VETASSESS

Information sheet

Metallurgist

ANZSCO: 234912 **Group A**

About this document

- The following Information Sheet is for your reference only and should be used as a guide to assist with your Skills Assessment application to VETASSESS. This information is subject to change.
- Please note that a Skills Assessment of the qualification involves assessment of both the qualification level and content. Qualifications are assessed according to the guidelines published by the Australian Government Department of Education.
- The employment assessment involves determining the skill level and relevance of the tasks undertaken.
- Integrity checks may be conducted to verify the qualification and employment claims made in an application.

Job description

A Metallurgist researches, develops, 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 and processes.

Occupations considered suitable under this ANZSCO code:

- Hydrometallurgical Engineer
- Metallographer
- Pyrometallurgical Engineer
- Radiological Metallurgist

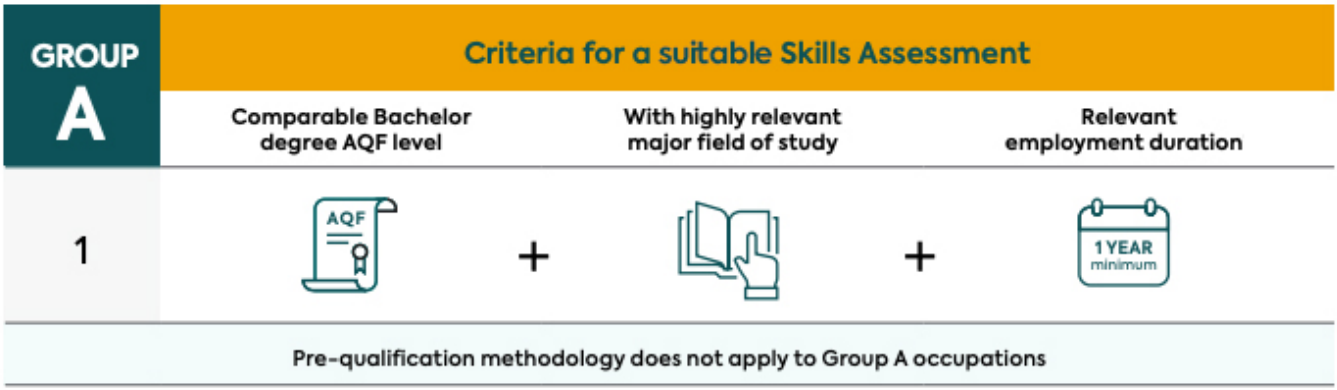
Occupations not considered under this ANZSCO code:

- Metallurgical or Materials Technician
- Production Manager (Mining)
- Production Manager (Manufacturing)

These occupations are classified elsewhere in ANZSCO or are not at the required skill level.

Metallurgist is a VETASSESS Group A occupation

This occupation requires a qualification assessed as comparable to the educational level of an Australian Qualifications Framework (AQF) Bachelor degree or higher, in a field highly relevant to the nominated occupation.



The information below describes the available pathways for a Skills Assessment under**Group A**. Please note that in order to achieve a suitable Skills Assessment Outcome, a suitable assessment for both qualifications and employment is required.

Pathway 1

This pathway requires a qualification assessed as comparable to the education level of an Australian Qualifications Framework (AQF) Bachelor degree or higher degree and in a field highly relevant to the nominated occupation.

Bachelor degree or higher degree includes AQF Master Degree or AQF Doctoral Degree.

In addition, it is essential for applicants to meet the following employment criteria:

- at least **one** year of post-qualification employment at an appropriate skill level, undertaken in the last five years,
- working 20 hours or more per week, and
- highly relevant to the nominated occupation.

Qualification

This includes qualifications assessed at AQF Bachelor, Master and Doctoral level.

Degrees in Chemical Engineering may be considered positively on a case-by-case basis if the course includes a sufficient range of metallurgical/material engineering related studies.

Highly relevant majors of study include:

- Metallurgy
- Metallurgical Engineering
- Minerals Engineering
- Materials Engineering

Employment

Highly relevant tasks include, but are not limited to:

- Studying and applying chemical and metallurgical techniques for extracting and refining metallic materials from their ores or concentrates.
- Coordinating the analysis of samples taken from metallurgical process streams to ensure safe and economic operation.
- Advising operations personnel on process changes required to obtain desired products, processes, and quality control.
- Investigating methods of improving metallurgical processes such as selective oxidation, reduction, electrolysis, and distillation to extract aluminum, lead, copper, zinc, nickel and other non-ferrous metals from their ores.
- Assisting with the design and preparation of specifications for primary and preparation plants.
- May prepare cost budgets of operations to evaluate the economic feasibility of processes.
- Conducting studies of metals and alloys before and during processing to evaluate their properties.
- Examining metal processing techniques to ensure that quality is maintained, improving processing or developing new techniques.

- Testing alloys to study their properties and check compliance with prescribed standards.
- Consulting with engineers to develop economical manufacturing methods for alloys, minimise air and water pollution and to set up inspection and testing procedures.
- Advising operations personnel on production techniques, quality control systems and specifies temperatures, mixtures and other factors in the production process.
- Supervising and coordinating the work of technicians and other workers.

Employment Information

For the occupation of Metallurgist, applicants are required to demonstrate employment in a role that is primarily focused on metallurgical research, advisory and process development. Metallurgists may be employed in a variety of different employment contexts, including mining operations, metal refineries and commercial manufacturing plants.

Applicants with roles focused on technical testing relating to metals, ceramics, polymers and other materials in support of Metallurgists and Materials Engineers are elsewhere classified under the alternative occupation of Metallurgical or Materials Technician, and therefore will not be considered relevant to this occupation.

Supporting material for assessment

When applying for a Skills Assessment, please ensure you submit sufficient evidence supporting proof of identity, qualification and employment claims. A full list of the documents required can be found on the VETASSESS website under Eligibility Criteria.

To further support your employment claims, you may also wish to provide supplementary documentation including:

- Examples of your work
- Any other documents relevant to your role such as Licence or Certifications

While the VETASSESS Skills Assessment for migration purposes is distinct from an assessment for licensing or registration purposes, applicants may wish to provide copies of relevant licences (including from overseas) if held.