



Updating ANZSCO

Reflecting a modern Australian labour market



List of ANZSCO Occupations in Scientific Research Services

Consultation round 1, 1 Feb 2023 - 28 Apr 2023

This is the list of ANZSCO Occupations in scope of the focus area 'Scientific research services'.

The focus area broadly covers occupations that require specialised knowledge and skills to:

- develop, implement and monitor strategies, policies, plans and activities in designated areas to conserve and protect natural and cultural heritage
- plan, organise, direct the operations of a research or production laboratory
- examine the anatomy, physiology and biochemistry of humans, animals and other living organisms to understand their function and interrelationships
- develop practical applications of experimental and research findings
- study the composition, structure and other physical attributes of the Earth's crust and the minerals contained in it
- study the chemical and physical properties of the universe
- study the physics and dynamics of the atmosphere to understand weather and climate and long-term climatic trends.

The comprehensive review includes occupations recently updated in 2021 and 2022 so that we can apply conceptual consistency across the classification.

Only occupations relevant to the focus area are included. These are listed by their current hierarchical categories in ANZSCO.

This information is from the latest version of ANZSCO, the Australian Update, 2022

[Browse Classification | Australian Bureau of Statistics \(abs.gov.au\)](https://abs.gov.au)



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Major Group 1 – Managers | Sub-major Group 13 – Specialist Managers | Minor Group 139 – Miscellaneous Specialist Managers | Unit Group 1399 – Other Specialist Managers

Code	Title	Skill Level	Specialisations	Description
139912	Environmental Manager	1		Plans, organises, directs, controls and coordinates the development and implementation of an environmental management system within an organisation by identifying, solving and alleviating environmental issues, such as pollution and waste treatment, in compliance with environmental legislation and to ensure corporate sustainable development.
139913	Laboratory Manager	1		Plans, organises, directs, controls and coordinates the operations of a research or production laboratory.





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Major Group 2 – Professionals | Sub-major Group 23 – Design, Engineering, Science and Transport Professionals | Minor Group 234 – Natural and Physical Science Professionals | Unit Group 2342 – Chemists, and Food and Wine Scientists

Code	Title	Skill Level	Specialisations	Description
234211	Chemist	1	Analytical Chemist Industrial Chemist	Studies the chemical and physical properties of substances, and develops and monitors chemical processes and production.
234212	Food Technologist Food Scientist	1		Develops new and improves existing food products, and sets standards for producing, packaging and marketing food.
234213	Wine Maker Oenologist	1		Plans, supervises and coordinates the production of wine or spirits from selected varieties of grapes.



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Major Group 2 – Professionals | Sub-major Group 23 – Design, Engineering, Science and Transport Professionals | Minor Group 234 – Natural and Physical Science Professionals | Unit Group 2343 – Environmental Scientists

Code	Title	Skill Level	Specialisations	Description
234311	Conservation Officer	1	Landcare Facilitator	Develops and implements programs and regulations for the protection of fish, wildlife and other natural resources.
234312	Environmental Consultant Environmental Adviser Environmental Auditor Environmental Officer	1		Analyses and advises on policies guiding the design, implementation and modification of government or commercial environmental operations and programs.
234313	Environmental Research Scientist Environmental Scientist	1	Air Pollution Analyst Ecologist Land Degradation Analyst Water Quality Analyst	Studies and develops policies and plans for the control of factors which may produce pollution, imbalance in or degradation of the environment.
234314	Park Ranger	1	Aboriginal and Torres Strait Islander Land and Sea Ranger	Assists in controlling a State or national park, scenic area, historic site, nature reserve, recreation area or conservation reserve in accordance with authorised policies and priorities.



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Major Group 2 – Professionals | Sub-major Group 23 – Design, Engineering, Science and Transport Professionals | Minor Group 234 – Natural and Physical Science Professionals | Unit Group 2343 – Environmental Scientists

Code	Title	Skill Level	Specialisations	Description
234399	Environmental Scientists nec	1		<p>This occupation group covers Environmental Scientists not elsewhere classified.</p> <p>Occupations in this group include:</p> <ul style="list-style-type: none">• Environmental Educator• Soil Scientist





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Major Group 2 – Professionals | Sub-major Group 23 – Design, Engineering, Science and Transport Professionals | Minor Group 234 – Natural and Physical Science Professionals | Unit Group 2344 – Geologists, Geophysicists and Hydrogeologists

Code	Title	Skill Level	Specialisations	Description
234411	Geologist	1	Marine Geologist Palaeontologist	Studies the composition, structure and other physical attributes of the earth to increase scientific knowledge and to develop practical applications in fields such as mineral exploitation, civil engineering, environmental protection and rehabilitation of land after mining.
234412	Geophysicist	1	Oceanographer Seismologist	Studies the composition, structure and other physical attributes of the earth, locates minerals, petroleum or ground water, and detects, monitors and forecasts seismic, magnetic, electrical, geothermal and oceanographic activity.
234413	Hydrogeologist	1		Monitors, measures, analyses and describes the earth's surface and groundwater resources and many aspects of the water cycle, including human use of water resources.



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Major Group 2 – Professionals | Sub-major Group 23 – Design, Engineering, Science and Transport Professionals | Minor Group 234 – Natural and Physical Science Professionals | Unit Group 2345 – Life Scientists

Code	Title	Skill Level	Specialisations	Description
234511	Life Scientist (General) Biologist (General)	1		Studies the origin, anatomy, physiology, reproduction and behaviour of living organisms and the ways in which they interact with the environment in which they live.
234513	Biochemist	1	Enzyme Chemist Protein Chemist	Studies the biochemistry of living organisms and the molecular structure and function of related components.
234514	Biotechnologist	1	Cell Geneticist Molecular Biologist Molecular Geneticist	Studies the anatomy, physiology and characteristics of living organisms and isolated biological molecules, and develops new materials for applying to a range of purposes.
234515	Botanist	1	Plant Pathologist Plant Physiologist Plant Taxonomist	Studies the anatomy, physiology, biochemistry and ecology of plants.
234516	Marine Biologist	1		Studies the anatomy, physiology, functions, characteristics, behaviour and environments of all forms of life living in the sea and connected water bodies.



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Major Group 2 – Professionals | Sub-major Group 23 – Design, Engineering, Science and Transport Professionals | Minor Group 234 – Natural and Physical Science Professionals | Unit Group 2345 – Life Scientists

Code	Title	Skill Level	Specialisations	Description
234517	Microbiologist	1	Bacteriologist (Non-medical)	Studies microscopic forms of life such as bacteria, viruses and protozoa.
234521	Entomologist	1	Entomologist (Biosecurity) Medical Entomologist	Studies the anatomy, physiology, characteristics, ecology, behaviour, environments, and impact of insects.
234522	Zoologist	1		Studies the anatomy, physiology, characteristics, ecology, behaviour, and environments of animals.
234599	Life Scientists nec	1		This occupation group covers Life Scientists not elsewhere classified. Occupations in this group include: <ul style="list-style-type: none">• Anatomist• Animal Behaviourist• Neuroscientist• Parasitologist• Pharmacologist (Non-clinical)• Physiologist• Toxicologist



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Major Group 2 – Professionals | Sub-major Group 23 – Design, Engineering, Science and Transport Professionals | Minor Group 234 – Natural and Physical Science Professionals | Unit Group 2349 – Other Natural and Physical Science Professionals

Code	Title	Skill Level	Specialisations	Description
234912	Metallurgist	1	Welder Engineer	Researches, develops, tests, controls and provides advice on processes used in extracting metals from their ores, and processes used for casting, alloying, heat treating or welding refined metals, alloys and other materials to produce commercial metal products or develop new alloys, techniques and processes. Registration or licensing may be required.
234913	Meteorologist	1	Climatologist Weather Forecaster	Studies the physics and dynamics of the atmosphere to increase understanding of weather and climate, and to forecast changes in the weather and long-term climatic trends.
234914	Physicist	1	Astronomer Medical Physicist	Studies matter, space, time, energy, forces and fields and the interrelationship between these physical phenomena to further understanding of the laws governing the behaviour of the universe, and seeks to apply these laws to solve practical problems and discover new information about the earth and the universe.
234999	Natural and Physical Science Professionals nec	1	Welder Engineer	<p>This occupation group covers Natural and Physical Science Professionals not elsewhere classified.</p> <p>Occupations in this group include:</p> <ul style="list-style-type: none">• Materials Scientist• Metrologist• Polymer Scientist.



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Major Group 2 – Professionals | Sub-major Group 27 – Legal, Social and Welfare Professionals | Minor Group 272 – Social and Welfare Professionals | Unit Group 2724 – Social Professionals

Code	Title	Skill Level	Specialisations	Description
272414	Archaeologist	1		Studies human activity in the past, primarily through the recovery and analysis of the material culture and environmental data left behind, which includes artifacts, architecture, biofacts and cultural landscapes (the archaeological record).





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Major Group 3 – Technicians and Trades Workers | Sub-major Group 31 – Engineering, ICT and Science Technicians | Minor Group 311 – Agricultural, Medical and Science Technicians | Unit Group 3114 – Science Technicians

Code	Title	Skill Level	Specialisations	Description
311411	Chemistry Technician Chemistry Technical Officer	2	Chemical Instrumentation Officer Chemical Process Analyst Chemistry Laboratory Technician Dairy Laboratory Technician Petroleum Laboratory Technician Sugar Laboratory Assistant	Performs laboratory tests on organic and inorganic chemicals, analyses test data and carries out technical functions in support of Chemists or Chemical Engineers in a wide variety of areas such as fuels, agricultural products, food, pharmaceuticals, paints, metals, plastics, textiles, detergents, paper, fertilisers, and cosmetics.
311412	Earth Science Technician Earth Science Technical Officer	2	Earth Science Laboratory Technician Geochemical Laboratory Technician Geological Technical Officer Geoscience Laboratory Technician Meteorological Observer Seismology Technical Officer Soil Science Technical Officer Water Resources Technical Officer	Collects and tests earth and water samples, records observations, and analyses data in support of Geologists or Geophysicists.



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Major Group 3 – Technicians and Trades Workers | Sub-major Group 31 – Engineering, ICT and Science Technicians | Minor Group 311 – Agricultural, Medical and Science Technicians | Unit Group 3114 – Science Technicians

Code	Title	Skill Level	Specialisations	Description
311413	Life Science Technician Life Science Technical Officer	2	Biological Technical Officer Botanical Technical Officer Ecological Technical Officer Environmental Technical Officer Fisheries Technical Officer Forestry Technical Officer Forestry Technician Wood Technologist Zoology Technical Officer	Identifies and collects living organisms and conducts field and laboratory studies in support of Life Scientists or Environmental Scientists.
311415	Hydrographer	2		Measures, analyses and maintains the flow and quality of water in rivers, lakes, stormwater and sewage, and surveys and maps oceans, seas and rivers.



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Code	Title	Skill Level	Specialisations	Description
311499	Science Technicians nec	2		<p>This occupation group covers Science Technicians not elsewhere classified.</p> <p>Occupations in this group include:</p> <ul style="list-style-type: none">• Calibration Technician• Drug and Alcohol Tester• Fibre Technologist• Fingerprint Expert• Textile Technical Officer





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Major Group 3 – Technicians and Trades Workers | Sub-major Group 31 – Engineering, ICT and Science Technicians | Minor Group 312 – Building and Engineering Technicians | Unit Group 3129 – Other Building and Engineering Technicians

Code	Title	Skill Level	Specialisations	Description
312912	Metallurgical or Materials Technician	2	Non-destructive Testing Technician Petroleum Products Laboratory Technician Petroleum Refinery Laboratory Technician Pressure Testing Technician Ultrasound Technician Welding Engineering Technician	Tests techniques, procedures, applications of equipment and materials as part of processing and refining and/or research into metals, ceramics, polymers and other materials. Registration or licensing may be required.





Figure 1. Structure of ANZSCO by skill level

