VETASSESS

Information sheet

Biotechnologist

ANZSCO: 234514

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 Biotechnologist studies the anatomy, physiology and characteristics of living organisms and isolated biological molecules, and develops new materials for applying to a range of purposes.

Occupations considered suitable under this ANZSCO code:

ANZSCO listed specialisations:

- Cell Geneticist
- Molecular Biologist
- Molecular Geneticist

Other specialisations:

- Computational Biologist / Bioinformatician
- Animal / Plant Biotechnologist

Occupations not considered under this ANZSCO code:

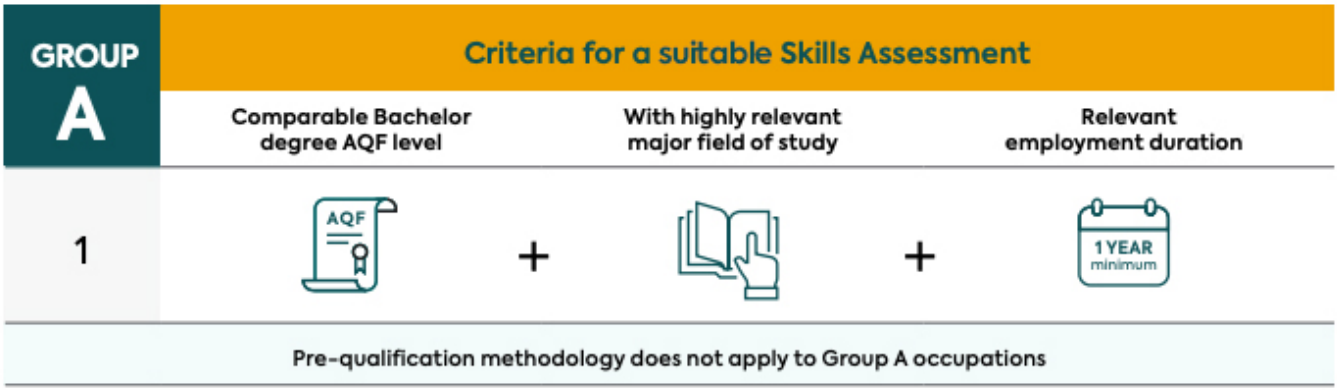
Occupations not considered under this ANZSCO code:

- Chemist
- Industrial Pharmacist
- Biochemist
- Biostatistician / Statistician
- Microbiologist

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

Biotechnologist 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. Highly relevant major fields of study include:

- Biotechnology
- Bioinformatics/Computational Biology
- Gene Technologies
- Molecular Genetics
- Cell and Developmental Biology
- Environmental Biotechnology

Fields of study considered on a case-by-case basis if containing relevant subjects or underpinning studies in Biotechnology and supportive work experience:

- Biostatistics
- Microbiology
- Life Science
- Biomedicine
- Biology
- Chemistry
- Physics
- Genetics
- Agriculture
- Zoology

Employment

Highly relevant tasks include, but are not limited to:

- Studying micro-organisms, such as bacteria, fungi, yeast and their enzymes, and using the knowledge gained to create and develop new, and improve existing, products, materials and processes.
- Undertaking research projects, experimental planning, execution, report writing, publishing scientific papers and presentation of study outcomes to key internal and external stakeholders.

Additional tasks may include:

- Identifying cellular and develop mental events that ensure continuity of life.
- Developing, optimising and validating diagnostic tools to rapidly detect diseases.
- Using bacteria, enzymes and other organisms for a range of industrial uses, including agricultural production, food production and waste removal.
- Conducting research and experiments in the field of genetic modification and biomolecular engineering, which involves altering the genetic make-up of plants and animals.
- Using biological engineering processes to create commercially useful biological products, such as biomaterials, chemicals or fuels.
- Using computational/bioinformatics tools to collect and analyse data in various fields such as biology, genetics, biochemistry, microbiology, biomedicine, pharmaceutical development, etc.

Employment Information

Biotechnologists work in a range of fields including in research laboratories and offices located within universities, research institutes and processing plants. This occupation covers biotechnology specialists from widespread areas such as medical, industrial, agricultural and environmental biotechnology as follows:

- Medical biotechnologists conduct scientific research and apply the research outcomes or biotechnology tools in pharmaceutical, non-clinical and clinical fields to enhance the patient quality of life. For example, they may be involved in developing or improving new medicines and vaccines, developing methods to detect, prevent and treat diseases, stem cell research and more.
- Industrial biotechnologists study the useful derivatives of living cells from various microorganisms, plants and animals and create new products. For example, they may work in production of antibiotics, hormones and vaccines.
- Agricultural biotechnologists develop and improve products and processes for agriculture. For example, they may be utilising genetic engineering tools to produce stronger crops, researching precision farming technologies and creating new bio-pesticides.
- Environmental biotechnologists conduct research combining biology and engineering to develop and use processes that remediate environmental contamination. For example, this may be utilising microorganisms in waste treatment, conversion of plants into biofuel, developing bioplastics, etc.

This occupation should not be confused with routine quality control/quality assurance, diagnostic testing or product sales roles in the above listed industries.

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.

You may provide additional evidence supporting your role, such as a summary brief for grant applications or similar projects, research articles or conference proceedings, laboratory reports, patents and a list of research projects outlining your responsibilities.