

BBmedSc Specialisation

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 specialisation is for those with an interest in areas such as genetic counselling, syndromes and diseases of genetic origin, human fertility, and ageing.

Molecular Pathology:

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

Molecular Pharmacology and Medicinal Chemistry:

A focus 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 specialisation is appropriate for students interested in both Chemistry and Biology.

First-year example: BBmedSc specialising in Human Genetics

1/3	2/3
BIOL 111 15 pts	BMSC 114 15 pts
CHEM 114 15 pts	BMSC 117 15 pts
BMSC 116 15 pts	PSYC 122 15 pts
BTEC 101 15 pts	STAT 193 15 pts
120 points	

Core course	Specialisation
Elective	

Degree Requirements

- Maximum of 180 points at 100 level allowed
- Electives may be chosen from any other first degree to make up 360 points

Specialisation

- A specialisation is a focus area within a degree. Each specialisation has a number of core courses.
- There are three specialisations in the BBmedSc (listed on the left). You will need to select one for your degree.
- In the first year there are six core courses which are common across all specialisations.

Electives

- If you have space left over in your first year after meeting the degree requirements you can include elective courses.

Tips

- It helps to have achieved 14 NCEA Level 3 credits in Chemistry, especially for the Molecular Pharmacology and Medicinal Chemistry specialisation. Alternatively you will need to take CHEM 113 in the first trimester.
- CHEM 191 can be taken over the summer trimester for students who have little or no previous experience in chemistry.
- First-year BIOL and BMSC courses assume little or no previous knowledge in these subjects, although NCEA Level 2 Biology is strongly recommended.

For more information on the BBmedSc, please visit www.victoria.ac.nz/science or refer to the *Guide to Enrolment*. For course details, prescriptions and timetables, visit www.victoria.ac.nz/coursecatalogue.

Compulsory first-year courses for all BBmedSc students

BBmedSc Core Courses	
These first-year courses are required to be taken by all BBmedSc students.	
BIOL 111 (1/3) Cell Biology 15 pts	BIOL/BMSC 114 (2/3) Biology of Animals 15 pts
CHEM 114 (1/3) (2/3) Principles of Chemistry 15 pts	BMSC 117 (2/3) The Biology of Disease 15 pts
One of:	
STAT 193 (1/3) (2/3) Statistics for Natural and Social Sciences 15 pts	MATH 142 (2/3) Calculus 1B 15 pts

Additional first-year core courses for each specialisation

Molecular Pharmacology and Medicinal Chemistry	
	CHEM 115 (2/3) Structure and Spectroscopy 15 pts
Human Genetics	
BMSC 116 (1/3) Human Reproduction, Evolution and Sexuality 15 pts	
Molecular Pathology	
BMSC 116 (1/3) Human Reproduction, Evolution and Sexuality 15 pts	

100-Level Prerequisites for BBmedSc courses

BIOLOGICAL SCIENCES

100-level courses assume little or no previous knowledge in these subjects, although NCEA Level 2 Biology is strongly recommended.

CHEMISTRY

CHEM 113 – Concepts of Chemistry: is an open-entry course recommended for those who have studied Chemistry to NCEA Level 2 but have not achieved 14 credits in NCEA Level 3.

CHEM 114 – Principles of Chemistry: requires at least 14 NCEA Level 3 Chemistry credits (achievement standards) or approved alternative.

CHEM 115 – Structure and Spectroscopy: CHEM 114 is a prerequisite for CHEM 115; however, candidates with an A- or better in CHEM 113 can enrol in CHEM 115 concurrently with enrolment in CHEM 114 in Trimester 2.

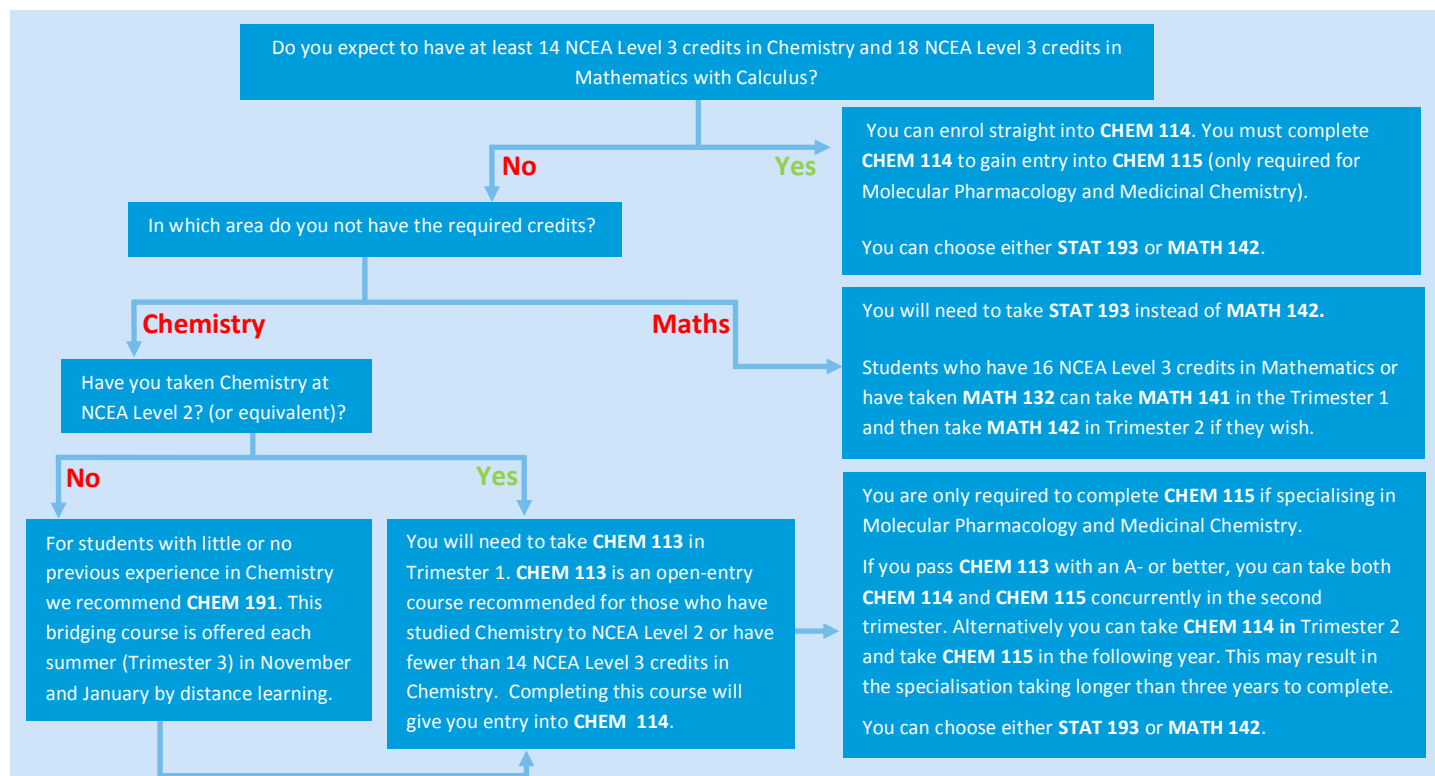
CHEM 191 – Introductory Chemistry: a bridging course which is offered each summer (Trimester 3) from late November to February by distance delivery and optional weekly on-campus tutorials (with a lab week in February), for those with little or no previous experience in Chemistry.

MATHEMATICS AND STATISTICS

MATH 142 – Calculus 1B: MATH 141 or at least 18 NCEA Level 3 Maths credits with Calculus.

STAT 193 – Statistics for Natural and Social Sciences: this assumes no previous knowledge of Statistics, but it will be beneficial to have taken NCEA Level 2 Maths.

If you are unsure of which Chemistry and Mathematics/Statistics courses you need to take in your first year please refer to the flowchart below.



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