find the location of products.
Stock shelves, sort and re-shelve returned items, and mark prices on items and shelves.
Check identifications to verify age of players.
Clean casino areas.
Exchange money, credit, tickets, or casino chips and make change for customers.
Pose for artists and photographers either with or without clothes.
Contact previous clients for prospecting of referral business.

(Transportation and Material Moving Occupations: SOC 53-0000)

Emerging Skill
Monitor, direct, or sequence the movement of aircraft within an assigned air space or on the ground at airports to minimize delays and maximize safety.
Conduct inspections of the airport property and perimeter to maintain controlled access to airfields.
Initiate or conduct airport-wide coordination of snow removal on runways and taxiways.
Inspect airfield conditions to ensure compliance with federal regulatory requirements.
Monitor passenger behavior to identify threats to the safety of the crew and other passengers.
Announce stops to passengers.
Read maps to plan bus routes.
Record bus routes.
Report delinquent student behaviors to school administration.
Perform basic vehicle maintenance tasks, such as adding oil, fuel, or radiator fluid, performing minor repairs, or washing trucks.
Operate locomotives under the instruction of engineers.
Conduct brake tests to determine the condition of brakes on trains.
Conduct safety drills such as man overboard or fire drills.
Visually inspect cargo for damage upon arrival or discharge.
Inspect crane site conditions to determine ground stability.
Perform maintenance on dredge equipment, such as changing engine oil.
Check freight, stock, or other materials for damage.
Take inventory of freight, stock, or other materials used on site.
Examine and inspect containers, materials, or products to ensure that product quality and packing specifications are met.
Change water filters.
Gauge oil and gas production.
Monitor pumps and flow lines for gas and fluid leaks.
Clean, fuel, service, and perform safety checks on all equipment, and repair and replace parts as necessary.
Examine roadway and clear obstructions from the path of travel.
Handle high voltage sources and hang electrical cables.

Source: CWIA analysis of Occupation Information Network (O*NET) data.