

BIOCHEMISTRY

www.sci.waikato.ac.nz/study/subjects/biochemistry

Biochemistry is the explanation of life in chemical terms. It involves the study of proteins, lipids, carbohydrates and nucleic acids which are the fundamental molecules of life. Biochemists try to understand how these molecules interact in living organisms, in health and disease. Biochemistry is one of the fastest growing areas of modern science. By taking a combination of papers from both biological sciences and chemistry, students will gain a solid grounding in the molecular and chemical principles underlying biochemistry.

CONTACTS FOR BIOCHEMISTRY

This interdisciplinary major is jointly taught between the Departments of Biological Sciences and Chemistry.

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BIOCHEMISTRY

Degrees

Biochemistry is available as an interdisciplinary major for the Bachelor of Science or Bachelor of Science (Technology) degrees.

Biochemistry Interdisciplinary Major

General Structure of a Biochemistry Interdisciplinary Major for the BSc and BSc(Tech) degrees

100 LEVEL	BIOL101 15 points	CHEM102 15 points		<p>100 Level – Recommended prerequisites: BIOL101 Cellular and Molecular Biology, and CHEM102 Chemical Change and Organic Chemistry.</p> <p>200 Level – BIOL210 Introduction to Genetics, BIOL251 Biochemistry, CHEM201 Organic Chemistry.</p> <p>300 Level – BIOL310 Advanced Genetics, BIOL351 Advanced Biochemistry, CHEM301 Advanced Organic Chemistry.</p>
200 LEVEL	BIOL210 20 points	BIOL251 20 points	CHEM201 20 points	
300 LEVEL	BIOL310 20 points	BIOL351 20 points	CHEM301 20 points	

Specialisations

Students may undertake the following specialisations for the BSc and BSc(Tech) major in Biochemistry.

» Agribusiness	*
» Science International	page 157
» Te Pūtaiao me ngā take Māori	page 162

**Enrolment in this specialisation should be completed in consultation with both the Faculty of Science & Engineering and the Waikato Management School.*

Choosing Papers

Biochemistry Interdisciplinary Major

To complete a major in Biochemistry, students must complete 120 points above 100 Level, including 60 points at 300 Level, from compulsory papers.

100 Level – Papers are worth 15 points.

Prerequisites

- » BIOL101B – Cellular and Molecular Biology
- » CHEM102B – Chemical Change and Organic Compounds

Students are strongly advised to include the following papers:

- » BIOL102A – The Biology of Organisms
- » CHEM101A – Chemical Concepts
- » STAT111B – Statistics for Science or
- » STAT121A/S – Introduction to Statistical Methods

200 Level – Papers are worth 20 points unless specified.

Compulsory papers

- » BIOL210B – Introduction to Genetics
 - » BIOL251A – Biochemistry
 - » CHEM201B – Organic Chemistry
- Students are strongly advised to include the following paper:
- » CHEM204A – Analytical Chemistry and Instrumental Techniques

300 Level – Papers are worth 20 points unless specified.

Compulsory papers

- » BIOL310A – Advanced Genetics
 - » BIOL351A – Advanced Biochemistry
 - » CHEM301A – Advanced Organic Chemistry
- Students are strongly advised to include the following papers
- » BIOL362C – Molecular Biology and Biotechniques
 - » CHEM306B – Advanced Analytical Chemistry

Note(s): For descriptions of individual papers refer to the following subjects: BIOL Biological Sciences; CHEM Chemistry. For descriptions of papers with subject codes COMP, MATH or STATS, refer to the *Computing & Mathematical Sciences Handbook* or the *University Calendar*.

Timetable Clashes

Your selection of papers may depend on your timetable. You will not usually be permitted to take papers which have lecture clashes. Laboratory clashes can usually be resolved. You should initially contact the relevant department if you have a laboratory clash.

BSc(Tech) Work Placement Papers

For details refer to *Work Placements*.