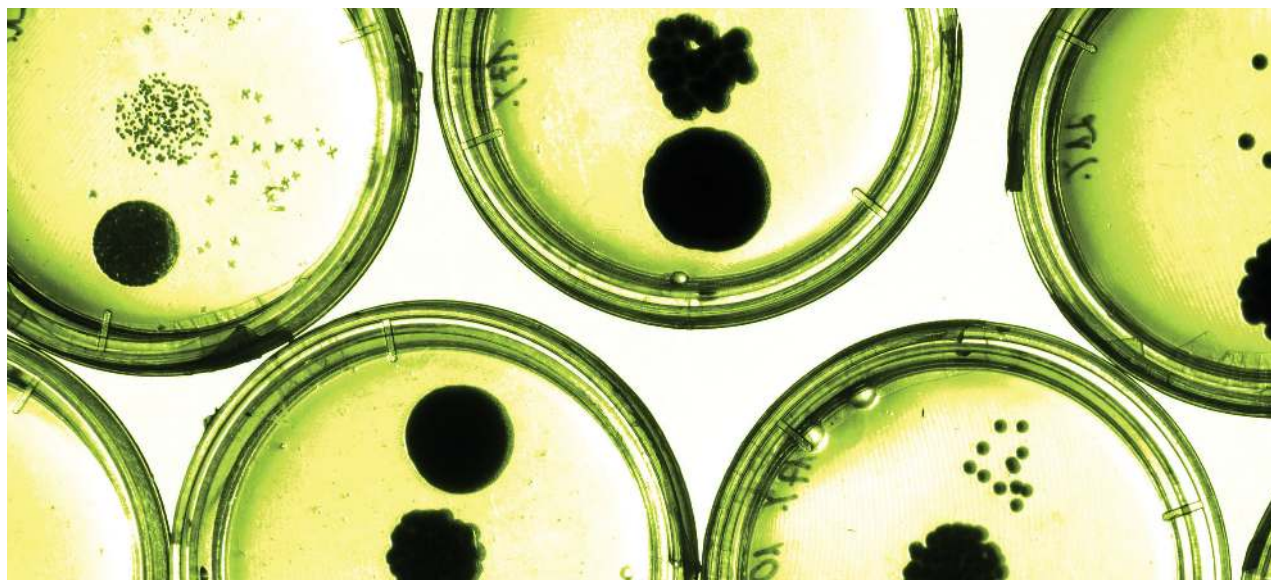


BACHELOR OF BIOMEDICAL SCIENCE



Antibiotic resistance, global disease, gene-editing technology, and drug design are some of the biggest challenges, and opportunities, facing our world.

The Bachelor of Biomedical Science (BBmedSc) is a three-year degree. It will help you develop skills to embark on a range of rapidly developing scientific research careers that explore challenges and opportunities. You'll be engaged at the front line of discovering vital medical developments, technology, and knowledge to understand and treat healthcare problems and diseases and improve the lives of others.

You'll study the relationship between humans, health, and disease, from researching genetics and reproduction to understanding the cellular and molecular structure of a disease and searching for cures.

Throughout your degree, you'll look at real-life health and medical issues, and gain first-hand experience of biomedical and clinical research through the University's close relationship with the Capital and Coast District Health Board, the Ferrier Research Institute, and the Malaghan Institute of Medical Research.

The programme covers the entirety of human life, from reproduction to ageing, including microbiology and pharmacology. So whether it be biological and medicinal chemistry, environmental health, human genetics, immunology, or physiology, the BBmedSc is the first step towards an innovative research career into human health, or an excellent base to study postgraduate medical and clinical training programmes at medical school.

POTENTIAL CAREERS

As a BBmedSc graduate, you'll have the knowledge base to move into a variety of biomedical-related fields such as genetic counselling, management, or the pharmaceutical industry. Some careers may require further qualifications or accreditation after completion of your undergraduate degree.

www.victoria.ac.nz/careers

POSTGRADUATE OPPORTUNITIES

Further study can be undertaken through a Bachelor of Biomedical Science with Honours, Master of Biomedical Science, Master of Clinical Immunology, and Master of Drug Discovery and Development, or PhD study.

The degree provides an excellent base for study at medical school or for postgraduate biological science, and medical and paramedical training programmes.

www.victoria.ac.nz/sbs/postgraduate

RECOMMENDED SCHOOL SUBJECTS

It is useful to have studied Biology, Chemistry, and Mathematics. You can enrol in a preparation course at the University in Trimester 3 in the summer before your first year if you don't have the required background in Chemistry (see page 134).

MAJORS

In your first year, you'll study a core programme of human biology, human disease, cell biology, chemistry, psychology, computer programming, and statistics. You will then study from a range of specialist courses in your second and third years, which are more specific to your chosen major.

Human Genetics covers all aspects of the science of human genetics, including the study of the human genome and the treatment of disease and illness of a genetic origin. This major is for those with an interest in areas such as ageing, genetic counselling, human fertility and syndromes, and diseases of genetic origin.

Molecular Pathology provides an introduction to the molecular basis of disease. The emphasis is on metabolic and other changes that occur when humans succumb to illnesses. This major will suit students interested in clinical biochemistry, forensics, immunology, microbiology, and the relationship between health and disease.

Molecular Pharmacology and Medicinal Chemistry focuses on all aspects of chemistry in relation to our bodies, including modern chemical methods for the synthesis of drugs and how they are used to treat disease. This major is appropriate if you're interested in both chemistry and biology.

Major	Code
Human Genetics	HGEN
Molecular Pathology	MOLP
Molecular Pharmacology and Medicinal Chemistry	MPMC

DEGREE REQUIREMENTS

Three years of full-time study.

A total of 360 points is required, of which at least 180 points must be at 200 and 300 level.

The requirements for at least one major must be satisfied.

Elective courses to make up 360 points may be chosen from any other first degree at the University.

First-year students need to take the 100-level core courses, plus any additional 100-level courses required for their chosen major. For entry-level requirements for 100-level Science courses, see the subjects and courses pages (from page 125).

 www.victoria.ac.nz/courses

Major in Human Genetics

At 100 level	At 200 level	At 300 level
BIOL 111, 114	BIOL 241, 243, 244	Complete three courses: BIOL 340, BMSC 339, BMSC 343
BMSC 116, 117	BMSC 252	
CHEM 114		Complete one further course from BIOL, BMSC or BTEC 200-300
COMP 132*(or COMP 102 or COMP 112)		
STAT 193		Complete one further course from BMSC 300-399

Major in Molecular Pathology

At 100 level	At 200 level	At 300 level
BIOL 111, 114	BIOL 241, 243, 244	Complete five courses: BIOL 340, BMSC 301, BMSC 323, BMSC 334, BMSC 335
BMSC 116, 117	BIOL 252	
CHEM 114		
PSYC 122 or COMP 132*(or COMP 102 or COMP 112)		
STAT 193		

Major in Molecular Pharmacology and Medicinal Chemistry

At 100 level	At 200 level	At 300 level
BIOL 111, 114	BIOL 241, 243, 244	Complete four courses: BMSC 335, BMSC 354, CHEM 301, CHEM 305
BMSC 117	CHEM 201, CHEM 205	Complete one further course from BIOL, BMSC, BTEC, or CHEM 300-399
CHEM 114, 115		
PSYC 122 or COMP 132* (or COMP 102 or COMP 112)		
STAT 193		


*Recommended for students who do not have a background in computer programming.


FIND OUT MORE ABOUT THIS DEGREE


 www.victoria.ac.nz/bbmedsc

FACULTY OF SCIENCE

Level 1, Cotton Building, Kelburn Parade, Wellington

 04 463 5101

 science-faculty@vuw.ac.nz

 www.victoria.ac.nz/sbs

DEGREE EXAMPLES

BBmedSc majoring in Human Genetics

Year 1		Year 2		Year 3	
1/3	2/3	1/3	2/3	1/3	2/3
BIOL 114 15 points	BIOL 111 15 points	BIOL 244 20 points	BIOL 241 20 points	BIOL 340 20 points	BMSC 339 20 points
CHEM 114* 15 points	BMSC 117 15 points	BIOL 252 20 points	BIOL 243 20 points	BMSC 343 20 points	BMSC 300 level 20 points
STAT 193 15 points	COMP 132 15 points	Elective 20 points	200-level major 20 points	Elective 20 points	Elective 20 points
BMSC 116 15 points	Elective 15 points				
60 points	60 points	60 points	60 points	60 points	60 points
120 points		120 points		120 points	

Total points required: 360
Total points completed: 360

BBmedSc majoring in Molecular Pathology

Year 1		Year 2		Year 3	
1/3	2/3	1/3	2/3	1/3	2/3
BIOL 114 15 points	BIOL 111 15 points	BIOL 244 20 points	BIOL 241 20 points	BIOL 340 20 points	BMSC 323 20 points
CHEM 114* 15 points	BMSC 117 15 points	BIOL 252 20 points	BIOL 243 20 points	BMSC 301 20 points	BMSC 334 20 points
STAT 193 15 points	COMP 132 15 points	Elective 20 points	Elective 20 points	BMSC 335 20 points	Elective 20 points
BMSC 116 15 points	Elective 15 points				
60 points	60 points	60 points	60 points	60 points	60 points
120 points		120 points		120 points	

Total points required: 360
Total points completed: 360

BBmedSc majoring in Molecular Pharmacology and Medicinal Chemistry

Year 1		Year 2		Year 3	
1/3	2/3	1/3	2/3	1/3	2/3
BIOL 114 15 points	BIOL 111 15 points	BIOL 244 20 points	BIOL 241 20 points	BMSC 335 20 points	BMSC 354 20 points
CHEM 114 15 points	BMSC 117 15 points	Elective 15 points	BIOL 243 20 points	CHEM 301 15 points	300-level major 20 points
STAT 193 15 points	PSYC 122 15 points	Elective 15 points	CHEM 201 15 points	CHEM 305 15 points	Elective 15 points
Elective 15 points	CHEM 115 15 points		CHEM 205 15 points	Elective 15 points	
60 points	60 points	50 points	70 points	65 points	55 points
120 points		120 points		120 points	

Total points required: 360
Total points completed: 360


*If you do not meet the prerequisites for CHEM 114, you can take CHEM 113 in (1/3) and CHEM 114 in (2/3).

Key

Core	Major	Elective
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ALINOR ROSE

Graduate, Bachelor of Biomedical Science in
Molecular Pathology and Human Genetics



“Choosing which programme to study was very important to me, as university is a big investment. My goal was to obtain a better understanding of human health, especially in terms of the underlying causes of illness—along with becoming more employable. A Bachelor of Biomedical Science is the perfect balance. You study all aspects of human health, from the molecular mechanisms to the grand scale of epidemiology and everything in between.”