



GRADUATE ATTRIBUTES FOR BSC MICROBIOLOGY

IN-DEPTH KNOWLEDGE

- Has a broad integrated knowledge of microbiology, including the disciplines of genetics and immunology.

GLOBAL PERSPECTIVE

- An awareness of current and emerging worldwide microbiological technologies, issues, and perspectives.

INTERDISCIPLINARY PERSPECTIVE

- Demonstrate a multi-disciplinary perspective on microbiology, an awareness of core concepts from genetics and immunology, and an ability to integrate knowledge from these core areas.

LIFELONG LEARNING

- An awareness of the dynamic nature and limits of current microbiological knowledge, limits of own knowledge and a commitment to life-long learning.

SCHOLARSHIP

- Commitment to the fundamental importance of the acquisition and development of knowledge and understanding of microbiology.
- Demonstrates understanding and evaluation of knowledge as the key to knowledge creation.
- Intellectual independence and integrity, including skills of deductive reasoning, rigour, analysis, and the interpretation of technical and scientific microbiological data.
- Able to be self-critical of own abilities.

COMMUNICATION:

- Able to accurately and effectively communicate information on microbiology using written, visual and oral reporting formats.

CRITICAL THINKING:

- An understanding of the need for independent critical data evaluation and formation of evidence-based opinions.
- Ability to apply the scientific process, including ability to acquire, assimilate, synthesise, analyse and critique microbiological information.
- The ability to problem-solve.

CULTURAL UNDERSTANDING:

- Knowledge and appreciation of the Treaty of Waitangi and the tikanga based principles: whakapapa (relationships), tika (research design), manaakitanga (cultural and social responsibility) and mana (justice and equity).
- An awareness and understanding of the importance of whakapapa (genealogy) and mauri (life principle) in regard to genetics.
- An awareness and understanding of, and appreciation for, the social and cultural context of the implications of microbiology and microbiological knowledge and investigation.

ETHICS:

- An awareness of relevant ethical contexts with a sense of responsibility within the workplace and the community.
- An awareness of the ethical implications of microbiology, immunology, biotechnology and scientific research into the same.

ENVIRONMENTAL LITERACY:

- Basic understanding of the microbiological principles that govern natural systems, the effects of human activity on these systems, and the cultures and economies that interact with those systems.
- An awareness of environmental implications of biotechnology and microbiological research.
- An awareness of compliance and regulatory requirements of biotechnology, immunology and microbiological research.

INFORMATION LITERACY

- Ability to apply specific skills in acquiring, organising, analysing, evaluating and presenting microbiological information, in particular incorporating the increasing importance of digital-based activity.

RESEARCH SCHOLARSHIP:

- Has an understanding of and the ability to apply the principles of scientific experimental design and methods to investigate microbiologically relevant problems.
- Ability to understand and critique scientific papers in microbiologically relevant research areas.

SELF-MOTIVATION

- Has self-discipline, planning, organisational and time management skills and the ability to work independently.

TEAMWORK:

- Ability to work effectively as both a member and leader within a team.
- An understanding and ability to employ the scientific method effectively as part of a collaborative team.
- Understands the role of network building in career development and has the ability to interact effectively with people from a wide range of backgrounds.