Faculty of Science

The Degree of Bachelor of Science (BSc)

See also General Course and Examination Regulations.

Note: In certain course regulations the Degree of Bachelor of Science is referred to as "the ordinary Degree of Bachelor of Science" to distinguish it from the Degree of Bachelor of Science with Honours.

1. Requirements of the Degree Course

Every candidate for the Degree of Bachelor of Science shall follow a course of study as laid down in these Regulations consisting of not fewer than 360 points (3 EFTS).

2. Structure of the Degree

To qualify for the Degree of Bachelor of Science:

(a) a candidate must pass courses having a minimum total value of 360 points.

(b) at least 254 points of the 360 must be from the Schedule to the Regulations for the Bachelor of Science.

(c) The remaining 106 points of the 360 may be for courses from any degree of the University. They will be subject to the Regulations of the other degree.

(d) at least 216 points must be for courses above 100-level.

(e) at least 84 points must be for courses at 300-level.

(f) at least 56 points of that 84 must be in a single subject from the Schedule to the Regulations for the Bachelor of Science or from a list of specified courses approved for the major requirement.

3. Subject Majors and Endorsements of the Degree

(a) Subject Majors: the degree of Bachelor of Science may be awarded in the following subjects: Astronomy; Biochemistry; Biological Sciences; Chemistry; Computer Science; Economics; Electronics; Finance *(subject to NZVCC CUAP approval due Dec 2008)*; Geography; Geology; Linguistics; Management Science; Mathematics; Philosophy; Physics; Psychology; Statistics

(b) In additional to meeting the requirements of a subject major, the degree of Bachelor of Science may be endorsed in the following subject/s:

Biosecurity
Environmental Science

Note: The course and programme requirements are given in the Schedule of Endorsements for the Award elsewhere in the degree regulations.

4. Excessive Load

A personal course of study of more than 160 points for a full year course of study or more than 80 points for a single semester is regarded as excessive. Candidates who wish to enrol for a course of study whose total points exceed 160 points for a full year or 80 points for a single semester must first obtain the approval of the Dean of Science.

Note: Students should seek advice from the College office as to the recommended GPA for such a course of study.

5. Direct Entry into 200-level Courses

Subject to the approval of the Dean of Science, a student who has achieved a sufficient standard in a subject or subjects in the National Certificate in Educational Achievement (NCEA) or other comparable examination may be enrolled in one or more courses listed in the Schedule with Prescription numbers from 201 to 299 without having passed the appropriate prerequisite to that course provided that:

(a) if the candidate is credited with the course he or she shall not thereafter be credited with any prerequisite in the subject of which that course forms a part, and

(b) if the candidate fails the course but in the opinion of the examiners attains the standard of a pass in a course at 100 or 200-level he or she shall be credited with a pass in such course or courses as the Dean of Science may decide.

6. Transfer from BE or BE(Hons) Degrees to BSc

A candidate who discontinues with a BE or BE(Hons) degree and enrols in a BSc may make an application to the Dean of Science to transfer credit from a BE or BE(Hons) to a BSc.

7. Cross Credits between BE(Hons) and BSc Degrees

A candidate who takes concurrently the course for the Degree of Bachelor of Science and Bachelor of Engineering (Honours) shall, in order to qualify for the award of both degrees, be enrolled for a course of study approved under the provisions of General Course and Examination Regulation A3, and shall:

(a) pass all the subjects laid down in the current Regulations for the Degree of Bachelor of Engineering (Honours);

(b) obtain 172 points above 100-level by passing courses selected from the Schedule to the Regulations for the Bachelor of Science which have not been credited to the Degree of Bachelor of Engineering (Honours), or used to obtain exemption from a course in that degree. Of these points, 84 must be from 300-level courses and include at least 56 points from a single subject or as required by the subject major;

(c) if admitted into the Bachelor of Engineering (Honours) under BE(Hons) Regulation 4 Direct entry to the First Professional Year, complete the 172 points in (b) above. A student may be required to complete 100-level prerequisite courses from the Science Schedule, if their New Zealand Entrance qualification was not in appropriate subjects;

(d) have met the requirements of a BE(Hons) to be eligible to graduate BSc under this cross credit regulation.

8. Course for BSc after Completion of BE(Hons) Degree

A candidate who has qualified for the Degree of Bachelor of Engineering (Honours) and who is proceeding to the Degree of Bachelor of Science shall be enrolled for an approved course of study and shall satisfy the requirements of Regulation 7 hereof.

9. Restrictions and Prerequisites from Engineering Courses

Candidates for the Degree of Bachelor of Science under Regulations 5, 6 or 7 shall require permission of the Head of the Department of Mathematics and Statistics for enrolment in any Mathematics or Statistics course.

Note: Some Mathematics and Statistics courses duplicate significantly material in Engineering Mathematics, and will be restricted. Other courses may have prerequisites partially or fully satisfied by credits in Engineering Mathematics.

10. Cross Credits and Substitution between BSc and BForSc Degrees

(a) A candidate for the Degree of Bachelor of Science who is or has been enrolled for the Degree of Bachelor of Forestry Science shall, in order to qualify for the award of both degrees, meet all requirements as laid down in the Regulations of the Degree of Bachelor of Forestry Science and obtain 172 points above 100-level in courses selected from the Schedule to the Regulations for the Degree of Bachelor of Science which have not been credited to the Degree of Bachelor of Forestry Science or used to obtain exemption from a course in that degree.

Of these points, 84 points must be from 300-level courses and include at least 56 points from a single subject or as required by the subject major.

(b) With the approval of the Dean of Engineering and Forestry a candidate may substitute an additional 200-level course equivalent to 22 points or a 300-level course equivalent to 28 points from the Bachelor of Science schedule for any FORE 400 elective.

(c) A candidate shall have met the requirements of a BForSc to be eligible to graduate BSc under this cross credit regulation.

11. Credit for Other Tertiary Level or Non-University Courses

1. The Academic Board may grant credit towards the degree from any other tertiary qualification where the content and standard of such study are considered appropriate to the degree. Credit may be specified or unspecified, and will be at an appropriate level. Credit from a completed degree will not exceed a maximum of 120 points. Credit from an incomplete degree, diploma or other tertiary qualification will not exceed 224 points.
2. National qualifications registered on the New Zealand Qualifications Framework which could properly be taught at university degree level may be considered for credit on the following basis: National Diploma of Science, at Levels 5 and 6, or equivalent science qualification, and courses for incomplete qualifications: points will be assigned on the basis of the courses credited gained at Levels 5, 6 and 7. Completed qualifications at Level 7 will be credited as a maximum of 120 points.

   Note: The maximum of 120 points must be consistent with credit under Regulation K: Cross Crediting and Double Degrees.

12. Credit for NZCS or NZCE

Notwithstanding anything contained in these Regulations, a candidate who in the opinion of the Academic Board has qualified with outstanding merit for the New Zealand Certificate in Science or New Zealand Certificate in Engineering may be credited under Regulation 2(b) with 100-level courses or unspecified credit at the 100-level. Credit under this regulation shall not exceed 108 points.

13. Credit for Polytechnic Nursing Qualifications

A candidate who has completed a Polytechnic Nursing course may be credited with up to 72 points at 100-level under Regulation 2(c).

14. Transition Rules for Students Enrolled for the Degree of Bachelor of Science prior to 2006

These regulations took effect in 2006.

(a) To qualify for the degree of Bachelor of Science a candidate enrolled before 2006 must pass courses having a minimum total value of 350 points.

(b) Of the 350:

  i. 262 points at least must be from the Schedule of courses for the Bachelor of Science.

  ii. 88 points (the balance of the 350) may be from courses from any degree in the University.

(c) And of the 350:

  i. 188 points at least must be for courses above 100-level and from the Schedule of Courses for the Bachelor of Science.

  ii. 56 points at least must be at 300-level and from a single subject from the Schedule of Courses for the Bachelor of Science.

Note: See General Course Regulation P: General Transition Regulations.

Schedule to the Regulations for the Degree of Bachelor of Science

Note: SU2 indicates a November 2008 course start date. See page 462 for a full list of semester indicators and course start dates.

Accounting and Information Systems

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
ACIS 323	e-Business Systems: Design, Management and Security	28	W	P: (1) ACIS 233 or AFIS 233; (2) 22 points from (ACIS 203, AFIS 203, ACIS 213, AFIS 213, AFIS 223, COSC 224, COSC 225, COSC 226, COSC 227, COSC 231). R: AFIS 323, AFIS 523, COSC 332

Antarctic Studies

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
ANTA 101	Antarctic Studies	18	W	R: INCO 103, ANTA 102, ANTA 103, ANTA 112, ANTA 113
ANTA 102	Antarctic Studies: The Cold Continent	9	SU2 S1	R: INCO 103, ANTA 101, ANTA 112
ANTA 103	Antarctic Studies: Life in the Cold	9	SU2 S2	R: INCO 103, ANTA 101, ANTA 113
ANTA 202	Experiencing Antarctica	11	S2	P: ANTA 101 or ANTA 102 and ANTA 103 or ANTA 112 and ANTA 113

Astronomy

Students intending to advance in Astronomy are strongly advised to include in their first year courses ASTR 112, PHYS 113, PHYS 114, MATH 108 and MATH 109. It should be noted that PHYS 113 is offered in Semesters 1 and 2, and PHYS 114 is offered in Semester 2, and as a Summer Programme. In second year, PHYS 221-224, 226, 281, 282, and one of MATH 261 or 264 are strongly recommended.

A major in Astronomy requires 22 points from MATH 251-264. A major in Astronomy requires 56 points consisting of ASTR 381, PHYS 310, and 28 points selected from ASTR 301-370. To graduate with a BSc in Astronomy a candidate must pass an approved academic writing test. In any Astronomy course that involves assessed laboratory or tutorial work, satisfactory attendance and performance in such work is required.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
ASTR 109	The Cosmos: Birth and Evolution	18	S2	R: PHYS 109, PHYS 110 EQ: PHYS 109
ASTR 112	Astrophysics	18	S1	
ASTR 211	Imaging the Universe	11	S2	P: 18 points from MATH 100-level, STAT 100-level, PHYS 100-PHYS 106, PHYS 111-PHYS 116 or ASTR 112. These prerequisites may be replaced by a high level of achievement in NCEA Level 3 Physics and Mathematics with Calculus or other background as approved by the Head of Department.
ASTR 212	The Solar System and Dynamical Astronomy	11	NO	P: 18 points of MATH 100-level, STAT 100-level, PHYS 100-106, PHYS 111-116 or ASTR 112. These prerequisites may be replaced by a high level of achievement in NCEA Level 3 Physics and Mathematics with Calculus or other background as approved by the Head of Department.
ASTR 321	Techniques in Observational Astronomy	14	NO	P: (1) 22 points from PHYS 221-PHYS 224, ASTR 211, ASTR 212; (2) MATH 109 or equivalent. R: PHYS 321 EQ: PHYS 321
ASTR 322	Theoretical and Observational Cosmology	14	S1	P: (1) 33 points from PHYS 221-224, PHYS 310; (2) MATH 109 or equivalent R: PHYS 322
ASTR 323	Stellar Structure and Evolution	14	S2	P: (1) 22 points from PHYS 221-PHYS 224, ASTR 211, ASTR 212; (2) MATH 109 or equivalent. R: PHYS 323 EQ: PHYS 323
ASTR 324	Special Topic	14	S2	P: (1) 22 points from PHYS 221-PHYS 224, ASTR 211, ASTR 212; (2) MATH 109 or equivalent
ASTR 325	Special Topic	14	S1	P: (1) 22 points from PHYS 221-PHYS 224, ASTR 211, ASTR 212; (2) MATH 109 or equivalent
ASTR 391	Introductory Astronomy Research	14	SU2 S1 S2	P: (1) MATH 109 or equivalent; (2) 44 points from any 200-level astronomy and physics courses; (3) Entry subject to a supervisor approved by the Head of Department, being available. R: ASTR 392, ASTR 393

Biochemistry

To major in Biochemistry, a student must be credited with: (a) BCHM 201 or BCHM 281 or CHEM 281; and (b) 56 points from BCHM 300-level courses. Students wishing to pursue a career in Biochemistry are advised to take BCHM 381, and should note that this course is required for entry into the MSc degree programme in Biochemistry. In all Biochemistry courses, a satisfactory performance is required in both the year's work and the examination. Students are required to wear approved safety glasses and laboratory coats to all Biochemistry laboratories.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
BCHM 201	Biochemistry 1	22	W	P: (1) BIOL 111; (2) Either (a) CHEM 114 and CHEM 115 or (b) CHEM 112.
BCHM 202	Biochemistry 2	11	S1	P: (1) BIOL 111; (2) BIOL 112 or BIOL 113 or CHEM 114 or CHEM 112. For students enrolled before 2002, CHEM 112 alone. R: BIOL 230, BIOL 231 EQ: BIOL 231
BCHM 205	Bio-organic Chemistry	12	S1	P: CHEM 112 or CHEM 115 R: CHEM 222, CHEM 232, CHEM 262, ENCH 241 EQ: CHEM 232

BCHM 206	Organic Chemistry	12	S2	P: BCHM 205 or CHEM 232 or ENCH 241 R: CHEM 222, CHEM 242, CHEM 262, CHEM 272 EQ: CHEM 242
BCHM 207	Special Topic	11	W	P: Entry subject to approval of the Coordinator, Biochemistry
BCHM 281	Synthetic, Chemical and Biochemical Techniques	11	S2	P: CHEM 112 or CHEM 115 R: CHEM 281 EQ: CHEM 281
BCHM 301	Biochemistry 3	28	W	P: (1) BCHM 201; (2) BCHM 202 or BIOL 230 or BIOL 231. R: BIOL 331 EQ: BIOL 331
BCHM 302	Biological Chemistry	28	W	P: Either (1) 22 points from BCHM 205, BCHM 206, CHEM 222, CHEM 232, CHEM 242, CHEM 262, CHEM 272, ENCH 241; or (2) BCHM 201 and either BCHM 205 or CHEM 232 or ENCH 241. R: CHEM 325, ENCH 445 EQ: CHEM 325
BCHM 303	Special Topic	14	W	P: Entry subject to approval of the Coordinator, Biochemistry.
BCHM 381	Biochemical Techniques	14	S2	P: BCHM 201 (if taken prior to 2005) or BCHM 281 or CHEM 281

Biological Sciences

To major in Biological Sciences students must have BIOL 111, 112 and 113. To gain a pass a student must do satisfactory practical work in laboratory classes and in field courses as well as performing satisfactorily in written tests and examinations.

Students who have not taken Chemistry to Year 13 secondary school level are strongly advised to take 18 points of Chemistry (e.g. CHEM 114) before enrolling in 200-level courses. BIOL 309 cannot be used as part of the minimum 56 points needed at 300-level to major in Biological Sciences. Students intending to enrol in fourth year courses must normally have gained the equivalent of at least 84 points in 300-level courses.

Students admitted to the Honours School or intending to proceed to a Masters degree are strongly advised to include BIOL 309 or an equivalent course in their undergraduate degree.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
BIOL 111	Cellular Biology and Biochemistry	18	S1	R: BIOL 101
BIOL 112	Ecology, Evolution and Conservation	18	S2	R: BIOL 102
BIOL 113	Diversity of Life	18	S1	R: BIOL 103, BIOL 104
BIOL 116	Human Biology	18	S2	
BIOL 209	Introduction to Biological Data Analysis	11	S1	P: 36 points 100 level BIOL. R: BIOL 301
BIOL 210	Vertebrate Biology	11	S2	P: BIOL 112 and BIOL 113 R: ZOOL 202
BIOL 211	Insect Biology	11	S2	P: BIOL 112 and BIOL 113 R: ZOOL 205
BIOL 212	Marine Biology	22	S1	P: (1) BIOL 113 or BIOL 114; (2) BIOL 111 or BIOL 112. R: ZOOL 204, ZOOL 214
BIOL 213	Microbiology 1	11	S2	P: BIOL 111, BIOL 113 R: PAMS 206
BIOL 214	Diversity of Algae	11	S1	P: BIOL 113 R: PAMS 205
BIOL 215	Plant Diversity	11	S2	P: BIOL 113, or with the approval of the Head of School. R: PAMS 205

BIOL 231	Molecular Genetics	11	S1	P: BIOL 111 and one of either BIOL 112, BIOL 113, CHEM 112, or CHEM 114 R: BIOL 230, BCHM 202 EQ: BCHM 202
BIOL 232	Genetics	11	S1	P: BIOL 111 and 112; plus one of either BIOL 113 or CHEM 114 R: BIOL 230
BIOL 250	Principles of Animal Physiology	22	S1	P: BIOL 111 R: ZOOL 206
BIOL 251	Exercise and Health	22	S2	P: BIOL 111 or BIOL 116. Students with other appropriate preparation may be admitted to this course with the approval of the Head of the School of Biological Sciences.
BIOL 252	Plant Organisation and Physiology	22	S2	P: BIOL 111 R: PAMS 202, FORE 214, FORE 219
BIOL 270	Ecology	22	S1	P: BIOL 112 and BIOL 113. R: PAMS 204, FORE 202 EQ: FORE 202
BIOL 271	Evolution	11	S1	P: BIOL 112. This prerequisite may be replaced by a high level of achievement in an equivalent course as determined by the Head of the School of Biological Sciences. R: PAMS 205
BIOL 272	Principles of Animal Behaviour	11	S2	P: BIOL 112 or PSYC 104, or PSYC 105 and PSYC 106
BIOL 273	New Zealand Biodiversity and Biosecurity	15	S2	P: 36 points at 100 level R: BIOL 114
BIOL 302	Special Topic: Conservation Genetics	14	SU1	P: BIOL 271 or subject to approval from the Head of the School of Biological Sciences
BIOL 303	Forensic Genetics	14	SU1	P: Entry subject to approval from Head of the School of Biological Sciences
BIOL 304	Special Topic	14	NO	P: Entry subject to approval by the Head of School.
BIOL 305	Practical Taxonomy for Field Biologists	14	NO	P: BIOL 215 or subject to approval by the Head of the School of Biological Sciences
BIOL 306	Special Topic	14	W	P: Entry subject to approval by the Head of School.
BIOL 307	Special Topic	14	S2	P: Entry subject to approval by the Head of School.
BIOL 308	Special Topic	28	S2	P: Entry subject to approval by the Head of School.
BIOL 309	Experimental Design and Data Analysis for Biologists	14	S2	P: BIOL 209 or other statistical background as determined by the Head of School. R: BIOL 301
BIOL 313	Microbiology 2	28	S2	P: BIOL 213 R: PAMS 303
BIOL 330	Advanced Concepts in Genetics	28	S1	P: Either (1) BIOL 230; or (2) BIOL 231 and BIOL 232 and BIOL 271 R: PAMS 309/ZOOL 309
BIOL 331	Biochemistry 3	28	W	P: (1) BCHM 201; (2) BCHM 202 or BIOL 230 or BIOL 231 R: PAMS 308, BCHM 301 EQ: BCHM 301
BIOL 332	Invasive Systems: Genetics	14	S2	P: BIOL 271
BIOL 351	Cell Biology	28	S2	P: Either (1) BIOL 231 and 232; or (2) BIOL 230 or BIOL 250 or BIOL 252 or BCHM 201 R: ZOOL 306

BIOL 352	Plant Biotechnology	28	S1	P: BIOL 252. For students enrolled before 2004, (1) BCHM 201 (2) either PAMS 202 or BIOL 252 (3) either BCHM 202 or PAMS 203/ZOOL 203 or BIOL 230. For students enrolled before 2003, 44 points from BCHM 201, PAMS 202, PAMS 203/ZOOL 203, PAMS 206. R: PAMS 310
BIOL 353	Comparative Physiology of Exercise	14	S1	P: BIOL 250 or BIOL 251 R: BIOL 350, ZOOL 301
BIOL 354	Animal Ecophysiology	14	S2	P: BIOL 250 or ZOOL 206 R: BIOL 350, ZOOL 301
BIOL 371	Evolutionary Ecology	14	S1	P: BIOL 271
BIOL 373	Behavioural Ecology	28	S1	P: (1) Either BIOL 271 or BIOL 272; (2) BIOL 209 or equivalent preparation in statistics. For students enrolled before 2004, 44 points from 200 level FORE, PAMS, PSYC, ZOOL, BIOL. R: ZOOL 307
BIOL 374	Marine Ecosystems	28	S2	P: BIOL 270 and BIOL 209. For students enrolled before 2004, 44 points from PAMS 204, BIOL 270, FORE 202, ZOOL 202, BIOL 210, ZOOL 204, ZOOL 205, BIOL 211, ZOOL 214, BIOL 212. R: BIOL 372, PAMS 311/ZOOL 311 RP: BIOL 212
BIOL 375	Freshwater Ecosystems	28	S2	P: BIOL 270 and BIOL 209. For students enrolled before 2004, 44 points from PAMS 204, BIOL 270, FORE 202, ZOOL 202, BIOL 210, ZOOL 204, ZOOL 205, BIOL 211, ZOOL 214, BIOL 212 R: BIOL 372, PAMS 311/ZOOL 311
BIOL 377	Global Change and Biosecurity	28	S1	P: (1) BIOL 270 or FORE 202; (2) BIOL 209 or FORE 222/ FORE 224
BIOL 378	Population Ecology and Conservation	14	S1	P: (1) BIOL 270 or FORE 202; (2) BIOL 209
BIOL 379	Sustaining Biodiversity on Private Land	14	S2	P: (1) BIOL 270 or FORE 202; (2) BIOL 209 or FORE 222/ FORE 224 R: BIOL 376, FORE 430, FORE 444

Biosecurity

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
BIOS 101	Issues in New Zealand Biosecurity	18	SU2 S2	R: BIOS 201, INCO 122, INCO 222
BIOS 201	Issues in New Zealand Biosecurity	22	SU2 S2	P: 36 points at 100 level approved by the course co-ordinator. R: BIOS 101, INCO 122, INCO 222

Chemistry

To major in Chemistry, students must have at least:

(a) a combined credit of 36 points from CHEM 111-121; and

(b) a combined credit of at least 44 points from CHEM 221-273, BCHM 205 and BCHM 206; and

(c) passed CHEM 281 or BCHM 281, and CHEM 282; and

(d) 56 points from CHEM 300-level courses.

Students wishing to pursue a career in Chemistry are advised to take at least 56 points of courses from CHEM 321-363 courses, and either CHEM 381 or 382. Students should also note that entry into the MSc degree programme in Chemistry requires at least 56 points from CHEM 321-363 courses and either CHEM 381 or 382. Chemistry students are required to wear approved safety glasses in all laboratories and, where instructed, laboratory coats.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
CHEM 111	General Chemistry A	18	S1	R: CHEM 113, CHEM 121 EQ: CHEM 121
CHEM 112	General Chemistry B	18	S2	P: CHEM 111 or CHEM 113 or CHEM 121. Entry without one of these prerequisites is possible with the permission of the Head of Department. R: CHEM 115
CHEM 113	Engineering Chemistry	18	S1	R: CHEM 111, CHEM 121
CHEM 114	Introductory Chemistry	18	S1	R: CHEM 105
CHEM 115	General Chemistry C	18	S2	P: CHEM 114. Entry without this pre-requisite is possible with permission of the Head of Department. R: CHEM 112
CHEM 121	General Chemistry A	18	SU1	P: Satisfactory performance in the laboratory component of CHEM 111 or CHEM 113, or a pass in both CHEM 114 and CHEM 115. R: CHEM 111, CHEM 113 EQ: CHEM 111
CHEM 224	Analytical and Environmental Chemistry	22	W	P: (1) CHEM 112 or CHEM 115, and (2) CHEM 111 or CHEM 113 or CHEM 121 C: Any single missing pre-requisite may be taken as a co-requisite. R: ENCH 241
CHEM 231	Introduction to Inorganic Chemistry	12	S1	P: CHEM 112 or CHEM 115. R: CHEM 221, CHEM 261.
CHEM 232	Bioorganic Chemistry	12	S1	P: CHEM 112 or CHEM 115. R: CHEM 222, CHEM 262, ENCH 241, BCHM 205. EQ: BCHM 205
CHEM 233	Introduction to Physical Chemistry	12	S1	P: CHEM 111 or CHEM 113 or CHEM 121 R: CHEM 223, CHEM 263, ENCH 241 (if credited prior to 2004)
CHEM 241	Inorganic Chemistry	12	S2	P: CHEM 231 R: CHEM 221, CHEM 261, CHEM 271
CHEM 242	Organic Chemistry	12	S2	P: CHEM 232 or BCHM 205 or ENCH 241. R: CHEM 222, CHEM 262, CHEM 272, BCHM 206 EQ: BCHM 206
CHEM 243	Physical Chemistry	12	S2	P: CHEM 111 or CHEM 113 or CHEM 121 R: CHEM 223, CHEM 263, CHEM 273
CHEM 271	Inorganic Chemistry (Pre-Honours)	12	S2	P: (1) CHEM 111 or CHEM 113 or CHEM 121; and (2) CHEM 231; and (3) subject to the approval of the Head of Department. R: CHEM 221, CHEM 261, CHEM 241
CHEM 272	Organic Chemistry (Pre-Honours)	12	S2	P: (1) CHEM 111 or CHEM 113 or CHEM 121; and (2) CHEM 232 or BCHM 205 or ENCH 241; and (3) subject to the approval of the Head of Department. R: CHEM 222, CHEM 242, CHEM 262, BCHM 206
CHEM 273	Physical Chemistry (Pre-Honours)	12	S2	P: (1) CHEM 111 or CHEM 113 or CHEM 121; and (2) subject to approval of the Head of Department. R: CHEM 223, CHEM 243, CHEM 263
CHEM 281	Synthetic, Chemical and Biochemical Techniques	11	S2	P: CHEM 112 or CHEM 115 R: BCHM 281 EQ: BCHM 281
CHEM 282	Measurement and Analysis	11	S1	P: (1) CHEM 111 or CHEM 113 or CHEM 121; or (2) CHEM 114 and CHEM 115. R: ENCH 241

CHEM 321	Inorganic and Structural Chemistry	28	W	P: 22 points from CHEM 221, CHEM 231, CHEM 241, CHEM 261, CHEM 271 R: CHEM 361, ENCH 441
CHEM 322	Organic Chemistry	28	W	P: 22 points from BCHM 205, BCHM 206, CHEM 222, CHEM 232, CHEM 242, CHEM 262, CHEM 272, ENCH 241. R: CHEM 362, ENCH 442
CHEM 324	Analytical and Environmental Chemistry	28	W	P: (1) CHEM 223 or CHEM 224 or CHEM 263; or (2) CHEM 233 and either CHEM 243 or CHEM 273 R: ENCH 444
CHEM 325	Biological Chemistry	28	W	P: Either (1) 22 points from BCHM 205 or BCHM 206 or CHEM 222 or CHEM 232 or CHEM 242 or CHEM 262 or CHEM 272 or ENCH 241; or (2) BCHM 201 and either BCHM 205 or CHEM 232 or ENCH 241. R: BCHM 302, ENCH 445 EQ: BCHM 302
CHEM 327	Special Topic	14	S1 S2	P: Entry subject to approval of the Head of Department.
CHEM 328	Special Topic	14	S1 S2	P: Entry subject to approval of the Head of Department.
CHEM 333	General Physical Chemistry	14	S1	P: (1) CHEM 223 or CHEM 263; or (2) CHEM 233 and either CHEM 243 or CHEM 273. C: Any single missing pre-requisite may be taken as a co-requisite with the permission of the Head of Department. R: CHEM 323, CHEM 363, ENCH 443, ENCH 446.
CHEM 343	Applied Physical Chemistry	14	S2	P: (1) CHEM 223 or CHEM 263; or (2) CHEM 233 and either CHEM 243 or CHEM 273. C: Any single missing pre-requisite may be taken as a co-requisite with the permission of the Head of Department. R: CHEM 323, ENCH 443.
CHEM 361	Inorganic and Structural Chemistry (Pre-Honours)	28	W	P: (1) 22 points from CHEM 221*, CHEM 231, CHEM 241*, CHEM 261, CHEM 271; and (2) CHEM 281 or BCHM 281. *Entry with this prerequisite only with the permission of the HOD. C: CHEM 381 R: CHEM 321 and ENCH 441
CHEM 362	Organic Chemistry (Pre-Honours)	28	W	P: (1) 22 points from BCHM 205, BCHM 206*, CHEM 222*, CHEM 232, CHEM 242*, CHEM 262, CHEM 272; and (2) CHEM 281 or BCHM 281 *Entry with this prerequisite only with the permission of the HOD C: CHEM 381 R: CHEM 322, ENCH 442
CHEM 373	Chemical Physics (Pre-Honours)	14	S2	P: (1) CHEM 223* or CHEM 263; or (2) CHEM 233 and either CHEM 243* or CHEM 273; and (3) CHEM 282; and (4) 36 points from courses in Mathematics, Statistics or ENGR 102. * Entry with this prerequisite only with the approval of the Head of Department. C: Any single missing pre-requisite may be taken as a co-requisite with the permission of the Head of Department. R: CHEM 363, ENCH 446
CHEM 381	Advanced Synthetic Techniques	14	S1	P: CHEM 281 or BCHM 281
CHEM 382	Instrumental Methods	14	S2	P: CHEM 282

Communication Disorders

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
CMDS 111	Introduction to Developmental Communication Disorders	18	S1	R: SPTH 101
CMDS 112	Introduction to Acquired Communication Disorders	18	S2	R: SPTH 101
CMDS 161	Anatomy and Physiology of the Speech and Hearing Mechanism	18	S1	R: CMDS 261.
CMDS 231	Acoustics and Phonetics	18	S1	
CMDS 242	Introduction to Audiology	18	S1	
CMDS 262	Neurosciences	18	S2	

Computer Science

A prospectus which gives advice on course planning is available from the Department Administrator. It is recommended that students who wish to satisfy the 300-level requirement of a degree by taking courses only in Computer Science should include MATH 115, COSC 110 and COSC 208.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
COSC 110	Working in a Digital World	18	W	
COSC 121	Computer Science 1A	18	S1 S2	R: COSC 123
COSC 122	Computer Science 1B	18	S2	R: COSC 112, CMIS 112
COSC 208	C Programming	11	S1	P: (1) COSC 121 or COSC 123; (2) 18 points from Mathematics, Statistics, or Engineering Mathematics. MATH 101 is not acceptable. MATH 115/STAT 111/STAT 131/ STAT 112 are strongly recommended. R: COSC 204, COSC 240, ENEL 208, ENCE 208 EQ: COSC 240, ENCE 208
COSC 221	Computer Systems	11	S2	P: (1) COSC 121 or COSC 123; (2) COSC 122; (3) 18 points from Mathematics, Statistics or Engineering Mathematics. MATH 101 is not acceptable. MATH 115/STAT 131/STAT 111/ STAT 112 are strongly recommended. R: ENEL 221
COSC 222	Foundations of Computer Science	11	S1	P: 1) COSC 121 or COSC 123 2) COSC 122 3) 18 points from Mathematics, Statistics or Engineering Mathematics. MATH 115/STAT 131/STAT 111/STAT 112 are strongly recommended. MATH 101 is not acceptable. R: COSC 202
COSC 224	Introduction to Software Engineering	11	S2	P: (1) COSC 121 or COSC 123; (2) COSC 122; (3) 18 points from Mathematics, Statistics or Engineering Mathematics. MATH 101 is not acceptable. MATH 115/STAT 131/STAT 111/ STAT 112 are strongly recommended. R: COSC 205
COSC 225	Human-Computer Interaction	11	S1	P: (1) COSC 121 or COSC 123; (2) COSC 122; (3) 18 points from Mathematics, Statistics or Engineering Mathematics. MATH 115/STAT 131/STAT 111/STAT 112 are strongly recommended. MATH 101 is not acceptable. R: COSC 314 before 2001.
COSC 226	Introduction to Databases	11	S1	P: (1) COSC 121 or AFIS 125; (2) 18 points from Mathematics, Statistics or Engineering Mathematics. MATH 101 is not acceptable. MATH 115/STAT 131/STAT 111/STAT 112 are strongly recommended. R: COSC 205

COSC 227	Probabilistic Methods and Information Theory	11	S2	P: (1) COSC 121 or COSC 123; (2) COSC 122; (3) 18 points from Mathematics, Statistics or Engineering Mathematics. MATH 101 is not acceptable. MATH 115/STAT 131/STAT 111/ STAT 112 are strongly recommended. R: COSC 201
COSC 229	Algorithms	11	S2	P: (1) COSC 121 or COSC 123; (2) COSC 122; (3) 18 points from Mathematics, Statistics or Engineering Mathematics. MATH 101 is not acceptable. MATH 115/STAT 131/STAT 111/ STAT 112 are strongly recommended. R: COSC 202
COSC 230	Programming Languages	11	S2	P: (1) COSC 121 or COSC 123; (2) COSC 122; (3) 18 points from Mathematics, Statistics or Engineering Mathematics. MATH 101 is not acceptable. MATH 115/STAT 131/STAT 111/ STAT 112 are strongly recommended. R: COSC 202, COSC 302
COSC 231	Introduction to Data Communications	11	S1	P: (1) COSC 121 or COSC 123; (2) COSC 122; (3) 18 points from Mathematics, Statistics or Engineering Mathematics. MATH 101 is not acceptable. MATH 115/STAT 131/STAT 111/ STAT 112 are strongly recommended.
COSC 241	Special Topic	11	S2	P: Entry subject to approval by the Head of Department.
COSC 242	Special Topic	11	S1	P: Entry subject to approval by the Head of Department.
COSC 243	Special Topic	11	S2	P: Entry subject to approval by the Head of Department.
COSC 324	Advanced Software Engineering	14	S1	P: (1) 44 points of 200-level Computer Science including COSC 224 or COSC 205; (2) 36 points from Mathematics, Statistics or Engineering Mathematics. MATH 115 and STAT 111/STAT 112/STAT 131 are strongly recommended. MATH 101 is not acceptable. R: COSC 314 RP: COSC 110, COSC 208, COSC 222, COSC 225
COSC 325	Software Engineering Group Project	28	W	P: (1) 44 points of 200-level Computer Science including COSC 224 or COSC 205; (2) 36 points from Mathematics, Statistics or Engineering Mathematics. MATH 115 and STAT 111/STAT 112/STAT 131 are strongly recommended. MATH 101 is not acceptable. R: COSC 314 RP: COSC 110, COSC 208, COSC 225, COSC 226, COSC 324
COSC 326	Database Management	14	S1	P: (1) 44 points of 200-level Computer Science including COSC 226 or COSC 205; (2) 36 points from Mathematics, Statistics or Engineering Mathematics. MATH 115/ STAT 111/STAT 131/STAT 112 are strongly recommended. MATH 101 is not acceptable. RP: COSC 208, COSC 110.
COSC 327	Performance Modelling and Simulation	14	S1	P: (1) 36 points from Mathematics, Statistics, or Engineering Mathematics. MATH 115/STAT 111/STAT 131/ STAT 112 are strongly recommended. MATH 101 is not acceptable; (2) 44 points of 200-level Computer Science including COSC 227 or COSC 201 RP: COSC 208
COSC 329	Algorithms and Artificial Intelligence	14	S1	P: (1) 36 points from Mathematics, Statistics or Engineering Mathematics. MATH 115/STAT 111/STAT 131/ STAT 112 are strongly recommended. MATH 101 is not acceptable; (2) 44 points of 200-level Computer Science including COSC 229 or COSC 202 RP: COSC 208, COSC 110.

COSC 331	Data Communications and Networks	14	S2	P: (1) 44 points of 200-level Computer Science including COSC 231; (2) 36 points from Mathematics, Statistics or Engineering Mathematics. MATH 115/STAT 131/STAT 111/ STAT 112 are strongly recommended. MATH 101 is not acceptable. RP: COSC 208, COSC 110 and COSC 227.
COSC 332	Data and Network Security	14	S2	P: (1) 44 points of 200-level Computer Science including COSC 231 (2) 36 points from Mathematics, Statistics or Engineering Mathematics. MATH 115/STAT 131/STAT 111/ STAT 112 are strongly recommended. MATH 101 is not acceptable. R: ACIS 323, AFIS 323 RP: COSC 208, COSC 110 and COSC 227
COSC 361	Microprocessor Systems 1	14	S1	P: (1) 36 points from Mathematics, Statistics, or Engineering Mathematics. MATH 115/STAT 111/STAT 131/ STAT 112 are strongly recommended. MATH 101 is not acceptable; (2) 44 points of 200-level Computer Science including COSC 221 and COSC 208, or ENEL 206 R: ELEC 361 RP: COSC 110. EQ: ELEC 361
COSC 363	Computer Graphics	14	S2	P: (1) 36 points from Mathematics, Statistics or Engineering Mathematics. MATH 115/STAT 131/STAT 111/ STAT 112 are strongly recommended. MATH 101 is not acceptable. (2) 44 points of 200-level Computer Science including COSC 208. RP: COSC 110
COSC 364	Special Topic	14	S1	P: Subject to approval of the Head of Department.
COSC 365	Distributed Computer Architectures	14	S2	P: (1) 44 points of 200-level Computer Science including COSC 224, COSC 208 and COSC 226; (2) 36 points from Mathematics, Statistics or Engineering Mathematics. MATH 115 and STAT 111/STAT 112/STAT 131 are strongly recommended. MATH 101 is not acceptable. RP: COSC 222, COSC 324, COSC 326
COSC 366	Research Project	14	SU2	P: Entry subject to approval by the Head of Department.
COSC 367	Special Topic	14	S2	P: Entry subject to approval by the Head of Department.

Economics

Students seeking 56 points at 300-level in Economics as their major must be credited with: both ECON 201 and either ECON 204, or 230, or 231. Candidates who have not been credited with the MATH or STAT prerequisite courses shown in the Course Catalogue section may be admitted to courses if they have reached a standard satisfactory to the Head of the Department of Economics and Finance in the prerequisites or other approved courses. Refer to the Department Handbook for further information.

Required for Honours: ECON 201, and 204 or 230 or 231; and ECON 211 or 213, or STAT 212 and 214.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
ECON 104	Introduction to Microeconomics	18	S1 S2	R: ECON 101, ECON 106
ECON 105	Introduction to Macroeconomics	18	S1 S2	R: ECON 101
ECON 201	Macroeconomics	22	W	P: ECON 105 and ECON 104. RP: MATH 108.
ECON 205	Economics of Developing Countries	22	NO	P: ECON 104 and ECON 105.
ECON 209	International Trade	11	S1	P: ECON 104 R: ECON 206
ECON 210	International Macroeconomics	11	S2	P: ECON 104 and ECON 105. R: ECON 206

ECON 212	Economic Statistics	11	S1	P: (1) ECON 104 or ECON 105; (2) 18 points from STAT courses or MSCI 110. R: ECON 211
ECON 213	Introduction to Econometrics	11	S2	P: (1) ECON 104 or ECON 105; (2) 18 points from STAT courses or ECON 212. With Head of Department discretion, a candidate who has not passed this pre-requisite but who is concurrently enrolled in an 18-point STAT course may be enrolled in ECON 213 if he or she has completed at least 50% of the STAT course at the start of the semester. R: ECON 211
ECON 223	Introduction to Game Theory for Business, Science and Politics	11	S1	P: Any 108 points from the BA, BCom, BForSc, BSc or LLB schedules.
ECON 224	Economics and Current Policy Issues	11	S2	P: ECON 104
ECON 225	Environmental Economics	11	S1	P: ECON 101 or ECON 104 RP: ECON 105
ECON 230	Microeconomic Theory with Calculus	22	W	P: ECON 104 C: MATH 108 R: ECON 231, ECON 204, ECON 550 (prior to 2006)
ECON 231	Microeconomic Theory and Applications	22	W	P: ECON 104 R: ECON 230, ECON 204, ECON 550 (prior to 2006)
ECON 321	Microeconomic Analysis	14	S1	P: (1) ECON 230; (2) MATH 108; (3) 18 points from STAT courses or ECON 212. R: ECON 301
ECON 322	Game Theory	14	S2	P: 1) ECON 230 or ECON 231; (2) MATH 108; (3) 18 points from STAT courses or ECON 212. R: ECON 301
ECON 323	Econometrics I	14	S1	P: (1) ECON 213 or (STAT 212 and STAT 214); (2) MATH 108. R: ECON 303 EQ: FINC 323
ECON 324	Econometrics II	14	S2	P: ECON 323 R: ECON 303
ECON 325	Macroeconomic Analysis	14	S2	P: (1) ECON 201; (2) MATH 108. R: ECON 305 RP: ECON 230 or ECON 231
ECON 326	Monetary Economics	14	S1	P: (1) ECON 201; (2) MATH 108. R: ECON 305 RP: ECON 230 or ECON 231
ECON 327	Economic Analysis of Law	14	NO	P: ECON 230 or ECON 231 R: ECON 306
ECON 328	Topics in Law and Economics	14	NO	P: ECON 230 or ECON 231 R: ECON 306
ECON 329	Industrial Organisation	14	S1	P: ECON 230 or ECON 231 R: ECON 310
ECON 330	Strategic Behaviour of Firms	14	S2	P: ECON 230 or ECON 231 R: ECON 310
ECON 331	Economics of Finance I	14	S2	P: (1) ECON 230 or ECON 231; (2) MATH 108 (3) 18 points from STAT courses. EQ: FINC 331
ECON 333	Experimental Economics	14	S2	P: ECON 230 or ECON 231. RP: STAT 111 and either MATH 101 or MATH 108.
ECON 334	Labour Economics	14	S2	P: ECON 230 or ECON 231
ECON 335	Public Economics	14	S1	P: ECON 230 or ECON 231 R: ECON 313

ECON 336	Public Choice	14	S2	P: ECON 230 or ECON 231. R: ECON 313 RP: ENGL 117 or an essay-based course.
ECON 337	Economic Evaluation in Health	14	S1	P: ECON 230 or ECON 231. R: ECON 314 RP: ENGL 117 or an essay-based course.
ECON 338	Health Economics Overview	14	S2	P: ECON 230 or ECON 231.
ECON 339	The Economics of European Integration	14	S2	P: Any 108 points from the BA, BCom, ForSc, BSc or LLB schedules including ECON 104 and ECON 105 and at least 22 points above 100 level. RP: ENGL 117 or an essay-based course.
ECON 342	Cliometrics	14	S1	P: ECON 213
ECON 343	Economic Analysis of Intellectual Property	14	S1	P: ECON 230 or ECON 231. RP: MATH 101 or MATH 108

Electronics

Students intending to advance in Electronics are strongly advised to include in their first year courses PHYS 113, PHYS 114, MATH 108, MATH 109, COSC 121 and COSC 122. It should be noted that PHYS 113 is offered in Semesters 1 and 2, and PHYS 114 is offered in Semester 2, and as a Summer Programme.

In second year, ELEC 225, 226, PHYS 224 and COSC 208 are strongly recommended. A major in Electronics requires COSC 208. A major in Electronics requires 56 points selected from ELEC 301-383, PHYS 312, 318, COSC 361, 362. This selection must include ELEC 321 and ELEC 381. In any Electronics course that involves assessed laboratory or tutorial work, satisfactory attendance and performance in such work is required.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
ELEC 225	Analogue Electronics	11	S2	P: (1) PHYS 113 and PHYS 114; and (2) MATH 108. These prerequisites may be replaced by a high level of achievement in NCEA Level 3 Physics and Mathematics with Calculus or another equivalent background, as approved by the Head of Department of Physics and Astronomy. R: PHYS 283, PHYS 225 RP: MATH 109 and COSC 122 EQ: PHYS 225
ELEC 226	Digital Electronics	11	S1	P: (1) Either PHYS 113 and PHYS 114, or COSC 122; and (2) 18 points from MATH 100. These prerequisites may be replaced by a high level of achievement in NCEA Level 3 Physics and Mathematics with Calculus or other background as approved by the Head of Department. R: PHYS 226 RP: MATH 109 and COSC 122. EQ: PHYS 226
ELEC 227	Fundamentals of Electronics	11	S1	P: (1) PHYS 113 and PHYS 114; (2) MATH 108. These prerequisites may be replaced by a high level of achievement in NCEA Level 3 Physics and Mathematics with Calculus or other background as approved by the Head of Department. R: ENME 339 RP: MATH 109 and COSC 122.
ELEC 228	Fundamentals of Power Electronics	11	S2	P: ELEC 227 R: ENME 338
ELEC 312	Applied Electromagnetism	14	S2	P: (1) PHYS 224 or ENEL 204; (2) MATH 109 or equivalent. R: PHYS 312 EQ: PHYS 312
ELEC 321	Electronics Design	14	S1	P: (1) ELEC 225 and ELEC 226; (2) MATH 109 or equivalent; (3) COSC 208

ELEC 322	Industrial Electronics	14	NO	P: (1) ELEC 226 and ELEC 227; (2) MATH 109 or equivalent.
ELEC 323	Instrumentation	14	S2	P: (1) ELEC 226 and ELEC 227; (2) MATH 109 or equivalent. R: PHYS 319
ELEC 325	Special Topic	14	S1	P: Entry by permission of the Head of Department of Physics and Astronomy.
ELEC 326	Special Topic	14	S2	P: Entry by permission of the Head of Department of Physics and Astronomy.
ELEC 361	Microprocessor Systems 1	14	S1	P: (1) ELEC 226 (2) MATH 109 or equivalent. R: COSC 361 EQ: COSC 361
ELEC 381	Advanced Electronics Design Laboratory	14	SU2 S1 S2	P: (1) 28 points from ELEC 300, including ELEC 321; (2) COSC 208

Engineering

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
ENGR 101	Foundations of Engineering	15	S1	
ENGR 102	Engineering Mechanics	18	S2	C: MATH 109

Finance

(Subject to NZVCC CUAP approval due December 2008)

Students seeking 56 points at 300-level in Finance as their major must be credited with FINC 331 or ECON 331.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
FINC 201	Analytical Tools of Finance	11	S1	P: ACIS 102 or AFIS 102, or ECON 104, or MATH 108 and 18 points of STAT courses R: AFIS 204
FINC 202	Business Finance	11	S2	P: FINC 201 R: AFIS 204
FINC 203	Financial Markets and Institutions	11	S1	C: FINC 201 R: AFIS 214
FINC 323	Econometrics I	14	S1	P: (1) ECON 213 or (STAT 212 and STAT 214); (2) MATH 108. R: ECON 303, ECON 323 EQ: ECON 323
FINC 331	Economics of Finance I	14	S2	P: (1) ECON 204 or ECON 230 or ECON 231; (2) MATH 108; (3) 18 points from STAT courses. R: ECON 331 EQ: ECON 331
FINC 354	Advanced Corporate Finance	28	S2	P: (1) AFIS 204 or FINC 202; (2) at least 18 points from MATH 104, MATH 105, MATH 107, MATH 109, MSCI 110, STAT 111, (STAT 112 to STAT 131). R: AFIS 304, AFIS 504
FINC 364	Investment Analysis and Portfolio Management	28	S1	P: (1) AFIS 204 or AFIS 214 or FINC 202 or FINC 203; (2) at least 18 points from MATH 104, MATH 105, MATH 107, MATH 109, MSCI 110, STAT 111, (STAT 112 to STAT 131). R: AFIS 314, AFIS 514
FINC 394	Financial Analysis and Valuation	28	NO	P: (1) AFIS 204 or FINC 202; (2) at least 18 points from MATH 104, MATH 105, MATH 107, MATH 109, MSCI 110, STAT 111, (STAT 112 to STAT 131). R: AFIS 344

Forestry

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
FORE 102	Forests and Societies	18	S1 S2	P: HOD approval to enrol required. R: FORE 101, FORE 103, FORE 104, FORE 111, FORE 121
FORE 111	Trees, Forests and the Environment	9	S1	R: FORE 101, FORE 102, FORE 103, FORE 104
FORE 121	Forests and People	9	S2	R: FORE 101, FORE 102, FORE 103, FORE 104
FORE 218	Forest Ecosystem Health	18	S1	P: BIOL 112 and BIOL 113, or their equivalents.
FORE 219	Introduction to Silviculture	18	S2	P: BIOL 112 and BIOL 113, or their equivalents. R: PAMS 202, BIOL 252, FORE 214

Geography

Students intending to complete their undergraduate degrees with a major in Geography must normally take:

(a) any 36 points of 100-level Geography, and

(b) any 44 points of 200-level Geography, and

(c) any 56 points of 300-level Geography.

Students intending to proceed to the BA(Hons), MA, BSc(Hons), PGDipSc or MSc degree must have passed 84 points in 300-level courses approved by the Head of the Department of Geography, including GEOG 309 and at least 28 other points in 300-level Geography courses, or have passed 112 points at 300-level of which 56 points are in Geography and 56 points are in subjects approved by the Head of Department.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
GEOG 106	Global Environmental Change	18	S1	R: GEOG 103
GEOG 107	Sustainable Cities: Environmental and Social Perspectives on Global Urbanisation	18	S1	R: GEOG 103
GEOG 108	Resources and Sustainability	18	S2	R: GEOG 103
GEOG 201	Environmental Processes: Principles and Applications	15	S1	P: Any 36 points of 100 level geography, or entry with the approval of the HoD. R: GEOG 201 prior to 2009.
GEOG 202	Globalisation and New Urban Geographies	15	S1	P: Any 36 points of 100 level Geography, or entry with the approval of the HoD
GEOG 205	Introduction to Geographic Information Systems	15	S2	P: Any 36 points at 100 level Geography, or entry with the approval of the HOD.
GEOG 206	Resource and Environmental Management	15	S2	P: Any 36 points at 100 level Geography, or entry with the approval of the HOD
GEOG 211	Environmental Processes: Research Practice	15	S1	P: Any 36 points of 100 level geography or entry with the approval of the HoD C: GEOG 201 R: GEOG 201 prior to 2009
GEOG 212	Geographies of Development	15	S2	P: Any 36 points of 100 level GEOG, or entry with the approval of the HoD
GEOG 213	Remaking the New Europe	22	SU1	P: Any 36 points of 100 level GEOG, or any 108 points approved by HOD. R: GEOG 203, EURO 223 EQ: EURO 223
GEOG 214	Applications in Physical Geography	22	SU1	P: 36 points of 100 level Geography or any 108 points approved by the Head of Department.
GEOG 304	Southeast Asia: Development or Change	30	NO	P: 44 points of 200 level GEOG, or in special cases with approval of the HOD.
GEOG 305	Environmental Hazards and Management	30	S1	P: 44 points of 200 level GEOG, or in special cases with approval of HOD.

GEOG 309	Research Methods in Geography	30	S2	P: 44 points of 200 level GEOG, or in special cases with approval of the HOD. R: GEOG 204, GEOG 303
GEOG 310	Weather Systems	15	S2	P: 44 points of 200 level GEOG, including GEOG 201, or in special cases with approval of the HOD.
GEOG 311	Coastal Studies	15	S1	P: 44 points of 200 level GEOG including GEOG 201, or in special cases with approval of HOD.
GEOG 312	Glacial Processes	15	S2	P: 44 points of 200 level GEOG, including GEOG 201, or in special cases with approval of the HOD.
GEOG 313	Remote Sensing Data for Geographic Analysis	15	S1	P: 44 points of 200 level GEOG, including GEOG 205, or in special cases with approval of the HOD.
GEOG 320	Space, Place and Power	30	S2	P: 30 points of 200 level Geography including GEOG 202, or entry with the approval of HoD
GEOG 321	European Integration From Community to Union	30	S2	P: Either (1) 22 points at B average in any Arts subject or any 22 points in GEOG at 200 level; (2) 22 points of EURO at 200 level with a B pass OR 44 points of EURO at 200 level OR any 66 points from the Arts Schedule at 200 level R: EURO 310 EQ: EURO 310
GEOG 322	Geography of Health	30	S1	P: 44 points of 200 level GEOG, or in special cases with approval of HOD.
GEOG 323	Spatial Data Analysis	15	S1	P: 44 points of 200 level Geography, including GEOG 205, or in special cases with approval of the Head of Department. R: GEOG 431
GEOG 324	Customising GIS	15	S2	P: 44 points of 200 level GEOG, including GEOG 205, and GEOG 323, or in special cases with approval of HOD.
GEOG 340	Field Based Geomorphic Applications	15	SU1	P: 44 points of 200 level GEOG, or in special cases with approval of the HOD.
GEOG 341	Burma (Myanmar): Geographies of Anti-Development	15	SU1	P: 44 points of 200-level Geography, including GEOG 202, or approval of the HOD.
GEOG 342	Political Geography and Political Corruption	15	NO	P: 44 points of 200-level Geography, including GEOG 202, or approval of the HOD.

Geology

All courses in the Department of Geological Sciences require laboratory and/or field work and include both practical and written examinations, with the exception of the Field Studies papers, which are assessed only on practical assignments. GEOL 111 and GEOL 112 are the core introductory papers and it is advisable to complete these, even where substitution of GEOL 113 has been allowed for 200-level. Passes in both GEOL 230 and GEOL 231 field papers, plus 44 other points from GEOL 200-level, are prerequisites for the advanced field papers GEOL 351 and 352.

Note that GEOL 351 and 352 (or attainment of a previous pass in GEOL 329, or GEOL 330) are required for entry to postgraduate courses. Students intending to proceed to BSc(Hons) in Geology or Engineering Geology, PGDipSc in Geology, PGDipEngGeol, or MSc in Geology or Engineering Geology, must also have a minimum of an additional 56 points in Geology at 300-level and 84 are recommended. At least 18 points of MATH 100-level, or a demonstrably equivalent standard in Mathematics, are a prerequisite for entry to ENGE 400-level.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
GEOL 111	Planet Earth: An Introduction to Geology	18	S1	R: ENCI 271
GEOL 112	Understanding Earth History	18	S2	R: ENCI 271 RP: GEOL 111
GEOL 113	Environmental Geohazards	18	S2	

GEOL 230	Field Studies A	11	S1	P: GEOL 111 and GEOL 112 (GEOL 113 may be substituted for either of these provided a candidate has attained an overall B grade in GEOL 100 level courses, or a standard which is acceptable to the HOD). C: 11 points from any papers in GEOL 232-GEOL 238 offered in the same semester.
GEOL 231	Field Studies B	11	S2	P: GEOL 111 and GEOL 112 (GEOL 113 may be substituted for either of these provided a candidate has attained an overall B grade in GEOL 100 level courses, or a standard which is acceptable to the HOD). C: 11 points from any papers in GEOL 232-GEOL 238 offered in the same semester.
GEOL 232	Earth Materials	11	S1	P: GEOL 111 and GEOL 112 (GEOL 113 may be substituted for either of these provided a candidate has attained an overall B grade in GEOL 100 level courses, or a standard which is acceptable to the HOD).
GEOL 233	Crustal Deformation Processes	11	S1	P: GEOL 111 and GEOL 112 (GEOL 113 may be substituted for either of these provided a candidate has attained an overall B grade in GEOL 100 level courses, or a standard which is acceptable to the HOD).
GEOL 234	Stratigraphy and Paleontology	11	S1	P: GEOL 111 and GEOL 112 (GEOL 113 may be substituted for either of these provided a candidate has attained an overall B grade in GEOL 100 level courses, or a standard which is acceptable to the HOD).
GEOL 235	Earth Surface Processes	11	S2	P: GEOL 111 and GEOL 112 (GEOL 113 may be substituted for either of these provided a candidate has attained an overall B grade in GEOL 100 level courses, or a standard which is acceptable to the HOD).
GEOL 236	Earth Dynamics and Plate Tectonics	11	S2	P: GEOL 111 and GEOL 112 (GEOL 113 may be substituted for either of these provided a candidate has attained an overall B grade in GEOL 100 level courses, or a standard which is acceptable to the HOD).
GEOL 237	Special Topic	11	S1	P: Entry subject to HOD approval.
GEOL 238	Special Topic: Resource Geology	11	S2	P: Entry subject to HOD approval.
GEOL 331	Principles of Basin Analysis	14	S2	P: GEOL 235 plus 11 additional points from GEOL 232-GEOL 238. RP: GEOL 234 and GEOL 236
GEOL 333	Evolution of the Biosphere	14	S1	P: GEOL 112 and GEOL 234 plus 11 additional points from GEOL 232-GEOL 238. With the permission of the HOD, 22 points from 200-level BIOL papers may be substituted for 22 points of 200-level GEOL. RP: GEOL 235.
GEOL 334	Tectonics and the New Zealand continent	14	S2	P: GEOL 236 plus 11 additional points from GEOL 232-GEOL 235. RP: GEOL 233
GEOL 336	Magmatic Systems and Volcanology	14	S2	P: GEOL 232 plus 11 additional points from GEOL 233-GEOL 238
GEOL 337	Economic Geology and Geophysical Exploration	14	S1	P: 22 points from GEOL 232-GEOL 238.
GEOL 338	Engineering and Mining Geology	14	S2	P: GEOL 233 plus 11 additional points from GEOL 232-GEOL 238
GEOL 339	Special Topic	14	S1	P: 22 points from GEOL 232-GEOL 236.
GEOL 340	Special Topic	14	S2	P: 22 point from GEOL 232-GEOL 236.
GEOL 342	Special Topic	14	S1	P: Entry subject to Head of Department approval.
GEOL 343	Special Topic	14	S2	P: Entry subject to Head of Department approval.

GEOL 344	Special Topic: Field-focussed Research in Geology	14	S1	P: Entry subject to Head of Department approval. C: Three courses from GEOL 232-238 and GEOL 331-342 taken in the same semester. R: GEOL 230, 231, 351 and 352
GEOL 351	Advanced Field Studies	14	S1	P: (1) GEOL 230; (2) GEOL 231; (3) 44 points from other GEOL 200-level courses C: 14 points from any papers in GEOL 331-GEOL 338 offered in the same semester.
GEOL 352	Advanced Geological Mapping	14	X	P: (1) GEOL 230; (2) GEOL 231; (3) 44 points from other GEOL 200 level courses. C: 14 points from any papers in GEOL 331-GEOL 338 offered in the same semester. R: GEOL 329, GEOL 330

Health Sciences

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
HLTH 101	Introduction to Health Studies	18	S2	

History and Philosophy of Science

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
HAPS 101	Cultures of Inquiry and the Origins of Science	18	S2	R: HAPS 402, PHIL 237, PHIL 257
HAPS 201	The scientific method debate; European science 1200-1700	22	S1	P: HAPS 101, or 36 points in either PHIL or HIST, or 72 points in science subjects and the permission of the HAPS coordinator. R: PHIL 223, PHIL 237 RP: HAPS 101
HAPS 202	Theory, measurement, reality; world science since 1700	22	S2	P: HAPS 101, or 36 points in either PHIL or HIST, or 72 points in science subjects and the permission of the HAPS coordinator. R: HAPS 302, PHIL 223, PHIL 237 RP: HAPS 101.
HAPS 203	Independent Course of Study	22	W	P: HAPS 101, or 36 points in either PHIL or HIST, or 72 points in science subjects and the permission of the HAPS coordinator. RP: HAPS 101
HAPS 302	Theory, measurement, reality; world science since 1700	28	S2	P: HAPS 201. R: HAPS 202, PHIL 223, PHIL 237 RP: HAPS 101

Linguistics

Students intending to complete the BSc in Linguistics must be credited with at least 136 points in Linguistics, including LING 206, LING 207 and 56 points at 300-level which must include at least one of LING 302 (prior to 2009), LING 306 or LING 307, and at least 18 points in a language other than English. The required 18 points in a language other than English may be replaced by proficiency in a language other than English at the discretion of the Head of Department.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
LING 101	The English Language	18	SU2 S1	R: ENGL 123, ENGL 112, LING 111
LING 102	Language and Society	18	S1	R: ENGL 323
LING 202	Semantics	22	NO	P: ENGL 123 or ENGL 112, or 18 points in PHIL, or 18 points in LING. R: PHIL 251 EQ: PHIL 251

LING 203	Sociolinguistics	22	S1	P: ENGL 123 or ENGL 112 or LING 101 or LING 111 or subject to HOD approval.
LING 205	Language Acquisition	22	S2	P: LING 101 or LING 111 or ENGL 112 or ENGL 123 or PSYC 104, or PSYC 105 and PSYC 106, or EDUC 121, EDUC 152, EDED 241 or EDED 268.
LING 206	Syntactic Theory	22	S2	P: LING 101 or LING 111 or ENGL 123 or ENGL 112 R: LING 201, LING 211
LING 207	Phonetics and Phonology	22	S1	P: LING 101 or LING 111 or ENGL 123 or ENGL 112 R: LING 201, LING 211
LING 302	Morphology	28	NO	P: LING 201 or LING 211 or LING 206 or LING 207
LING 303	New Zealand English	28	NO	P: LING 201 or LING 211 or LING 203 or LING 207
LING 304	Historical Linguistics	28	S1	P: LING 201 or LING 211 or LING 206 or LING 207
LING 306	Topics in Syntactic Theory	28	S2	P: LING 201 or LING 206 or LING 211 R: LING 301, LING 311
LING 307	Topics in Phonetics and Phonology	28	S1	P: LING 201 or LING 207 or LING 211 R: LING 301, LING 311
LING 308	Word Meaning	28	S2	P: LING 201 or LING 211 or LING 206, or equivalent background in syntactic phrase structure, at the discretion of the Head of Department.

Management Science

For courses in Management Science a pass in any prerequisite may be replaced by a level of attainment in the prerequisite, or its equivalent, acceptable to the Head of the Department of Management.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
MSCI 101	Management Science	18	S2	R: MSCI 102, MSCI 112
MSCI 110	Quantitative Methods for Business	18	S1	R: STAT 111, STAT 112
MSCI 204	Planning Methods for Management	22	S1	P: 18 points of MATH, MSCI or STAT R: MSCI 215
MSCI 210	Statistical Methods for Management	11	S1	P: (1) MSCI 110 or 18 points of STAT; (2) 9 points from MSCI or MGMT or MATH 104 or MATH 105 or MATH 106 or MATH 107 or MATH 108 or MATH 109 or MATH 116 or MATH 127 or MATH 171. R: MSCI 202
MSCI 216	Linear Programming Methods	11	S2	P: (1) MSCI 215 or MSCI 204; (2) MATH 104 or MATH 105 or MATH 106 or MATH 107 or MATH 108 or MATH 109 or MATH 116 or MATH 127 or MATH 171. R: MSCI 201
MSCI 220	Introduction to Operations Management	11	S1	P: (1) MSCI 101 or (MSCI 102 and MSCI 112); or (2) MGMT 101 and 18 points of MSCI, MATH, STAT. R: MSCI 203
MSCI 221	Production Planning and Control	11	S2	P: (1) MSCI 101 or MGMT 101; (2) MSCI 110 or 18 points STATS. R: MSCI 203 RP: MSCI 220
MSCI 301	Optimisation Models and Methods	28	S1	P: (1) MSCI 204 or MSCI 215; (2) MSCI 216; (3) any one of COSC 121, ACIS 125, AFIS 123, ENEL 206, MATH 171, MATH 282, or any course involving an appropriate level of computer programming, as approved by the Head of Department. R: MSCI 315, MSCI 316 RP: MATH 251, MATH 252 or MATH 254.

MSCI 302	Probabilistic Operations Research Models	28	S2	P: (1) MSCI 204; (2) MSCI 210 or 22 points of 200-level courses in STAT; (3) any one of COSC 121, ACIS 125, AFIS 123, ENEL 206, MATH 171, MATH 282, or any course involving an appropriate level of computer programming, as approved by the Head of Department. R: MSCI 310, MSCI 311, MSCI 312
MSCI 320	Strategic Operations and Supply Chain Management	14	S1	P: (1) MSCI 220; (2) 22 points 200 level from MSCI, MGMT, ACIS or AFIS. R: MSCI 304 RP: MSCI 221
MSCI 321	Materials, Logistics and Supply Chain Management	14	S2	P: MSCI 220, MSCI 221 R: MSCI 303
MSCI 323	Quality Management	14	S1	P: (1) MSCI 220 and MSCI 221; (2) 22 points at 200 level from MSCI, MGMT, ACIS, AFIS. R: MSCI 304
MSCI 324	Project Management	28	S2	P: (1) MSCI 220, MSCI 221 and 22 points from Commerce; or (2) 88 points at 200 level from Commerce, Science or Engineering R: MSCI 304, MSCI 322, AFIS 313
MSCI 340	Special Topic	14	NO	P: Subject to the approval of the Head of Department.

Mathematics

The 100-level core Mathematics (Calculus and Linear Algebra) courses are MATH 108 and 109. Both these courses re offered in Semester 1 and Semester 2. MATH 109 is also available as a Summer Course.

To obtain 36 points at 100-level in core Mathematics, students can take any occurrence of MATH 108, followed by any of MATH 109. Such a route leads to enrolment in 200-level courses, and subsequently a degree with 300-level credits in Mathematics.

Students who have not passed Year 13 Mathematics, or its equivalent, are strongly advised to enrol in MATH 101 before advancing to MATH 108. MATH 115 or 134 can be taken alone or credited with any other 100-level core Mathematics course.

MATH 171 is intended for students who want to progress in applied mathematics. It is recommended that students who enrol in MATH 171 have already been credited with MATH 108. Students majoring in

Mathematics must complete 44 points from MATH 210-299 or equivalent, and at least 56 points from MATH 310-399. Satisfactory attendance at, and performance in, tutorials is required in all Mathematics courses.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
MATH 101	Introductory Mathematics with Applications	18	S1	R: MATH 104, MATH 105, MATH 106, MATH 107, MATH 108, MATH 109, MATH 171
MATH 108	Mathematics 1C	18	S1 S2	R: MATH 104, MATH 105, MATH 106
MATH 109	Mathematics 1D	18	SU2 S1 S2	P: MATH 106 or MATH 108. R: MATH 104, MATH 105, MATH 107
MATH 115	Discrete Mathematics 1	18	W	
MATH 134	Logic and Computability	18	SU1 S1	R: PHIL 134, PHIL 144, MATH 144 EQ: PHIL 134
MATH 171	Mathematical Modelling and Computation	18	S2	R: EMTH 171 RP: MATH 108
MATH 208	Logic A	22	S1	P: Any 18 points in Philosophy or Mathematics or Computer Science. R: PHIL 225, PHIL 246, PHIL 346, PHIL 208, PHIL 308, MATH 308

MATH 221	Algebra and Cryptography	11	S1	P: MATH 104 or MATH 105 or MATH 106 or MATH 107 or MATH 108 or MATH 109 or MATH 199 or MATH 115. R: MATH 211, MATH 315
MATH 222	Groups and Symmetry	11	S2	P: MATH 104 or MATH 105 or MATH 106 or MATH 107 or MATH 108 or MATH 109 or MATH 199 or MATH 115. R: MATH 211
MATH 231	Discrete Methods	11	S2	P: MATH 104 or MATH 105 or MATH 106 or MATH 107 or MATH 108 or MATH 109 or MATH 199 or MATH 115. R: MATH 215
MATH 243	Analysis 2	11	S1	P: MATH 104 or MATH 105 or MATH 107 or MATH 109 or MATH 199. R: MATH 212
MATH 251	Linear Systems	11	S1	P: MATH 104 or MATH 105 or MATH 107 or MATH 109 or MATH 199. R: MATH 204, MATH 217, MATH 254, EMTH 203, EMTH 204
MATH 252	Matrix Algebra 2	11	S2	P: MATH 104 or MATH 105 or MATH 107 or MATH 109 or MATH 199. R: MATH 204, MATH 217, MATH 254, EMTH 203, EMTH 204
MATH 254	Linear Algebra 2	22	S2	P: MATH 104 or MATH 105 or MATH 107 or MATH 109 or MATH 199 and Head of Department approval. R: MATH 204, MATH 217, MATH 251, MATH 252, EMTH 203, EMTH 204
MATH 261	Multivariate Calculus	11	S1	P: MATH 104 or MATH 105 or MATH 107 or MATH 109 or MATH 199. R: MATH 204, MATH 218, MATH 219, MATH 264, EMTH 201, EMTH 202, EMTH 204, EMTH 210
MATH 262	Differential Equations and Transforms	11	S2	P: MATH 104 or MATH 105 or MATH 107 or MATH 109 or MATH 199. R: MATH 204, MATH 218, MATH 219, MATH 264, EMTH 201, EMTH 202, EMTH 204, EMTH 210
MATH 264	Multivariate Calculus and Differential Equations	22	S1	P: MATH 104 or MATH 105 or MATH 107 or MATH 109 or MATH 199 and Head of Department approval. R: MATH 204, MATH 218, MATH 219, MATH 261, MATH 262, EMTH 201, EMTH 202, EMTH 204, EMTH 210, EMTH 264
MATH 271	Mathematical Modelling and Computation 2	11	S2	P: (MATH 171 or EMTH 171 or MATH 280 or MATH 281 or MATH 282) AND (EMTH 201 or EMTH 202 or EMTH 204 or EMTH 210 or MATH 261 or MATH 264). Or high grade in MATH 104, MATH 105, MATH 107 or MATH 109 or MATH 199 and Head of Department approval. R: MATH 266, EMTH 271
MATH 282	Introduction to Scientific Computing	11	SU1	P: MATH 104 or MATH 105 or MATH 107 or MATH 109 or MATH 199. R: MATH 280, MATH 281
MATH 301	Mathematics in Perspective	14	S2	P: 36 points in Mathematics or Statistics or Engineering Mathematics at 100 level. 44 points from the BA or BSc Schedule at 200 level in Mathematics, Statistics, Engineering Mathematics, related subjects, or other subjects with good grades, as approved by the Head of Department.
MATH 305	Mathematics Project	14	SU2	P: 44 points from MATH 210-299, and approval of HOD. R: STAT 305
MATH 308	Logic A	28	NO	P: Any 22 points at 200 level in Philosophy or Mathematics or Computer Science or Engineering Mathematics R: PHIL 225, PHIL 246, PHIL 346, PHIL 208, PHIL 308, MATH 208

MATH 321	Fields and Commutative Rings	14	S1	P: MATH 221 or MATH 222 (or MATH 254 or EMTH 204 with HOD permission) R: MATH 311
MATH 322	Group Theory	14	NO	P: MATH 221 or MATH 222 (or MATH 254 or EMTH 204 with HOD permission) R: MATH 311
MATH 323	Algebraic Computing	14	NO	P: Either 44 points in MATH 221, MATH 222, MATH 231, MATH 251, MATH 252, MATH 254, EMTH 203, EMTH 204 or 22 points at 200 level Maths with HOD approval.
MATH 324	Cryptography 2	14	S2	P: MATH 221 and a further 11 points from MATH 210-299
MATH 333	Coding Theory	14	S1	P: 22 points from MATH 221, MATH 222, MATH 231, MATH 251, MATH 252, MATH 254, EMTH 203, EMTH 204 or 22 points at 200 level Maths with HOD approval. R: MATH 315
MATH 334	Combinatorics	14	S2	P: 22 points from MATH 221, MATH 222, MATH 231, MATH 251, MATH 252, MATH 254, EMTH 203, EMTH 204 or 22 points at 200 level Maths with HOD approval. R: MATH 315
MATH 335	Computability Theory	14	S2	P: COSC 222 or PHIL 246 or 22 points in MATH or EMTH at 200 level, as approved by the Head of Department.
MATH 336	Foundations of Mathematics	14	NO	P: 22 points from MATH 221-282 or EMTH 200-204 or EMTH 210-271; or approval of HOD. R: MATH 208, MATH 308
MATH 342	Applications of Complex Variables	14	S2	P: Either (1) 22 points from MATH 219, MATH 264, EMTH 204 or (2) MATH 261 and MATH 262 or (3) MATH 243 or (4) EMTH 202 R: MATH 319
MATH 343	Metric, Normed and Hilbert Spaces	14	S1	P: Either (1) MATH 243 or MATH 264 or EMTH 202 or EMTH 204 or (2) 22 points from MATH 200 or EMTH 200 as approved by the Head of Department. R: MATH 312
MATH 352	Applied Matrix Algebra A	14	S1	P: Either MATH 251 or MATH 252 or MATH 254 or EMTH 203 or EMTH 204. R: MATH 317 RP: MATH 280 or MATH 281 or MATH 282 or MATH 271
MATH 353	Applied Matrix Algebra B	14	S2	P: Either MATH 252 or MATH 254 or EMTH 203 or EMTH 204. R: MATH 317 RP: (MATH 251 or MATH 352) and (MATH 271, MATH 280, MATH 281 or MATH 282)
MATH 361	Partial Differential Equations	14	S1	P: 22 points from MATH 219, MATH 261, MATH 262, MATH 264, EMTH 202, EMTH 204 R: MATH 314, MATH 318, MATH 319
MATH 363	Dynamical Systems	14	S2	P: 22 points from MATH 219, MATH 261, MATH 262, MATH 264, EMTH 202, EMTH 204. R: MATH 318 RP: MATH 252, MATH 254 or EMTH 203
MATH 371	Vector Calculus and Modelling	14	S1	P: MATH 219 or MATH 264 or MATH 261 or MATH 262 or EMTH 202 or EMTH 204. R: MATH 318
MATH 376	Applied Stochastic Modelling	14	S2	P: (1) 11 points from STAT 212, STAT 214, STAT 216 and a further 11 points from STAT 210 to STAT 299; (2) MATH 109 or MATH 199. R: STAT 316 RP: STAT 212, STAT 216, and 11 points from MATH 252, MATH 254, MATH 261, MATH 262, MATH 264, EMTH 202, EMTH 203, EMTH 204. EQ: STAT 316

MATH 381	Advanced Scientific Computing	14	S2	P: (1) (MATH 261 or MATH 262 or MATH 264 or EMTH 202 or EMTH 204); (2) (MATH 266 or MATH 271 or MATH 280 or MATH 282) R: MATH 366, MATH 367
MATH 392	Special Topic	14	S2	

Philosophy

Students completing a BSc in Philosophy must be credited with at least 136 points in Philosophy, including at least 44 points in Philosophy at 200-level, including PHIL 233, and 56 points in Philosophy at 300-level, which must include at least one of PHIL 305, 308, 309, 310, 311, 315, 317, or 318. For the purpose of these regulations, HAPS 101 or MATH 134 or MATH 144 may be counted as 18 points in Philosophy at 100-level; HAPS 202, LING 202, MATH 208, or MATH 209 may be counted as 22 points in Philosophy at 200-level; and HAPS 302, MATH 308 or MATH 309 at 300-level. To enter PHIL 200-level courses, it is sufficient to pass one course in Philosophy at 100-level. Students without this prerequisite but with at least a B average in 72 points in appropriate courses may be admitted with approval of the Head of the School of Philosophy and Religious Studies.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
HAPS 101	Cultures of Inquiry and the Origins of Science	18	S2	R: HAPS 402, PHIL 237, PHIL 257
HAPS 202	Theory, measurement, reality; world science since 1700	22	S2	P: HAPS 101, or 36 points in either PHIL or HIST, or 72 points in science subjects and the permission of the HAPS coordinator. R: HAPS 302, PHIL 223, PHIL 237 RP: HAPS 101.
HAPS 302	Theory, measurement, reality; world science since 1700	28	S2	P: HAPS 201. R: HAPS 202, PHIL 223, PHIL 237 RP: HAPS 101
PHIL 110	Science: Good, Bad, and Bogus	18	S1	
PHIL 132	God, Mind, and Freedom	18	S2	R: PHIL 138 (prior to 2006)
PHIL 133	Philosophy and Human Nature	18	S1	
PHIL 134	Logic and Computability	18	SU1	R: MATH 134, MATH 144, PHIL 144 EQ: MATH 134
PHIL 138	Truth and Reason	18	S1	R: PHIL 132 (prior to 2006), PHIL 134/MATH 134
PHIL 208	Logic A	22	S1	P: Any 18 points in Philosophy or Mathematics or Computer Science or Linguistics. R: PHIL 225, PHIL 246, PHIL 346, PHIL 308, MATH 208, MATH 308
PHIL 209	Logic B	22	S2	P: PHIL 208 R: PHIL 225, PHIL 247, PHIL 347, PHIL 309, MATH 209, MATH 309 EQ: MATH 209
PHIL 223	Special Topic	22	S1	P: 18 points in PHIL, or B average in 72 points of appropriate courses with approval of the Head of School. R: EDUC 631, HAPS 401 and PHIL 323
PHIL 224	Greek Philosophy	22	S2	P: 18 points in PHIL, or B average in 72 points of appropriate courses wih approval of the Programme Director. R: CLAS 224, CLAS 324 EQ: CLAS 224
PHIL 229	Philosophy of Religion: Rationality, Science, and the God Hypothesis	22	S1	P: At least 18 points in Philosophy or Religious Studies. Students without this prerequisite but with at least 72 points in appropriate subjects may be admitted with the approval of the Head of School. R: RELS 210, PHIL 318 EQ: RELS 210

PHIL 233	Epistemology and Metaphysics	22	S1	P: 18 points in PHIL or B average in 72 points of appropriate courses with approval of the Head of School.
PHIL 235	Cyberspace, Cyborgs, and the Meaning of Life	22	S2	P: Any 18 points in Philosophy or Mathematics or Computer Science; or a B average in 72 points of appropriate courses with approval of the Head of School.
PHIL 236	Ethics	22	S1	P: 18 points in PHIL or B average in 72 points of appropriate courses with approval of the Programme Director. R: PHIL 321
PHIL 238	Cognitive Science	22	S2	P: 18 points in PHIL, or 18 points in an appropriate science subject with the approval of the PHIL Programme Director.
PHIL 240	Bioethics	22	NO	P: 18 points in PHIL or a B average in 72 points in relevant subjects, (eg PAMS, ZOOL, POLS, ECON, SPTH, LAWS, CMDS) as approved by the Head of School. R: PHIL 324
PHIL 251	Semantics	22	NO	P: ENGL 123 or ENGL 112, or 18 points in PHIL, or 18 points in LING R: LING 202 EQ: LING 202
PHIL 305	Philosophical Logic	28	S2	P: Any 22 points at 200 level in Philosophy or Mathematics or Computer Science courses as approved by the Head of School. R: PHIL 315
PHIL 308	Logic A	28	S1	P: Any 22 points at 200 level in Philosophy or Mathematics or Computer Science or Engineering Mathematics. R: PHIL 225, PHIL 246, PHIL 346, PHIL 208, MATH 208, MATH 308
PHIL 309	Logic B	28	S2	P: Any 22 points at 200 level in Philosophy or Mathematics or Computer Science R: PHIL 225, PHIL 247, PHIL 347, PHIL 209, MATH 209, MATH 309 EQ: MATH 309
PHIL 310	History of Philosophy	28	S1	P: 62 points in PHIL, at least 44 at 200 level
PHIL 311	Recent and Contemporary Philosophy	28	S2	P: 62 points in PHIL, at least 44 at 200 level. R: PHIL 464 (from 2006)
PHIL 314	Greek Philosophy	28	S2	P: 62 points in PHIL, at least 44 at 200 level including PHIL 233 (INCO 219 may be substituted for any SEE ABOVE PHIL course except PHIL 233). R: PHIL 224, CLAS 224, CLAS 324 EQ: CLAS 324
PHIL 317	Contemporary Political Philosophy	28	S2	P: PHIL 236 or POLS 201 or PHIL 239 or B average in 66 points above 100 level in relevant subjects (e.g. PHIL, POLS, ECON, MSCI, LAWS, or SOCI) with approval of the Programme Director. R: POLS 301 EQ: POLS 301
PHIL 318	Philosophy of Religion: Rationality, Science and the God Hypothesis.	28	S1	P: 62 points in PHIL, at least 44 at 200 level, with approval of the Head of School. R: RELS 210 and PHIL 229
PHIL 320	Special Topic	28	S1	P: 62 points in Philosophy, at least 44 at 200 level with approval of the Head of School. R: HLTH 407
PHIL 321	Special Topic: Ethics	28	S1	P: 62 points in Philosophy, at least 44 at 200 level, with approval of the Head of School.

PHIL 323	Special Topic	28	S1	P: (1) 62 points in Philosophy, at least 44 at 200 level; (2) Approval of the Head of School.

Physics

Students intending to advance in Physics are strongly advised to include in their first year courses PHYS 113, PHYS 114, MATH 108 and MATH 109. It should be noted that PHYS 113 is offered in Semesters 1 and 2, and PHYS 114 is offered in Semester 2, and as a Summer Programme. In second year, PHYS 221-224, 226, 281, 282, and one of MATH 261, 264 are strongly recommended.

A major in Physics requires PHYS 281, PHYS 282 and 22 points from MATH 251-264. A major in Physics requires 56 points selected from PHYS 301-383, ASTR 301-370, ELEC 321, 323. This selection must include PHYS 310 and PHYS 381. A student may be permitted by the HOD to obtain a double major in Physics and Mathematics or Physics and Electronics, without PHYS 381.

To graduate with a BSc in Physics a candidate must pass an approved academic writing test. In any Physics course that involves assessed laboratory or tutorial work, satisfactory attendance and performance in such work is required.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
PHYS 106	Physics for Biological and Earth Sciences	18	NO	R: PHYS 111
PHYS 109	The Cosmos: Birth and Evolution	18	S2	R: ASTR 109, PHYS 110 EQ: ASTR 109
PHYS 111	Introductory Physics for Physical Sciences and Engineering	18	S1	R: PHYS 106. Students who have been credited with any of PHYS 112, PHYS 113, PHYS 114, PHYS 115, or PHYS 116 cannot subsequently be credited with PHYS 111.
PHYS 113	Waves, Thermodynamics and Materials	18	S1 S2	P: PHYS 111, or PHYS 106, or 14 credits NCEA Level 3 Physics and 14 credits NCEA Level 3 Mathematics with Calculus. These prerequisites may be replaced by other background as approved by the Head of Department. R: PHYS 112
PHYS 114	Electrical and Quantum Physics	18	SU2 S2	P: (1) PHYS 113; or (2) 18 credits NCEA Level 3 Physics and 18 Credits NCEA Level 3 Mathematics with Calculus. These prerequisites may be replaced by other background as approved by the Head of Department. R: PHYS 115, PHYS 116 (prior to 2006)
PHYS 221	Waves, Optics and Circuits	11	S1	P: (1) PHYS 113; (2) PHYS 114; (3) MATH 108. These prerequisites may be replaced by a high level of achievement in Level 3 NCEA Physics and Mathematics with Calculus or other background as approved by the Head of Department. RP: MATH 109
PHYS 222	Quantum Physics	11	S2	P: (1) PHYS 113; (2) PHYS 114; (3) MATH 108. These prerequisites may be replaced by a high level of achievement in Level 3 NCEA Physics and Mathematics with Calculus or other background as approved by the HOD. RP: MATH 109.
PHYS 223	Newtonian and Relativistic Mechanics	11	S1	P: (1) PHYS 113; (2) PHYS 114; (3) MATH 108. These prerequisites may be replaced by a high level of achievement in Level 3 NCEA Physics and Mathematics with Calculus or other background as approved by the HOD. RP: MATH 109.

PHYS 224	Electricity and Magnetism	11	S2	P: (1) PHYS 113; (2) PHYS 114; (3) MATH 108. These prerequisites may be replaced by a high level of achievement in Level 3 NCEA Physics and Mathematics with Calculus or other background as approved by the Head of Department. RP: MATH 109.
PHYS 225	Analogue Electronics	11	S2	P: (1) PHYS 113 and PHYS 114; and (2) MATH 108. These prerequisites may be replaced by a high level of achievement in NCEA Level 3 Physics and Mathematics with Calculus or another equivalent background, as approved by the Head of Department of Physics and Astronomy. R: ELEC 225 RP: MATH 109 and COSC 122 EQ: ELEC 225
PHYS 226	Digital Electronics	11	S1	P: (1) Either PHYS 113 and PHYS 114, or COSC 122; and (2) 18 points from MATH 100. These prerequisites may be replaced by a high level of achievement in NCEA Level 3 Physics and Mathematics with Calculus or other background as approved by the Head of Department. R: ELEC 226 RP: MATH 109 and COSC 122. EQ: ELEC 226
PHYS 281	Laboratory Techniques	11	S1	P: (1) PHYS 113; (2) PHYS 114; (3) 18 Points from MATH 100. These prerequisites may be replaced by a high level of achievement in NCEA Physics and Mathematics with Calculus or other background as approved by the Head of Department. RP: MATH 109.
PHYS 282	Experimental Physics	11	S2	P: PHYS 281
PHYS 310	Thermal Statistical and Particle Physics	14	S1	P: (1) 22 points from PHYS 221-PHYS 224; (2) MATH 109 or equivalent.
PHYS 311	Quantum Mechanics	14	S1	P: (1) PHYS 222; (2) MATH 109 or equivalent.
PHYS 312	Applied Electromagnetism	14	S2	P: (1) PHYS 224; (2) MATH 109 or equivalent. R: ELEC 312 EQ: ELEC 312
PHYS 314	Condensed Matter Physics	14	S2	P: (1) PHYS 222; (2) MATH 109 or equivalent.
PHYS 316	Geophysical Fluid Dynamics	14	S1	P: (1) PHYS 223 or PHYS 221; (2) MATH 109 or equivalent.
PHYS 318	Computational Physics	14	NO	P: (1) 22 points from PHYS 221-PHYS 224; (2) MATH 109 or equivalent.
PHYS 321	Techniques in Observational Astronomy	14	NO	P: (1) 22 points from PHYS 221-PHYS 224, ASTR 211, ASTR 212. (2) MATH 109 or equivalent R: ASTR 321 EQ: ASTR 321
PHYS 322	Theoretical and Observational Cosmology	14	S1	P: (1) 33 Points from PHYS 221-224, PHYS 310; (2) MATH 109 or equivalent R: ASTR 322 EQ: ASTR 322
PHYS 323	Stellar Structure and Evolution	14	S2	P: (1) 22 points from PHYS 221-PHYS 224, ASTR 211, ASTR 212; (2) MATH 109 or equivalent. R: ASTR 323 EQ: ASTR 323
PHYS 326	Classical Mechanics and Symmetry Principles	14	S2	P: PHYS 223 and MATH 261 or MATH 264
PHYS 327	Special Topic	14	S1	P: (1) HOD approval; (2) MATH 109 or equivalent.
PHYS 328	Special Topic	14	S2	P: (1) HOD approval; (2) MATH 109 or equivalent.

PHYS 329	Special Topic	14	S1	P: (1) HOD approval; (2) MATH 109 or equivalent.
PHYS 381	Advanced Experimental Physics and Astronomy	14	SU2 S1 S2	P: (1) (PHYS 281 and PHYS 282 or PHYS 283) and 22 points from PHYS 221-226; (2) MATH 109 or equivalent R: ASTR 381 EQ: ASTR 381
PHYS 391	Introductory Physics Research	14	SU2 S1 S2	P: (1) MATH 109 or equivalent (2) 44 points from PHYS 200 (3) Entry subject to a supervisor approved by the Head of Department, being available R: PHYS 392, PHYS 393

Psychology

Students intending to complete the BSc in Psychology must be credited with the following PSYC courses:

(a) PSYC 105 and PSYC 106, or PSYC 104 (prior to 2005);

(b) PSYC 206; and

(c) one from PSYC 207–211, and

(d) two 300-level PSYC courses, and

(e) one further 200-level PSYC course or 300-level PSYC course.

Students who wish to proceed to higher postgraduate degrees in Psychology must satisfy these requirements and in addition have been credited with PSYC 344. Students intending to apply for the MSc in Applied Psychology must also complete PSYC 336 or equivalent course. Students who wish to become eligible to apply for the Diploma in Clinical Psychology need to complete PSYC 335 or an equivalent course.
Note: COSC 110 and/or STAT 111 or 131 are recommended as useful preparation for students progressing beyond 100-level in Psychology.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
PSYC 105	Introductory Psychology - Brain, Behaviour and Cognition	18	S1	R: PSYC 103, PSYC 104
PSYC 106	Introductory Psychology - Social, Personality and Developmental	18	S2	R: PSYC 103, PSYC 104
PSYC 206	Research Design and Statistics	22	S1	P: PSYC 104, or PSYC 105 and PSYC 106 R: PSYC 201, PSYC 202, PSYC 204, PSYC 205
PSYC 207	Developmental Psychology	22	S1	P: PSYC 104, or PSYC 105 and PSYC 106 R: PSYC 201, PSYC 202, PSYC 204, PSYC 205
PSYC 208	Cognition	22	S2	P: PSYC 104, or PSYC 105 and PSYC 106, or with the approval of the HOD, a pass in a professional year of Engineering, or COSC 121 and COSC 122 or LING 101, or LING 111, or ENGL 123 or PHIL 137. R: PSYC 201, PSYC 202, PSYC 204, PSYC 205, PSYC 312
PSYC 209	Sensation and Perception	22	S1	P: PSYC 104, or PSYC 105 and PSYC 106, or with the approval of the HOD a pass in a professional year of Engineering, or ARTT 101, or 36 points in Art History, or COSC 121 and COSC 122. R: PSYC 201, PSYC 202, PSYC 204, PSYC 205, PSYC 312
PSYC 211	Personality	22	S2	P: PSYC 104, or PSYC 105 and PSYC 106
PSYC 332	Social Psychology	28	S1	P: PSYC 206. R: PSYC 305, PSYC 313 RP: 6 further points from PSYC 200.
PSYC 333	Biological Psychology	28	S1	P: PSYC 206. R: PSYC 321, PSYC 203, PSYC 307 RP: 6 further points from PSYC 200/300.
PSYC 334	Learning and Behaviour Analysis	28	W	P: PSYC 206 or EDUC 224 or EDUC 324 or EDUC 230 or EDUC 330 R: PSYC 318

PSYC 335	Abnormal Psychology	28	W	P: PSYC 206. R: SOWK 101B RP: PSYC 207, PSYC 211
PSYC 336	Industrial and Organisational Psychology	28	W	P: PSYC 206. RP: PSYC 211, 6 further points from PSYC 200
PSYC 338	Family Psychology	28	S2	P: EITHER 22 points from PSYC 206 or PSYC 207; OR PSYC 105 and PSYC 106 (or PSYC 104) PLUS at least 22 points at 200-level or above in a course approved by the HOD Psychology.
PSYC 339	Health Psychology and Behaviour Change	28	S1	P: EITHER 22 points from PSYC 206 - PSYC 211; OR PSYC 105 and PSYC 106 (or PSYC 104) PLUS an advanced course in Health Sciences approved by the HOD Psychology.
PSYC 340	Cognitive Psychology	28	W	P: PSYC 208
PSYC 341	Special Topic	28	W	P: PSYC 206
PSYC 342	Special Topic	28	W	P: PSYC 206
PSYC 343	Psychology of Adult Development	28	S2	P: EITHER 22 points from PSYC 206 - PSYC 211; OR PSYC 105 and PSYC 106 (or PSYC 104) PLUS 22 points from a course approved by the HOD Psychology. R: PSYC 207 (taken prior to 2003).
PSYC 344	Research Methods	28	S2	P: PSYC 206
PSYC 345	Special Topic: Psychology and Sport	28	S2	P: (1) PSYC 105 and PSYC 106; and (2) PSYC 206 or 22 points at 200-level or above in a relevant subject/s approved by the Head of Department

Science and Entrepreneurship

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
SCIE 301	Science and Entrepreneurship in New Zealand, Part 1	14	S1	P: 108 points, including 44 points at 200-level.
SCIE 302	Science and Entrepreneurship in New Zealand, Part II	14	S2	P: SCIE 301

Science, Maori and Indigenous Knowledge

Note: This is an integrated multi-disciplinary course between the School of Maori and Indigenous Studies and the College of Science.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
SCIM 101	Science, Maori and Indigenous Knowledge	18	S2	

Soil Science

Students who have not taken Chemistry to NCEA Level 3 are strongly advised to take CHEM 111/121 and 112, or CHEM 113 and 112, or CHEM 114 and CHEM 115 before enrolling in SOIL 203.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
SOIL 203	Soil Fertility	22	S2	P: 36 points from CHEM, GEOL or BIOL. R: SOIL 201

Statistics

STAT 111, 112 and 131 are alternative courses, STAT 131 requiring the higher standard of entry. Either will satisfy the prerequisites for 200-level Statistics courses and subsequently lead to a degree with 300-level courses in Statistics. Statistics 112 repeats STAT 111 in Semester 2. Students majoring in Statistics must complete MATH 109 or MATH 199, 33 points from STAT 210-299, and 56 points from STAT 310-399.

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
STAT 111	Statistics 1	18	W	R: STAT 112, STAT 131
STAT 112	Statistics 1	18	S1 S2	R: STAT 111, STAT 131
STAT 131	Statistics 1A	18	NO	R: STAT 111, STAT 112
STAT 212	Statistical Distributions	11	S1	P: (1) MATH 104 or MATH 105 or MATH 106 or MATH 107 or MATH 108 or MATH 109 or MATH 199; (2) STAT 111 or STAT 112 or STAT 131. R: STAT 221, STAT 223, STAT 231
STAT 214	Statistical Inference	11	S2	P: (1) STAT 111 or STAT 112, (2) MATH 108 or MATH 109 or MATH 199 R: STAT 221
STAT 216	Probability	11	S1	P: STAT 111 or STAT 112 or MATH 108 or MATH 109 or MATH 199 R: STAT 231, MATH 223
STAT 218	Computational Methods in Statistics	11	S2	P: STAT 111 or STAT 112 or MATH 108 or MATH 109 or MATH 115 or MATH 171 or MATH 199
STAT 222	Applied Statistics	11	S1	P: STAT 111 or STAT 112 or STAT 131 R: FORE 222, FORE 210, STAT 220
STAT 224	Regression Modelling	11	S2	P: STAT 111 or STAT 112 or STAT 131 R: FORE 224, FORE 210, STAT 220
STAT 305	Statistics Project	14	SU2	P: 33 points from STAT 210-299, and approval of HOD. R: MATH 305
STAT 312	Sampling Methods	14	S1	P: 11 pts from STAT 212, STAT 214, STAT 222, STAT 224 and a further 11 pts from STAT 210 to STAT 299.
STAT 313	Computational Statistics	14	S2	P: (1) 11 points from STAT 212, STAT 214, STAT 222, STAT 224 and a further 11 points from STAT 210 to STAT 299; (2) MATH 108 or MATH 109 or MATH 199 RP: STAT 218, and either MATH 109 or MATH 199
STAT 314	Bayesian Inference	14	S1	P: (1) 11pts from STAT 212, STAT 214 and a further 11 pts from STAT 210 to STAT 299. (2) MATH 109 or MATH 199 RP: STAT 212 and STAT 214
STAT 315	Multivariate Statistical Methods	14	S2	P: 11pts from STAT 212, STAT 214, STAT 222, STAT 224 and a further 11 pts from STAT 210 to STAT 299. RP: MATH 252 or MATH 254
STAT 316	Applied Stochastic Modelling	14	S2	P: (1) 11 points from STAT 212, STAT 214, STAT 216 and a further 11 points from STAT 210 to STAT 299; (2) MATH 109 OR MATH 199. R: MATH 376 RP: STAT 212, STAT 216 and 11 points from MATH 252, MATH 254, MATH 261, MATH 262, MATH 264, EMTH 202, EMTH 203,EMTH 204 EQ: MATH 376
STAT 317	Time Series Methods	14	S1	P: (1) 11 points from STAT 212, STAT 214, STAT 222, STAT 224 and a further 11 points from STAT 210 to STAT 299, ECON 211 and MSC1210; (2) MATH 109 or MATH 199 RP: 11 points from MATH 251, MATH 252, MATH 254 and 11 pts from MATH 271, MATH 282, STAT 216
STAT 318	Data Mining	14	S2	P: (1) 11 points from STAT 210 to 299; (2) 11 points from the STAT 210 to 299, or COSC 200 to 299 or any other relevant subject with Head of Department approval.
STAT 391	Special Topic: Generalised Linear Models	14	S1 S2	P: Subject to the approval of the Head of Department
STAT 392	Special Topic	14	S1 S2	

Schedule of Endorsements for the Degree of Bachelor of Science

Biosecurity

To qualify for an endorsement in Biosecurity a student must be enrolled for a Bachelor of Science in Biological Sciences and must complete the 360 point requirement for the BSc.

Required courses

The following courses are required for the endorsement:

Course	Pts
BIOL 111 Cellular Biology and Biochemistry	18
BIOL 112 Ecology, Evolution and Conservation	18
BIOL 113 Diversity of Life	18
CHEM 114 Introductory Chemistry or CHEM 112 General Chemistry	18
Total 100-level required points	**72**
BIOL 209 Introduction to Biological Data Analysis or STAT 222 Applied Statistics or STAT 224 Regression Modelling	11
BIOL 231 Molecular Genetics	11
BIOL 270/FORE202 Ecology	22
BIOL 271 Evolution	11
BIOL 273 New Zealand Biodiversity and Biosecurity	15
BIOS 101/BIOS 201 Issues in New Zealand Biosecurity	18 or 22
Total 200-level required points	**88 or 92**
BIOL 332 Invasive Systems: Genetics	14
BIOL 377 Global Change and Biosecurity	28
Total 300-level required points	**42**

Recommended courses

Students will normally follow one of two pathways: a molecular/genetics pathway or an ecological/applied pathway. Recommended courses should be selected from:

Molecular/genetics pathway

100-level

LAWS 101 The Legal System
SCIM 101 Science, Maori and Indigenous Knowledge

200-level

BIOL 232 Genetics
BIOL 213 Microbiology 1
BIOL 252 Plant Organisation and Physiology
CHEM 224 Analytical and Environmental Chemistry
ANTA 201 Antarctica and Global Change
POLS 206 Public Policy: An Introduction

300-level

BIOL 303 Forensic Genetics
BIOL 330 Advanced Concepts in Genetics
BIOL 313 Microbiology 2
BIOL 352 Plant Biotechnology
BIOL 309 Experimental Design and Data Analysis

Ecological/applied pathway

100-level

LAWS 101 The Legal System
SCIM 101 Science, Maori and Indigenous Knowledge

200-level

BIOL 211 Insect Biology
BIOL 212 Marine Biology
BIOL 215 Plant Diversity
BIOL 214 Diversity of Algae
FORE 218 Forest Ecosystem Health
ANTA 201 Antarctica and Global Change
POLS 206 Public Policy: An Introduction

300-level

BIOL 305 Practical Taxonomy for Field Biologists
BIOL 309 Experimental Design and Data Analysis
BIOL 371 Evolutionary Ecology
FORE 443 Biosecurity Risk Management
BIOL 374 Marine Ecosystems
BIOL 375 Freshwater Ecosystems
BIOL 378 Population Ecology and Conservation
BIOL 379 Sustaining Biodiversity on Private Land

Environmental Science

To qualify for an endorsement in Environmental Science, a student must be a Biology or Chemistry or Geography or Geology major and complete the 360 points requirements for the Bachelor of Science. Of those 360 points, 252 points must come from the courses listed below and meet the following requirements:

(a) At least 108 points at the 100-level with at least 54 points at the 100-level outside the major.

(b) At least 88 points at the 200-level with at least 44 points at the 200 level outside the major.

(c) At least 56 points at the 300-level. These points may be in the same subject as the major.

Note: The course of study needs to be coherent and approved by the Coordinator of Environmental Science. With the approval of the Coordinator, courses at a higher level can substitute for courses at a lower level when meeting the above requirements.

Antarctic Studies

ANTA 101 Antarctic Studies

ANTA 102 Antarctic Studies: The Cold Continent

ANTA 103 Antarctic Studies: Life in the Cold

ANTA 201 Antarctica and Global Change

Biology

BIOL 112 Ecology, Evolution & Conservation

BIOL 113 Diversity of Life

BIOL 114 New Zealand Biodiversity and Biosecurity

BIOL 209 Introduction to Biological Data Analysis

BIOL 211 Insect Biology

BIOL 212 Marine Biology

BIOL 213 Microbiology

BIOL 214 Diversity of Algae

BIOL 252 Plant Organisation and Physiology

BIOL 270 Ecology

BIOL 273 New Zealand Biodiversity and Biosecurity

BIOL 309 Experimental Design and Data Analysis for Biologists

BIOL 354 Animal Eco-physiology

BIOL 374 Freshwater Ecosystems

BIOL 375 Marine Ecosystems

BIOL 377 Global Change and Biosecurity

BIOL 378 Ecology and Conservation Populations

BIOL 379 Sustaining Biodiversity on Private Land

Chemistry

CHEM 111 General Chemistry A or CHEM 113 Engineering Chemistry

CHEM 112 General Chemistry B or CHEM 114 General Chemistry C

CHEM 224 Analytical & Environmental Chemistry

CHEM 233 Introduction to Physical Chemistry

CHEM 282 Measurement and Analysis

CHEM 324 Analytical and Environmental Chemistry

CHEM 382 Instrumental Methods

Geography

GEOG 106 Global Environmental Change

GEOG 107 Sustainable Cities: Environmental and social perspective on global urbanisation

GEOG 108 Resources and Sustainability

GEOG 201 Environmental Processes: Principles and Applications

GEOG 205 Introduction to Geographical Information Systems

GEOG 206 Resource and Environmental Management

GEOG 211 Environmental Processes: Research Practice

GEOG 214 Applications in Physical Geography

GEOG 305 Environmental Hazards and Management

GEOG 309 Research Methods in Geography

GEOG 310 Weather Systems

GEOG 311 Coastal Processes

GEOG 312 Glacial Processes

GEOG 313 Remote Sensing Data for Geographic Analysis

GEOG 323 Spatial Data Analysis

GEOG 324 Customising GIS

GEOG 340 Field-Based Geomorphic Applications

Geology

GEOL 111 Planet Earth: An introduction to Geology

GEOL 112 Understanding Earth History

GEOL 113 Environmental Geohazards

GEOL 230 Field Studies A

GEOL 231 Field Studies B

GEOL 234 Stratigraphy and Palaeontology

GEOL 235 Earth Surface Processes

GEOL 236 Earth Dynamics and Plate Tectonics

GEOL 331 Principles of Basin Analysis

GEOL 333 Evolution of the Biosphere

GEOL 337 Economic Geology and Geophysical Exploration

GEOL 338 Engineering and Mining Geology

GEOL 351 Advanced Field Studies A
GEOL 352 Advanced Field Studies B

Forestry

FORE 111 Trees, Forests and the Environment
FORE 121 Forests and People
FORE 218 Forest Health and Dendrology
FORE 443 Biosecurity Risk Management
Note: This course must be selected as part of the 106 non-science points for the degree
FORE 445 Environmental Forestry
Note: This course must be selected as part of the 106 non-science points for the degree

Mathematics

MATH 171 Mathematical Modelling and Computation

Natural Resources - Environmental Engineering

ENNR 203 Environmental Quality and Ecosystems
Note: This course must be selected as part of the 106 non-science points for the degree
ENNR 305 Ecological Engineering
Note: This course must be selected as part of the 106 non-science points for the degree

Science, Maori & Indigenous Knowledge

SCIM 101 Science, Maori & Indigenous Knowledge

Statistics

STAT 111 Statistics 1 or
STAT 112 Statistics 1
STAT 222 Applied Statistics
STAT 224 Regression Modelling
STAT 312 Sampling Methods
STAT 315 Multivariate Statistical Methods
STAT 316 Applied Stochastic Modelling

The Degree of Bachelor of Speech and Language Therapy (BSLT)

See also General Course and Examination Regulations

1. Approval of Candidacy

Every candidate for the Degree of Bachelor of Speech and Language Therapy shall have been approved as a candidate by the Dean of Science.

2. Structure of the Degree

To qualify for the Degree, a candidate must follow a course of study as laid down in the Schedule to these Regulations consisting of not fewer than 4 EFTS (four years of full-time study) and be credited with:

(a) successful completion of courses in the Intermediate Examination;
(b) passes in the Examinations prescribed for the first, second and third professional years, and
(c) satisfactory performance in such other practical work as may be prescribed in order to complete a minimum of 300 hours of supervised clinical practice.

Note: Entry into the First Professional Examination is limited. Candidates must submit an enrolment application and a separate application form to the Head of the Department of Communication Disorders.

3. Admission to the Degree

i. All students planning to complete a Bachelor of Speech and Language Therapy (BSLT) must apply for admission to the degree programme prior to their first professional year. Applications for admission to the first professional year must be received at the Department of Communication Disorders on the prescribed form no later than 1 November in the year preceding desired entry. When the Intermediate Year is not completed at the University of Canterbury, it is the responsibility of the student to ensure that an up-to-date official academic record is sent to the Department of Communication Disorders as soon as it is available. Students must also Apply to Enrol.
ii. To be eligible for admission students must have completed Intermediate Year courses of at least 120 points. Selection is based on academic merit but in cases of equal merit preference will be given to people who have completed the recommended courses.
iii. Students who have not completed the intermediate year at the University of Canterbury and are admitted to the first professional year

are required to complete and pass CMDS161 concurrently with the first professional year programme.

iv. Admission to the degree is normally limited to 40 candidates. Up to four additional places may be designated for international students. *Note: See Limitation of Entry Regulations.*

v. Admission to CMDS 281 and CMDS 282, the practicum courses in the First Professional Year, will be granted only to students who have been formally admitted to the degree programme. Admission to other professional courses may be approved for students enrolled in other degrees at the discretion of the Head of Department.

vi. Admission to the degree is competitive and selection will be based upon grades in relevant course work (generally a B+ or better grade average), a statement of interest, and for those meeting the basic admission criteria (as indicated by the application material and academic transcripts) an interview with Departmental representatives. Relevant work or volunteer experience with individuals who have communication disorders may also be considered when entry decisions are made.

vii. The selection into the degree programme is by the Admissions Committee of the Department of Communication Disorders who have been delegated authority by the Academic Board. The Admissions Committee normally meets during the second week of December following the publication of grades.

viii. Exemption from the Intermediate Year may be granted to individuals with qualifications and, where appropriate, relevant work experience, approved by the Head of Department. Students admitted under this clause may be required to take additional qualifying courses.

4. Maintaining a Place in the Programme

Students admitted to the degree must pre-register for the practicum courses CMDS 343, CMDS 381, CMDS 382, CMDS 482 and CMDS 484 by 15 October of the year preceding the course. Students pre-register by completing the application form available through the Department of Communication Disorders. Students who do not pre-register may not be admitted except under exceptional circumstances and by the approval of the Dean of Science.

5. Each Professional Examination to be Passed as a Whole

A candidate shall be required to pass each Examination for the first, second and third professional years as a whole. In recommending a candidate for a pass in any of these Examinations, the Dean of Science shall take into consideration the candidate's performance in all of the subjects of the Examination.

In exceptional circumstances, a candidate who has failed to pass an Examination as a whole may be credited with some of the subjects of the Examination. The candidate may then present, in a subsequent year, the remaining subjects of that Examination together with such subjects of the succeeding Professional Year as the Academic Board may permit.

6. Approval of Course of Study

The personal course of study of every candidate shall be as approved by the Dean of Science. In special cases the Academic Board may approve a course of study which does not conform to these or other relevant Regulations. Any application under this Regulation must be submitted in writing to the Head of the Department of Communication Disorders.

7. BSLT with Honours

The Degree of Bachelor of Speech and Language Therapy may be awarded with or without Honours. A candidate who has fulfilled the requirements herein prescribed for the degree and whose work has been of a sufficiently high standard may be recommended by the Dean of Science for admission to the degree with First or Second Class Honours. The candidates obtaining Second Class Honours shall be listed in two divisions (Division 1 and Division 2).

Schedule to the Regulations for the Degree of Bachelor of Speech and Language Therapy

Note: SU2 indicates a November 2008 start date. See page 462 for a full list of semester indicators and course start dates. Prescriptions for these courses are provided in the Course Catalogue.

Intermediate Examination

Candidates for admission to the First Professional Year of the Bachelor of Speech and Language Therapy must have passed courses totalling at least 120 points at this university or the equivalent at another university. A candidate's course of study for the Intermediate Year will consist of a total of 126 points made up of, or equivalent to, seven 18 point courses. It is recommended that they include courses selected from the following list; however, students should check with the Department to discuss the options prior to enrolment.

Compulsory course

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
CMDS 161	Anatomy and Physiology of the Speech and Hearing Mechanism	18	S1	R: CMDS 261.

Strongly recommended courses

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
CMDS 111	Introduction to Developmental Communication Disorders	18	S1	R: SPTH 101
CMDS 112	Introduction to Acquired Communication Disorders	18	S2	R: SPTH 101
LING 101	The English Language	18	SU2 S1	R: ENGL 123, ENGL 112, LING 111

Other recommended courses

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
BIOL 116	Human Biology	18	S2	
EDUC 102	Child and Adolescent Development and Health	18	S1 S2	R: EDUC 121
HLTH 101	Introduction to Health Studies	18	S2	
MAOR 107	Te Ao Maori: Introduction to Maori Society	18	S1	
MAOR 108	Te Tiriti: An Introduction to the Treaty of Waitangi	18	SU1 S2	R: MAOR 113 (prior to 2006)
PSYC 105	Introductory Psychology - Brain, Behaviour and Cognition	18	S1	R: PSYC 103, PSYC 104
PSYC 106	Introductory Psychology - Social, Personality and Developmental	18	S2	R: PSYC 103, PSYC 104
SCIM 101	Science, Maori and Indigenous Knowledge	18	S2	

Notes:

1. *Students who have not completed CMDS 161 should refer to Regulation 3(iii).*
2. *Students who have completed the Intermediate Year without taking CMDS 111 and CMDS 112 and have been accepted into the first professional year will be required to undertake a related course of self-directed study during the summer prior to entry. Students who have not completed LING 101 or an equivalent course will also be required to undertake a related course of self-directed study over the summer prior to entry. It is the responsibility of the student to purchase reading materials as recommended by the Department of Communication Disorders. Students from other universities should contact the College of Science Student Advisor for information on equivalent and acceptable courses.*

First Professional Year

All courses are compulsory

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
CMDS 221	Linguistics and Language Acquisition	15	S1	
CMDS 222	Language Disorders in Children	15	S2	
CMDS 231	Acoustics and Phonetics	18	S1	
CMDS 232	Articulation and Phonology	15	S2	
CMDS 242	Introduction to Audiology	18	S1	
CMDS 262	Neurosciences	18	S2	
CMDS 281	Observation and Clinical Practice 1	9	S1	
CMDS 282	Clinical Practice 2	12	S2	

Notes:

1. *Entry to the First Professional Examination is limited to 40 students, and selection is based on fluency in English and suitability for training as a Speech and Language Therapist. Candidates must submit an enrolment application and a separate application form to the Head of the Department of Communication Disorders by 1 November.*
2. *Students who have not completed the intermediate year at the University of Canterbury and are admitted to the first professional year are required to complete and pass CMDS 161 concurrently with the first professional year programme.*

Second Professional Year

All courses are compulsory

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
CMDS 320	Spoken and Written Language Disorders in Education	12	S1	P: CMDS 222 (SPTH 222) and CMDS 232 (SPTH 232)
CMDS 322	Advanced Language Analysis	12	S2	
CMDS 343	Health Disciplines	12	S2	P: CMDS 261 (SPTH 261), CMDS 262 (SPTH 262), CMDS 281 (SPTH 281), CMDS 282 (SPTH 282)
CMDS 351	Fluency Disorders	12	S2	
CMDS 363	Motor Speech Disorders	12	S2	
CMDS 365	Dysphagia and Related Disorders - Diagnosis	12	S1	
CMDS 367	Voice Science and Disorders	12	S2	
CMDS 369	Aphasia and Related Disorders	12	S1	
CMDS 381	Clinical Practice 3	12	SU2 S1	
CMDS 382	Clinical Practice 4	12	SU2 S2	P: CMDS 281 (SPTH 281) and CMDS 282 (SPTH 282)

Third Professional Year

All courses are compulsory

Course Code	Course Title	Pts	09	P/C/R/RP/EQ
CMDS 410	Cultural and Ethical Issues	15	S1	
CMDS 442	Aural Rehabilitation	15	S2	
CMDS 461	Advanced Topics in Speech and Language Disorders	15	S1	
CMDS 462	Special Topic	15	S2	

CMDS 465	Dysphagia and Related Disorders: Management	15	S1	P: CMDS 365 (SPTH 365)
CMDS 482	Clinical Practice 5	15	SU2 S1	P: CMDS 381 (SPTH 381) and CMDS 382 (SPTH 382)
CMDS 484	Clinical Practice 6	30	SU2 S2	P: CMDS 381, CMDS 383.
CMDS 490	Research Project *Note: CMDS 490 is an optional course. Admission is subject to approval of the Head of Communication Disorders.*	30	W	P: Subject to approval of the Head of Department.

Certificate in Science (CertSc)

See also General Course and Examination Regulations.

The Programme for this Certificate

1. The Structure of the Programme

(a) Subjects: The Certificate in Science may be awarded for courses passed in the following subjects: Astronomy, Biochemistry, Biological Sciences, Chemistry, Computer Science, Economics, Electronics, Geography, Geology, Linguistics, Management Science, Mathematics, Philosophy, Physics, Psychology, and Statistics.

Note: The courses for the subjects and their prerequisites are given in the Schedule of Courses for the Degree of Bachelor of Science.

(b) Structure: To qualify for the Certificate in Science a candidate must pass courses totalling at least 72 points at the 100- and/or 200-level, in courses listed in the Schedule to the Bachelor of Science.

2. Full-time and Part-time Study and the Normal Time Limits

The Certificate may be studied full-time or part-time. Other than in exceptional circumstances approved by the Dean of Science, the maximum elapsed time from first enrolment will be three years.

Admission to the Programme

The Certificate in Science is an introductory qualification in Science for candidates wishing to: test their scholastic ability at university prior to proceeding to a Bachelor's degree programme; broaden or update their knowledge for employment reasons, or: engage in lifelong learning.

3. Standard of Entry and Approvals Required for Admission to the Programme

(a) Candidates must satisfy the admission requirements of the University.

(b) The programme of study must be approved by the Dean of Science.

4. Transfer of Earlier Credit

(a) With the approval of the Dean of Science, courses passed within the previous five years and listed in the Schedule to the Bachelor of Science, or courses deemed to be equivalent which have not already been credited to another qualification, may be credited to the Certificate, provided that they satisfy the other regulations of the Certificate. Up to 18 points from courses from another New Zealand university may be credited under this Regulation.

(b) A student who has abandoned a Bachelor of Science degree and has passed 72 points with a C average or better and wishes to graduate with a Certificate in Science, must have permission of the Dean of Science to do so.

Transfer to Bachelor of Science

5. With the approval of the Dean of Science:

(a) A candidate who has been awarded a Certificate within the previous five years may apply to credit Certificate courses towards an undergraduate science degree of the University, provided any such courses comply with the Regulations for the degree.

(b) A candidate who has not been awarded the Certificate may apply to transfer courses passed while enrolled for the Certificate to a Bachelor of Science degree.

Graduate Diploma in Science (GradDipSc)

See also General Course and Examination Regulations.

1. Subjects in Which the Diploma May be Awarded

The subjects for the Graduate Diploma in Science are: Astronomy, Biochemistry, Biological Sciences, Chemistry, Computer Science, Economics, Electronics, Ethics, Geography, Geology, Linguistics, Management Science, Mathematics, Philosophy, Physics, Psychology, and Statistics.

2. Qualifications Required to Enrol in the Diploma

(a) Every candidate for the Diploma in Science shall, before enrolling for the diploma, fulfil one of the following conditions:
   i. either qualify for a bachelor's degree;
   ii. or be admitted ad eundem statum as entitled to enrol for the Diploma in Science.

(b) Every candidate for the diploma shall have been approved as a candidate by the Dean of Science.

3. Structure of the Diploma

To qualify for the diploma a candidate shall pass prescribed courses which shall have been selected from the Schedule to the Bachelor of Science degree or from courses which the Academic Board has accepted as equivalent thereto. These courses must have a total value of not fewer than 120 points including not fewer than 84 points at 300-level *(subject to NZVCC CUAP approval due Dec 2008).*

4. Award of Diploma with Distinction

The Diploma in Science may be awarded with Distinction.

5. Exemption of Prerequisites

Normal prerequisites for any course may be exempted at the discretion of the Head of Department/School where the course is offered.

6. Part-time Enrolment

The diploma may be studied part-time.

7. Repeating of Courses

A candidate who has failed one or more courses is allowed to repeat those courses for credit.

The Degree of Bachelor of Science With Honours (BSc(Hons))

See also General Course and Examination Regulations.

1. BSc(Hons) Programme of Study

The BSc(Hons) at Canterbury, if studied full-time, is an accelerated one-year (12 months) degree course for the very able. It is taken following the completion of a three-year Bachelor's degree with very good grades. Those who complete the BSc(Hons) with high grades are normally eligible to proceed directly to a PhD.

Students who have been granted direct entry to 200-level undergraduate courses on the basis of high achievement in university entrance assessments may complete a BSc(Hons) after a total of three years study: two years undergraduate (Pre-BSc(Hons)) and the one-year (12 months) Honours. Also see Regulation 3(1) (c) below.

2. Subjects in which the Degree may be Awarded

The degree of BSc(Hons) may be awarded in the following subjects: Astronomy, Biochemistry, Biotechnology, Cellular and Molecular Biology, Chemistry, Computational and Applied Mathematics, Computer Science, Ecology, Economics, Engineering Geology, Environmental Science, Geography, Geology, Hazard and Disaster Management, Management Science, Mathematics, Mathematics and Philosophy, Mathematical Physics, Medical Physics, Microbiology, Physics, Plant Biology, Psychology, Statistics, Zoology. (*Please refer to Regulation 9 for Combined Honours.)*

3. Qualifications Required to Enrol in the Degree

Every candidate for the Degree of Bachelor of Science with Honours shall have either:

1. Either
   (a) qualified for the award of a Bachelor's degree; or
   (b) been admitted under the regulations for admission ad eundem statum as entitled to enrol for the Degree of Bachelor of Science with Honours; or

(c) gained direct entry into 200-level courses and have completed a minimum of 240 points, including 84 points at 300-level;

Note: Students who enter 200-level honours (Pre-BSc(Hons)) under this regulation transfer from an incomplete BSc and graduate BSc(Hons) only.

2. Either
   (a) satisfied the prerequisites for the subject to be undertaken in the BSc(Hons) as specified in the Schedule to these Regulations; or
   (b) completed a qualifying course prescribed by the Head of Department/School and approved by the Dean of Science of a standard equivalent to the pre-requisite courses;
3. demonstrated a high standard of achievement in previous course work, normally entailing having achieved at least a B+ average in the required courses for their undergraduate degree subject major.
4. been approved as a candidate for the degree in that subject by the Head of Department/School and the Dean of Science.

4. Course of Study Requirements

A candidate shall be assessed on the basis of such written examination, oral examinations, research project, and other work as prescribed for the subject offered. Candidates shall not concurrently enrol in additional undergraduate courses except with the permission of the Head of Department/School and Dean of Science. The programme of study shall satisfy the following conditions.

(a) Approval of programme of study
   i. Every programme of study for the degree shall contain the 400-level requirements specified by the Department in the Schedule to the Regulations for the Bachelor of Science with Honours. The programme of study must have a minimum of 144 points (1.2 EFTS), which includes a research project of at least 30 points. With the approval of the Head of Department/School, a candidate may replace courses up to 60 points with 400-level honours courses prescribed for other subjects.
   ii. In special cases a personal programme of study may be approved which does not conform to the course of study requirements. Applications for a special course of study shall be submitted in writing to the appropriate Head of Department/School and forwarded to the Dean of Science for approval. The application will be considered on its merits and in the light of special circumstances.

(b) Courses not to be repeated or failed: All courses must normally be passed at the first attempt. Where a candidate's performance or ability to study in one or more Honours courses has been impaired by illness or other circumstances, and an aegrotat consideration is not available, the Dean of Science may permit the candidate to repeat course work and/or undergo assessment one further time.

(c) Subjects passed elsewhere at 400-level: A candidate shall not present a subject for a BSc(Hons) degree which he or she has already passed at an equivalent level for another degree or diploma.

5. Full-time and Part-time Study and the Normal Time Limits

(a) When a candidate is enrolled full-time, the 400-level Honours courses must be completed within 12 months, except as permitted under Regulation 4(b).

(b) i. With the approval of the Head of Department/School and the Dean of Science, a candidate may be enrolled in Honours courses part-time.
   ii. A part-time candidate is one who, because of employment, health, family, or other reasons, is unable to study full-time. Part-time enrolment requires completion within 2 years (24 months), except as permitted under Regulation 4(b).

6. Class of Honours

The Degree of Bachelor of Science with Honours may be awarded with First Class Honours, with Second Class Honours, or with Third Class Honours; the list of candidates obtaining Second Class Honours shall be listed in two divisions (Division I and Division II). The class of honours awarded shall be determined on the performance of the candidate. *(Please refer to the General Course and Examination Regulations C: Work and Assessment, for further information.)*

7. Candidates Who Fail to Obtain Honours

When a candidate fails to obtain BSc(Hons), the Dean of Science, depending upon the level of achievement and on the advice of the Head of Department/School, may recommend the award of:

i. a Postgraduate Diploma in Science,
ii. a Masters of Science Part I,
iii. in the case of students who gained entry to BSc(Hons) under direct entry Regulation 3(1) (c), a

BSc, or

iv. course credit, Certificate of Proficiency (COP).

8. Withdrawal from the BSc(Hons) programme

A candidate who has commenced study for the degree and withdraws from all or part of the programme without completing course assessment requirements may not re-enrol without the permission of the Dean of Science.

9. Combined Honours Degree

A candidate may complete the degree of Bachelor of Science with Honours in two subjects (Combined Honours). Except in the case of the specific Combined Honours degrees whose requirements are stated in Schedule 2 of the BSc(Hons) regulations, a student wishing to complete a Combined BSc(Hons) degree must satisfy the course requirements for entry to 400-level honours in each subject, take 400-level courses totalling at least 60 points in each subject, complete one research project (worth at least 30 points) that normally reflects the combined nature of the degree, and take such additional courses as required by the Dean of Science.

10. Subjects and their Prerequisites for the Degree

The subjects for the degree and their prerequisites are given in the Schedule to these Regulations.

Schedule 1 to the Regulations for the Degree of Bachelor of Science with Honours

Astronomy

ASTR 424, ASTR 480 and six other courses, chosen as follows:

(i) at least one course from ASTR 421–423, 425–426

(ii) the remainder from PHYS 401–460, but no more than two courses from PHYS 441–460.

Not all courses may be offered in any one year. With the approval of the Head of Department, up to two courses may be replaced by appropriate courses from another subject. *Note: The choice of courses is subject to the approval of the Head of Department.*

P: (1) 84 points of 300-level ASTR or PHYS courses; and
(2) 28 points of 300-level MATH courses.

Biochemistry

Courses totalling at least 1.0 EFTS and a project (BCHM 480) as approved by the Programme Co-ordinator. Normally courses are selected from BCHM 401 (BIOL 436), BCHM 403 (BIOL 435), BCHM 405 (BIOL 434), BCHM 406 (BIOL 430), BCHM 410 (CHEM 405), BCHM 411 (CHEM 411), BCHM 412 (CHEM 412). Other suitable courses include: BCHM 407–409, BIOL 431–432, BIOL 451, BIOL 491, CHEM 402, CHEM 408.

P: (1) BCHM 201; and
(2) BCHM 202 or BIOL 230 or BIOL 231; and
(3) BCHM 205 or CHEM 222 or 232 or 262 or 272 or ENCH 241; and
(4) BCHM 301 (BIOL 331); and
(5) BCHM 302 (CHEM 325); and
(6) BCHM 381; and
(7) 14 additional points normally from CHEM 321, 322, 324, 362 or 381 or BIOL 313, BIOL 330, BIOL 351 or BIOL 352.

Biotechnology

Four courses and a research project (BIOT 480). The courses are BIOL 491, plus at least two others selected from BIOL 430–435, BIOL 453, BIOL 492, BIOL 493. The fourth course should be selected with the approval of the School of Biological Sciences Fourth Year Coordinator.

P: (1) BIOL 252; and
(2) BIOL 352; and
(3) one course selected from BIOL 313, BIOL 330, BIOL 331.

Note: Students will normally be expected to take BIOL 309.

Cellular and Molecular Biology

Four courses and a research project (CEMB 480). At least three courses are to be selected from BIOL 430–436, BIOL 491, BIOL 493. The fourth course should be selected with the approval of the School of Biological Sciences Fourth Year Coordinator.

P: Three courses from BCHM 301, BIOL 313, BIOL 330, BIOL 331, BIOL 351, BIOL 352.

Note: Students will normally be expected to take BIOL 309.

Chemistry

CHEM 480 and eight courses chosen from CHEM 401-416. Note: With the approval of the Head of Department, up to two of the courses CHEM 401-416 may be replaced by Honours 400-level courses with a total EFTS value of at least the same from another subject.

P: (1) At least 66 points from CHEM 221-223 and 231-273; and

(2) CHEM 281 and 282; and
(3) at least 36 points from courses in Mathematics, Statistics or ENGR 102; and
(4) CHEM 333, 361, 362, 373, 381 and 382.

Note: With the approval of the Head of Department, 28 points from CHEM 333 and CHEM 361-373 may be replaced by CHEM 324 or CHEM 325.

Computational and Applied Mathematics

CAMS 449 Research Project, and eight other approved courses chosen from MATH 401-490 (other than MATH 449), MSCI 451-462 or STAT 401-490 (other than STAT 449). With the approval of the Programme Co-ordinator, candidates may substitute one or two courses from other subjects in an applications area.

P: (1) 44 points from MATH 251, 252, 254, 261, 262, 264 (Note: It is recommended that candidates also include one of MATH 171, 271, or 282); and
(2) MATH 381; and
(3) 70 points from MATH 323, 346, 352, 353, 361, 362, 363, 371; and
(4) 44 points from other approved courses at 200-level or above (normally from CHEM, COSC, MATH, MSCI, PHYS, STAT or ENGINEERING courses).

Computer Science

COSC 460 and eight half-courses to be selected (with the approval of the Head of Department) from COSC 401-439.

Note: Not all half-courses may be available in one year.

P: (1) 66 points from 200-level COSC; and
(2) a total of 36 points from courses in Mathematics and Statistics; and
(3) 84 points from 300-level COSC.

Ecology

Four courses and a research project (ECOL 480). The courses are to be selected, with the approval of the School of Biological Sciences Fourth Year Coordinator, from BIOL 421, BIOL 453, BIOL 470–479, BIOL 490, ENVR 410, ENVR 411, FORE 616.

P: (1) 56 points from BIOL 370–379; and
(2) BIOL 309 or BIOL 301 or equivalent (eg, GEOG 309 or PSYC 206).

Economics

ECON 680 and eight courses or their equivalent from ECON 601-679. Enrolment in any combination of courses is subject to the approval of the Head of Department. Some second semester courses may have a first semester course as a prerequisite. ECON 680 is a whole year course. Candidates can normally attempt each course on offer only once. All full-time candidates shall normally take four courses and ECON 680, in each semester.

P: (1) ECON 201, and 204 or 230 or 231; and
(2) ECON 211 or 213, or STAT 212 and 214; and
(3) MATH 104 or 105; or (106 or 108) and (107 or 109); and either
(4) ECON 351, 353 and 355 (before the year 2001), or
(5) ECON 321, 322, 323, 324, and 325.

Engineering Geology

A total of seven courses plus the Research Project (ENGE 490). Courses must include ENGE 471, ENGE 472, ENGE 485, ENGE 486, at least one course chosen from GEOL 473-489, and at least one course chosen from ENGE 476-482, with the approval of the Head of the Department of Geological Sciences.

Notes:

1. *Practical and fieldwork may be required as part of any ENGE 471-486 courses.*
2. *With the approval of the Head of the Department of Geological Sciences, one of the courses ENGE 471-486 may be replaced by one other ENGE course.*
3. *With the approval of the Head of the Department of Geological Sciences, up to two courses from GEOL 473-489 may replace up to two of the optional courses, or one full year course from another subject may replace two of the optional courses.*
4. *Not all courses may be offered in any one year.*

P: (1) 18 points of MATH 100-level courses; and
(2) GEOL 230 and GEOL 231 (or equivalent fieldwork); and
(3) at least 44 points from GEOL 221-226, 232-238; and
(4) normally at least 36 points from ASTR, BIOL, CHEM, COSC, GEOG, PHYS, or STAT courses; and
(5) GEOL 351 and GEOL 352 (or equivalent fieldwork); and
(6) 56 points from GEOL 300-level courses.

Note: An additional 28 points at GEOL 300-level is strongly advisable.

Environmental Science

ENVR 410, ENVR 411, a project ENVR 480, and courses totalling not less than 0.75 course weighting selected from relevant courses offered by the Environmental Science home departments/schools of Forestry (FORE), Geography (GEOG), Geological Sciences (GEOL and ENGE), and Biological Sciences (BIOL), and from relevant courses, as approved by the Co-ordinator, that are offered by Antarctic Studies (ANTA), Biochemistry (BCHM), Chemistry (CHEM), Chemical

and Process Engineering (ENCH), Civil Engineering (ENCI), and Mathematics and Statistics (MATH and STAT). The selection should form a coherent thematic programme, and must be discussed with the Co-ordinator. Note that normally all individual course prerequisites must be satisfied.

P: Students who have fulfilled the requirements for Honours 200 and 300-level in appropriate courses in Forestry, Geography, Geological Sciences, Biological Science, or other science and engineering courses, including a total of 84 points at 300-level, and as approved by the Co-ordinator, may enrol for Environmental Science Honours 400-level.

Geography

A Research Project (GEOG 420) and four semester courses chosen from GEOG 401-419, with the approval of the Head of Department. Not all courses will necessarily be offered in any one year.

P: Students will normally be expected to:
(1) either have passed 84 points in 300-level courses approved by the Head of Department, including GEOG 309 and at least 28 other points in 300-level Geography courses; or
(2) to have completed 112 points at 300-level of which 56 are in Geography and 56 are in subjects approved by the Head of Department.

Geology

Seven courses chosen from GEOL 471-489 and a research project (GEOL 490), with the approval of the Head of the Department of Geological Sciences.

Notes:

1. *With the approval of the Head of the Department of Geological Sciences, up to three courses from ENGE 476-482 (Engineering Geology) may replace up to three of the optional courses, or one full year course from another subject may replace two of the optional courses.*
2. *Practical and fieldwork may be required as part of any GEOL 471-489 courses.*
3. *Not all courses may be offered in any one year.*

P: (1) GEOL 230 and GEOL 231 (or equivalent fieldwork); and
(2) at least 44 points from GEOL 221-226, 232-238; and
(3) normally at least 54 points from ASTR, BIOL, CHEM, COSC, GEOG, MATH, PHYS, or STAT courses; and
(4) GEOL 351 and GEOL 352 (or equivalent fieldwork); and
(5) 56 points from other GEOL 300-level courses.

Note: An additional 28 points at GEOL 300-level is strongly advisable.

Hazard and Disaster Management

HAZM 401, HAZM 403, ENCI 601, ENCI 462 (or equivalent), a research project (HAZM 490) and additional courses chosen to complete a coherent programme in the area of hazard and disaster management with a total course weight of not less than 1.2 EFTS with the approval of the Programme Director, Department of Geological Sciences.

P: (1) 18 points of 100-level STAT or equivalent; and
(2) normally at least 84 points at 300-level from the Schedule to the BSc Regulations as approved by the Programme Director.

Management Science

MSCI 680 and a further 120 points (or equivalent) from MSCI 601-679 with approval of the Head of the Department of Management. Up to 30 points (or equivalent) may be replaced by other graduate courses with the approval of the Head of Department of Management.

P: At least 84 points of 300-level courses, normally including:
(1) MSCI 301 or (MSCI 315 and 316)
(2) MSCI 302 or (MSCI 310 and 311)
(3) 28 points at 300-level in MSCI, MATH, STAT or COSC as approved by the Head of Department of Management.

Mathematics

MATH 449 and eight courses chosen from MATH 401-490 and STAT 401-490 (other than MATH 449 or STAT 449). Normally one of the eight courses must be MATH 443 if the student has not been credited with MATH 343 previously. Normally at least six courses will be chosen from the MATH course list.

P: (1) 44 points from MATH 210-299; and
(2) 56 points from MATH 310-399; and
(3) an additional 28 points from MATH 310-399 or STAT 310-399 or other approved courses.

Mathematics and Philosophy

MPHI 450 and seven courses chosen from MATH 401–490 (other than MATH 449) and PHIL 431–470. Normally one of the seven courses must be MATH 443 if the student has not been credited with MATH 343 previously. Normally two courses will be chosen from the PHIL course list and five courses from the MATH course list.

P: (1) 44 points from MATH 210–299; and
(2) 84 points from MATH 310–399; and

(3) 44 points from PHIL 208, 209, 233, HAPS 201, 202, MATH 208, 209; and
(4) 28 points from PHIL 301–399, MATH 308, 309.

Mathematical Physics

MAPH 480 and seven courses chosen from PHYS 401–460 and MATH 401–490 (other than MATH 449). Normally, at least four courses must be chosen from the PHYS course list and at least two from the MATH course list. The choice of courses is subject to the approval of the Co-ordinator, Mathematical Physics.

P: (1) PHYS 221–224, 281, 282; and
(2) 44 points from MATH 251–269; and
(3) 112 points PHYS 300-level and MATH 300-level courses chosen with the approval of the Co-ordinator, Mathematical Physics.

Note: Students will normally be expected to take: PHYS 310; at least 42 points from PHYS 311, 312, 314, 316, 322, 326; and 56 points from MATH 342, 343, 352, 353, 361, 363, 371.

Medical Physics

MDPH 480, six courses from MDPH 401-410 and PHYS 407 and one course from PHYS 410-460. With the approval of the Programme Director, one or two of the courses may be replaced by appropriate courses from another subject.

P: 84 points at 300-level, approved by the Head of Department.

Microbiology

Four courses and a research project (MBIO 480). The courses are BIOL 492 and BIOL 493 plus a further two courses selected with the approval of the School of Biological Sciences Fourth Year Coordinator.

P: (1) BIOL 313; and
(2) One course selected from BIOL 331, BCHM 301, BIOL 330, BIOL 352.

Note: Students will normally be expected to take BIOL 309.

Physics

PHYS 480 and seven courses chosen from PHYS 401–460. At least five courses from PHYS 401–440. Not all courses may be available in any one year.

With the approval of the Head of Department, up to two of the courses may be replaced by appropriate courses from another subject. *Note: The choice of courses is subject to the approval of the Head of Department.*

P: (1) 84 points of 300-level PHYS or ASTR courses; and
(2) 28 points of 300-level MATH courses.

Plant Biology

Four courses and a research project (PBIO 480). The courses are to be selected, with the approval of the School of Biological Sciences Fourth Year Coordinator, from BIOL 421, BIOL 430–432, BIOL 434–436, BIOL 453, BIOL 471–474, BIOL 476, BIOL 478, BIOL 479, BIOL 490–493.

P: 84 points from 300-level BIOL courses.

Note: Students will normally be expected to take BIOL 309.

Psychology

PSYC 470 (a project) and four whole year courses (or their semester course equivalent) totalling at least 1.00 EFTS from PSYC 401-469 and PSYC 471–475. Candidates enrolled in PSYC 470 must present a report on the project by 31 October of the year in which the candidate enrols for the project.

P: Six courses from 200-level PSYC and 300-level PSYC courses, including:
(1) PSYC 206 and
(2) one from PSYC 207-211, and
(3) PSYC 344, and
(4) two 300-level PSYC courses, and
(5) one further 200-level PSYC course or 300-level PSYC course.

Note: Students should consult the Psychology Department Postgraduate Handbook and the Psychology Graduate Studies Co-ordinator for full information on the courses offered in any one year.

Statistics

STAT 449 and eight courses chosen from STAT 401-490 and MATH 401-490 (other than STAT 449 or MATH 449). One of the eight courses must be STAT 464 if the student has not been credited with STAT 214 previously. Normally at least six courses will be chosen from the STAT course list.

P: (1) MATH 109 or MATH 199; and
(2) 33 points from STAT 210-299; and
(3) 56 points from STAT 310-399; and
(4) an additional 28 points from MATH 310-399 or STAT 310-399 or other approved courses.

Zoology

Four courses and a research project (ZOOL 480). The courses are to be selected, with the approval of the School of Biological Sciences Fourth Year Coordinator, from BIOL 421, BIOL 430–432, BIO434–436, BIOL 451, BIOL 470–474, BIOL 476, BIOL 479, BIOL 490.

P: 84 points from 300-level BIOL courses.
Note: Students will normally be expected to take BIOL 309.

Schedule 2 to the Regulations for the Degree of Bachelor of Science with Honours

Economics and Mathematics

Either:

(1) ECON 680 plus eight additional courses in 600-level ECON or 400-level MATH, including at least three courses in ECON and at least four courses in MATH; or

(2) MATH 449 plus eight additional courses in 600-level ECON or 400-level MATH, including at least four courses in ECON and at least three courses in MATH.

P: (1) ECON 201 and 230; and
(2) STAT 212 and STAT 214; and
(3) 66 points from MATH 210–299, normally including MATH 254, 264, 243; and
(4) 56 points from ECON 321, 322, 323, 324, 325, 326, 331, 332; and
(5) 56 points from MATH 310–399 or STAT 310–399, including at least 28 points from MATH 310–399 and MATH 343.

Mathematics and Statistics

(1) MATH 449 or STAT 449

(2) Eight courses chosen from MATH 401-490 and STAT 401-490 (other than MATH 449 or STAT 449). Normally one of the eight courses must be MATH 443 if the student has not been credited with MATH 343 previously, and one of the eight courses must be STAT 464 if the student has not been credited with STAT 214 previously. At least three courses will be chosen from the MATH course list and at least three courses will be chosen from the STAT course list.

P: (1) 44 points from MATH 210-299; and
(2) 33 points from STAT 210-299; and
(3) 98 points from MATH 310-399 and STAT 310-399, including at least 42 points from each of the MATH and STAT course lists.

The Degree of Master of Antarctic Studies (MAntaStud)

See also General Course and Examination Regulations.

1. Qualifications Required to Enrol in the Degree

Every candidate for the degree of Master of Antarctic Studies, before enrolling for the degree, shall have:

(a) i. qualified for the Postgraduate Diploma in Antarctic Studies, or an equivalent postgraduate qualification, normally with a B average; or
ii. qualified for a degree in a New Zealand university which is of relevance to Antarctic Studies and the proposed course of study; and
iii. presented evidence of ability for advanced level academic study; or
iv. been admitted ad eundem statum to enrol for the Master of Antarctic Studies.

(b) Every candidate for the degree shall have been approved as a candidate by the Dean of Science.

2. Award of the Degree With or Without an Endorsed Option; Award of the Degree with Honours

The degree of Master of Antarctic Studies maybe awarded with Honours. There shall be two classes of Honours: First Class Honours and Second Class Honours. Second Class Honours shall be awarded in two divisions: Division I and Division II.

3. Structure of the Degree

The programme for the degree of Master of Antarctic Studies consists of Part I and Part II.

(a) A candidate admitted under (ii.) and (iii.), or (iv.) of Regulation 1(a) shall offer both Parts.

(b) A candidate admitted under (i.) of Regulation 1(a) for a Master of Antarctic Studies shall offer Part II only.

(c) All students admitted to the Master of Antarctic Studies will complete a coherent programme of study approved by the Chair of the Board of Studies: Antarctic Studies.

4. Full-time/Part-time Enrolment

A candidate may be enrolled for the degree of Master of Antarctic Studies either on a full-time or part-time basis. A part-time candidate is one who, because of employment, health, family or other reasons, is unable to devote his or her full-time to study. Part-time enrolment requires the approval of the Dean of Science.

5. Duration of the Course

A candidate offering both Part I and Part II shall normally follow a course of study for not less than two years of full-time study, and Part I will be completed in not less than one year and no more than two years of full-time study.

The time limits for the thesis or research project will be determined by the Dean of Science on the recommendation of the Chair of the Board of Studies: Antarctic Studies, but will normally be no less than one year and no more than two years of full-time study. A part-time candidate shall be required to follow a programme of study with time limits determined by the Dean of Science on the recommendation of the Chair of the Board of Studies: Antarctic Studies.

6. Requirements for Part I

(a) The requirements for Part I shall be ANTA 401 and ANTA 402 and appropriate 400-level courses approved by the Chair of the Board of Studies: Antarctic Studies and listed in the University of Canterbury or other University Calendars relevant to a coherent programme of study for each student. The total course weight of the Part I programme will be at least 1.0 EFTS.

(b) Candidates must satisfy the Board of Studies: Antarctic Studies, that they have the necessary prerequisite knowledge to undertake the proposed courses from the Schedule.

(c) Re-enrolment in Part I to repeat failed courses or offer any other course in its place will only be permitted in exceptional circumstances and requires a recommendation from the Chair of the Board of Studies: Antarctic Studies and the permission of the Dean of Science.

(d) A candidate who fails any courses offered for Part I and is not successful under Regulation 6(c), shall not be awarded a pass in Part I and shall not be permitted to proceed to Part II, but will be awarded a Certificate of Proficiency for each course passed.

(e) A candidate who passes all of the courses for Part I, but who does not attain a B grade average or better shall not be permitted to proceed to Part II (unless special permission has been granted by the Dean of Science), but may apply for the award of the Postgraduate Diploma in Antarctic Studies. The candidate may also apply to the Chair of the Board of Studies: Antarctic Studies to repeat relevant courses to obtain a B grade average.

(f) A candidate who passes all the courses for Part I and is eligible to proceed to Part II, but who chooses not to do so, may apply for the award of the Postgraduate Diploma in Antarctic Studies.

Note: Course work shall consist of approved courses at 400-level or higher from the University of Canterbury or another tertiary education institution in New Zealand, as approved by the Board of Studies: Antarctic Studies.

7. Requirements for Part II

Part II shall consist of the preparation of a thesis to the value of 1.0 EFTS embodying the results of an investigation in a subject area approved by the Board of Studies: Antarctic Studies. The requirements of the General Course and Examination Regulations, Part L, shall be met.

Schedule to the Regulations for the Degree of Master of Antarctic Studies

Part I

ANTA 401 Antarctic Global Connections, compulsory (0.3750 EFTS)

ANTA 402 Antarctic Legal System, compulsory (0.1250 EFTS)

Other 400-level courses relevant to a coherent programme of study. A total course weighting of at least 1.0 EFTS must be completed.

Note: Courses other than those on the above Schedule will be approved by the Board of Studies: Antarctic Studies, for inclusion in a candidate's course of study.

Part II

ANTA 690 Antarctic Studies Masters Thesis (1.000 EFTS)

The Degree of Master of Audiology (MAud)

See also General Course and Examination Regulations.

1. Qualifications Required to Enrol in the Degree

(a) Either:
   i. qualified for the award of the Degree of Bachelor of Speech and Language Therapy; or
   ii. qualified for the award of the Degree of Bachelor of Science, the Degree of Bachelor of Arts, the Degree of Bachelor of Education, the Degree of Bachelor of Engineering – Electrical, or the Degree of Bachelor of Engineering – Mechanical, with relevant undergraduate course work, as approved by the Head of the Department of Communication Disorders; or
   iii. been admitted ad eundem statum as entitled to enrol for the degree of Master of Audiology; and

(b) been approved as a candidate for the degree by the Dean of Science.

Note: Entry into Year 1 of the Master of Audiology is limited. Candidates must submit an enrolment application and a separate application form to the Head of the Department of Communication Disorders.

2. Full-time and Part-time Study

A candidate shall normally be enrolled as a full-time candidate. A full-time candidate is one who throughout the calendar year regards study and research for the Master of Audiology as a full-time occupation.

With the approval of the Dean of Science, a candidate may be enrolled as a part-time candidate. A part-time candidate is one who because of employment, health, family or other reasons is unable to devote his or her full-time to study.

Total course weighting for the MAud is 2.00 EFTS for students with a BSLT and 2.21 EFTS for those without a BSLT degree.

3. Structure of the Degree

A candidate for the Degree of Master of Audiology shall:

(a) enrol in and pursue either full-time for 2 years or part-time for no less than 3 years and no more than 4 years a programme of study approved by the Dean of Science;

(b) during the programme of study, pass the required courses as specified in the Schedule to these regulations if enrolled as a full-time student or, if enrolled as a part-time student, pass all courses listed in the Schedule in a programme of study over three years, as determined by the Dean of Science;

(c) during the programme of study, complete a thesis and satisfy the examiners therewith.

4. Repeating of courses

A candidate who fails any of the courses, or who otherwise does not attain a standard satisfactory to the Dean of Science shall not be permitted to repeat any of those courses, or offer any other course in their place.

5. Supervision of Theses

(a) A candidate shall, before commencing the research to be described in the thesis, secure the approval of the Head of the Department concerned for the topic chosen and for the proposed research programme.

(b) Supervisors shall be appointed in accordance with the General Course and Examination Regulations, Part L.

(c) The candidate shall meet with and report to the senior supervisor as has been determined under the agreement signed on registration of the research proposal. The candidate shall normally work on the University campus, and laboratory work shall normally be carried out within the University institution. The Head of Department may give approval for work to be carried out at another institution in New Zealand for a period not exceeding one month, but permission of the Dean of Postgraduate Studies is required if the period exceeds one month, or if any of the work, including field work, is to be carried out overseas.

6. Examination of Theses

(a) When a thesis is examined, there shall be two examiners, as specified in the General Course and Examination Regulations, Part L.

(b) A candidate must indicate in the thesis any part which he or she has previously used for another degree.

(c) The examiners may require the candidate to undergo an oral examination on the subject of the thesis or on related subjects.

(d) If the thesis at its first presentation is unsatisfactory, the Dean of Science may, on the recommendation of the examiners, permit the candidate to revise the thesis and re-submit it by a specified date.

(e) If the examiners' final recommendation is that the thesis be awarded a failing grade, the degree of Master of Audiology shall not be awarded.

7. MAud with Distinction

In cases of exceptional merit candidates may, on the recommendation of the examiners, have the degree awarded with Distinction. In recommending a candidate for admission to the degree and in recommending Distinction the examiners will take into consideration the combined results of the thesis, clinical practice, and other courses taken.

Note: The award of Distinction normally requires a grade point average of 7.00 or greater.

Schedule to the Regulations for the Degree of Master of Audiology

Year 1

First Semester

CMDS 629 Clinical Audiology *.050 EFTS*

CMDS 631 Biological Bases of Auditory Function *0.0900 EFTS*

CMDS 632 Acoustics and Psychoacoustics *0.0900 EFTS*

CMDS 633 Amplification *0.0900 EFTS*

Second Semester

Co-req Aural Rehabilitation (CMDS 442 in BSLT*) *0.0900 EFTS*

CMDS 634 Paediatric Audiology *0.0900 EFTS*

CMDS 635 Electrophysiological Techniques *0.0900 EFTS*

CMDS 636 Advanced Audiological Assessment *0.0900 EFTS*

CMDS 637 Cochlear Implants *0.0500 EFTS*

Whole Year

CMDS 604 Research Design *0.0900 EFTS*

CMDS 610 Clinical Observation and Practice I *0.1833 EFTS*

Summer

CMDS 650 Externship *0.0900 EFTS*

Year 1 Total EFTS BSLT Background 1.00 EFTS

Year 1 Total EFTS non-BSLT Background 1.09 EFTS

**Course offered as part of BSLT degree. Students enrolled in the MAud programme without having a BSLT background are required to take these courses.*

The Thesis

CMDS 690** *0.7500 EFTS*

***A Year 1 grade average of B- is normally required for entry to the thesis. Thesis must be completed within 12 months (full-time) and may be started in either the summer at the end of Year 1, or the first semester of Year 2, finishing in either the second semester of Year 2 or the summer of Year 2, respectively. Note: Part-time enrolment in the thesis (0.6500 EFTS) is available on approval.*

Year 2

First Semester

CMDS 638 Medical Audiology *0.0410 EFTS*

CMDS 642 Auditory Processing Disorder *0.0410 EFTS*

Second Semester

Co-req Language Disorders in Children (CMDS 222 in BSLT*) *0.0800 EFTS*

CMDS 639 Vestibular Disorders *0.0410 EFTS*

Whole Year

CMDS 620 Clinical Observation and Practice II *0.0833 EFTS*

Summer

CMDS 680 Clinical Practice III *0.0410 EFTS*

Year 2 Total EFTS BSLT Background (including the thesis) 1.0000 EFTS

Year 2 Total EFTS non-BSLT Background (including the thesis) 1.0400 EFTS

**Course offered as part of BSLT degree. Students enrolled in the MAud programme without having a BSLT are required to take these courses.*

The Degree of Master of Science (MSc)

See also General Course and Examination Regulations.

1. Subjects in Which the Degree May be Awarded; Award of Degree with Distinction or Merit, or Honours

(a) The subjects for the Degree of Master of Science are those listed in Schedule 1 to these Regulations.

(b) The Degree of Master of Science may be awarded with Distinction or Merit provided that the additional requirements of Regulation 14 are met.

(c) The Degree of Master of Science may be awarded with Honours provided that the additional requirements of Regulation 15 are met.

2. Qualifications Required to Enrol in the Degree

(a) Every candidate for the Degree of Master of Science shall, before enrolling for the degree, fulfil one of the following conditions: either

i. qualify for the award of the ordinary Degree of Bachelor of Science; or

ii. qualify for a bachelor's degree and if necessary pass a qualifying programme consisting of such courses from the schedule to the regulations for the Degree of Bachelor of Science as may be required by the Dean of Postgraduate Studies; or

iii. qualify for the award of the Degree of Bachelor of Science with Honours; or

iv. qualify for the award of a Postgraduate Diploma in Science (Note: Candidates who qualify for a Canterbury PGDipSc are subject to the provisions of PGDipSc Regulation 5); or

v. qualify for the award of a Postgraduate Diploma in Engineering Geology (Note: Candidates who qualify for the Canterbury Postgraduate Diploma in Engineering Geology are subject to the provisions of the PGDipEngGeol Regulation 5); or

vi. qualify for the award of a Postgraduate Diploma in Science (Hazard and Disaster Management) (Note: Candidates who qualify for the Canterbury Postgraduate Diploma in Science (Hazard and Disaster Management) are subject to the provisions of the PGDipSc Regulation 5); or

vii. be admitted ad eundem statum as entitled to enrol for the degree of Master of Science; or

viii. for the Master of Science in Biotechnology only, be admitted by any other of the conditions of Regulation 2(a) or qualify for the award of Bachelor of Engineering, with or without Honours.

(b) Every candidate for the degree shall have been approved as a candidate by the Dean of Science.

Note: Relevance and standard of undergraduate studies will be criteria for approval.

3. Structure of the Degree

The programme for the Degree of Master of Science consists of Part I and Part II:

(a) A candidate admitted under (i) or (ii) of Regulation 2(a) shall offer both Parts.

(b) A candidate admitted under (iii), (iv) or (v) of Regulation 2(a) in the same subject as for the BSc(Hons) degree, PGDipSc or PGDipEngGeol shall offer Part II only.

(c) In the case of a candidate admitted under (vi), or under (iii), (iv), or (v) to a different subject, the Dean of Science shall determine whether the candidate shall offer both Parts I and II, or Part II only, and in such cases may vary the form of the Part I requirements.

4. Concurrent or Sequential Enrolment in Parts I and II

A candidate who offers both Parts I and II may be enrolled in these sequentially or concurrently. Sequential enrolment means Part I is completed before the candidate starts Part II.

Concurrent enrolment means that Parts I and II are taken concurrently with the proviso that the requirements of Part I must be completed within two years if the candidate is a full-time student, or within such time as is determined by the Dean of Postgraduate Studies, under regulation 6, if the candidate is a part-time student.

The total course-weight of the programme in each of the first two years of concurrent enrolment will normally be at least 1.0 EFTS for a full-time student, though this may be reduced to a minimum of 0.95 EFTS if the programme contains some courses from another subject, as permitted under Regulation 7(c).

Candidates who wish to enrol concurrently in Parts I and II must have at least a B+ grade average in the prerequisites listed in Schedule 1, and concurrent enrolment also requires the approval of the Head of Department/School.

5. Part-time Enrolment

Enrolment for the Degree of Master of Science shall be either on a full-time or a part-time basis. A part-time candidate is one who, because of employment, health, family or other reasons, is unable to devote his or her full-time to study; part-time enrolment requires the approval of the Dean of Science.

6. Duration of the Degree

For a full-time candidate the duration of study and other limits are as listed in Schedule 2 to these Regulations. A candidate whose application to enrol for this degree on a part-time basis is accepted shall be required to follow a programme of study with time limits determined by the Dean of Science following recommendations by the Head of Department/School.

Note: The time limits for a candidate studying part-time shall normally be twice those for the equivalent full-time course.

7. Requirements for Part I

(a) A candidate offering Part I shall have met the prerequisites in Schedule 1 to these Regulations, or their equivalents.

The requirements for Part I shall be as listed in Schedule 2 and as laid down in the Prescriptions for the subject. A candidate who fails any of the courses offered for Part I shall not be permitted to repeat those courses, or to offer any other course(s) in their place (but refer to regulation 7b).

If a candidate has failed no more than 0.25 EFTS of the Part I programme, the Dean of Science, on the advice of the Head of Department/School concerned, may recommend a pass in Part I as a whole. With the recommendation of the Head of the Department/School, and the permission of the Dean of Science, such a candidate may offer Part II for examination if he or she has a grade average (including any failed courses) of at least B- (some departments require a higher grade average). If a candidate qualifies for a pass in Part I but is not permitted to offer Part II for examination, or if such a candidate chooses not to offer Part II for examination, he or she may apply for the award of the Postgraduate Diploma in Science or the Postgraduate Diploma in Engineering Geology, whichever is appropriate.

A candidate who fails more than 0.25 EFTS of the Part I programme shall not be awarded a pass in Part I as a whole and shall not be permitted to offer Part II for examination, but he or she will be awarded a Certificate of Proficiency for each course passed.

A candidate who passes all the courses for Part 1, but who does not attain a grade average of at least C+ (some departments/school require a higher grade average), or who otherwise does not attain a standard satisfactory to the Dean of Science in the Part I requirements as a whole, shall not be permitted to repeat any part of the Part I programme, or to offer Part II for examination, but may apply for the award of the Postgraduate Diploma in Science or the Postgraduate Diploma in Engineering Geology, whichever is appropriate.

Notwithstanding anything else in Regulation 7(a), before offering Part II for examination, a candidate must pass Part I to the standard required by the Head of Department/School, which standard may be specified in Schedule 1 to these regulations.

(b) Notwithstanding Regulation 7(a), a candidate offering Part I who qualifies for consideration for an aegrotat award in some or all of the courses (see General Course and Examination Regulation H) may elect either (i) to accept for the courses affected the aegrotat grades recommended by the examiners under that Regulation; or (ii) to sit a further examination and/or present again all or some of the assessed work if that examination or assessed work formed the basis of the aegrotat application. The time or times for representation of work or further examination will be set by the Dean of Science, after consulting the Head of Department/School.

(c) The total course-weight of the Part I programme, if all courses are offered in one subject only, will be at least 1.0 EFTS. A candidate may, with the approval of the Heads of Department/School concerned, replace up to 0.5 EFTS of the Part I programme prescribed for the subject offered by courses prescribed for another subject at an equivalent level for an Honours degree or a Masters degree, and in such a situation the total course-weight of the Part I programme must be at least 0.95 EFTS.

8. Thesis Requirement

Except as provided in Regulation 9, Part II shall consist of the preparation of a thesis embodying the results of an investigation in some branch of one of the subjects listed in Schedule 1 to these regulations.

9. MSc in Applied Psychology

A candidate in Applied Psychology shall, instead of presenting a thesis, satisfy the Part II requirement by passing in one year a course as specified in Schedule 1 to the MSc Regulations, and presenting a dissertation by a prescribed date.

10. Time Limits for Presentation of Theses

Where a thesis is required, the maximum time limits for its presentation are specified in Schedule 2 to these regulations. The maximum time limit for a part-time candidate will be determined by the Dean of Science, as noted in Regulation 6. The minimum time limit is that required by the candidate to complete the equivalent of 1.0 EFTS (typically this would be close to one year full-time study).

11. Extension of Time for Presentation of Theses

In special circumstances the Dean of Science may approve an extension of the time specified in Schedule 2 to these regulations.

12. Supervision of Theses

(a) Where a thesis is required, the requirements of the General Course and Examination Regulations, Part L, shall be met.

(b) A candidate shall, before commencing the research to be described in the thesis, secure the approval of the Head of the Department/School concerned for the topic chosen and for the proposed research programme.

(c) Supervisors shall be appointed in accordance with the General Course and Examination Regulations, Part L.

(d) The candidate shall work under the direction of the supervisors and shall meet with and report to the senior supervisor as has been determined under the agreement signed on registration of the research proposal. Except for field work in New Zealand under the direction of the senior supervisor, the candidate shall normally work on the University campus, and laboratory work shall normally be carried out within the University institution. A Head of Department/School may give approval for work to be carried out at another institution in New Zealand for a period not exceeding one month, but permission of the Dean of Postgraduate Studies is required if the period exceeds one month, or if any of the work, including field work, is to be carried out overseas.

13. Examination of Theses

(a) When a thesis is examined, there shall be two examiners, as specified in the General Course and Examination Regulations, Part L.

(b) A candidate shall not present a thesis any part of which has previously been accepted for any degree.

(c) The examiners may require the candidate to undergo an oral examination on the subject of the thesis or on related subjects.

(d) If the thesis at its first presentation is unsatisfactory, the Dean of Science may, on the recommendation of the examiners, permit the candidate to revise the thesis and re-submit it by a specified date.

(e) If the examiners' final recommendation is that the thesis be awarded a failing grade, the degree of Master of Science shall not be awarded.

Note: The weighting ratios of Parts I and II, as specified in Schedule 2 to these regulations, do not apply if a thesis offered for Part II is unsatisfactory at its final presentation. If the candidate's thesis has been awarded a failing grade, and if that candidate has successfully completed Part I, he or she may apply for the award of the Postgraduate Diploma in Science or the Postgraduate Diploma in Engineering Geology, whichever is appropriate.

14. MSc with Distinction or Merit

Where the candidate has offered Part II only, by thesis, and in the opinion of the examiners the thesis shows special merit, they shall recommend that the degree be awarded with Distinction or Merit, provided that the thesis is presented within the time limits specified in Schedule 2 to these Regulations or that for a part-time candidate the thesis is presented within the time limits determined by the Dean of Postgraduate Studies under Regulation 6.

Note: The award of Distinction is equivalent to First Class Honours; the award of merit is equivalent to Second Class Honours Division 1.

15. Award of Honours

Where the candidate has offered both Parts, the degree may be awarded with Honours.

(a) There shall be two classes of Honours: First Class Honours and Second Class Honours. Second Class Honours shall be awarded in two divisions: Division 1 and Division 2.

(b) The weighting of the two Parts in the assessment (including the determination of Honours) is given in Schedule 2 to these Regulations.

(c) The requirements of Parts I and II shall normally be completed by a full-time candidate within the time limits specified in Schedule 2 to these Regulations. The time limits for a part-time candidate shall be determined by the Dean of Postgraduate Studies under Regulation 6.

(d) A full-time candidate for the degree in any subject shall be eligible for the award of Honours only if all the requirements for the degree are completed within three years of the date of enrolment as a candidate for Part I of the degree in that subject. The eligibility for Honours of a part-time candidate shall be determined in each case by the Dean of Postgraduate Studies.

(e) In special circumstances the Dean of Postgraduate Studies may, on recommendation of the Head of Department/School, extend the period of eligibility for the award of Honours beyond the time limits specified in 15(c), and/or 15(d).

Note: For the purposes of Regulation 15(d) the date of enrolment is 1 March or 1 August of the year in which the candidate first enrols for the degree, depending on whether the candidate started Part I in the first or second semester, respectively.

16. Award of MSc instead of PhD

Where a thesis has been presented for the Degree of Doctor of Philosophy on a subject listed in Schedule 1 to these regulations, and the examiners are of the opinion that it does not justify the award of that degree, they may recommend the award of the Degree of Master of Science, without Honours or Distinction or Merit.

17. Transfer from MSc to PhD

With the approval of the Dean of Postgraduate Studies, and on the recommendation of the Head of Department/School, a student who has been enrolled for MSc Part II for a period of at least 6 months full-time, or the equivalent part-time period, and who has completed MSc Part I or is offering only Part II, may apply for transfer to the PhD.

Candidates wishing to do this should refer to PhD Regulation 3(d). A candidate who transfers to PhD, and who completed Part I, may apply for the award of the PGDipSc or PGDipEngGeol, whichever is appropriate.

18. Transfer from MSc to PGDipSc or PGDipEngGeol

A candidate who is enrolled for M.Sc. Part I may at any time apply to the Dean of Science for transfer to either the PGDipSc or PGDipEngGeol, whichever is appropriate.

19. Award of PGDipSc or PGDipEngGeol Instead of Credit Towards MSc

A candidate who has successfully completed Part I of the Degree of Master of Science, or who under Regulation 7(a) has passed Part I as a whole, may have this part of the programme credited towards a PGDipSc or PGDipEngGeol, whichever is appropriate, instead of the Degree of Master of Science.

Schedule 1 to the Regulations for the Degree of Master of Science

Applied Psychology

Part I consists of PSYC 460 or PSYC 464 and the equivalent of three whole year courses and one single semester course, normally selected from APSY 601-630, PSYC 401, 435, 450-451, 460, 461, 464. With the approval of the Head of Department, one or more courses with PSYC prescriptions may be substituted. Note: Not all courses may be offered in any one year.

Part II consists of one course (selected from the same list as Part I but with the addition of APSY 631) and a dissertation (APSY 660), which are to be completed in a single academic year.

Note: Both whole-of-year courses and semester courses are offered. Where semester courses are selected, the combination of courses in Part 1 must be equivalent to 1.000 EFTS and Part II a course plus a dissertation equivalent to 1.000 EFTS.

P: Six courses from PSYC 200- and PSYC 300-level courses, including:
(1) PSYC 206 and
(2) one from PSYC 207-211, and
(3) PSYC 344, and
((4) two 300-level PSYC courses, and
(5) one further 200-level PSYC course or 300-level PSYC course.

A B average in three PSYC 300-level courses is normally required.

Note: Enrolment in this course is limited. See the Limitation of Entry regulations.

Astronomy

Part I: ASTR 424, ASTR 480 and four other courses, chosen as follows:

(i) at least one course from ASTR 421–423, 425–426

(ii) the remainder from PHYS 401–460, but no more than two courses from PHYS 441–460.

Not all courses may be offered in any one year. With the approval of the Head of Department, up to two courses may be replaced by appropriate courses from another subject. *Note: The choice of courses is subject to the approval of the Head of Department.*

Part II: A thesis (ASTR 690) which shall normally be presented not later than 12 months after the date of enrolment for Part II.

P: 84 points at 300-level approved by the Head of Department of Physics and Astronomy.

In determining the class of honours, Parts I and II are weighted in the ratio 2:3.

Biochemistry

For Part I: Courses totalling at least 1.0 EFTS as for Biochemistry honours, selected with the approval of the Programme Co-ordinator.

Part II: A thesis (BCHM 690) on a research project selected with the approval of the Course Co-ordinator. The thesis shall normally be presented not later than 16 months after the date of enrolment for Part II.

In determining the class of Honours, Part I and Part II are weighted in the ratio 2:3.

P: 84 points in 300-level courses: 70 points from BCHM 301 (BIOL 331), BCHM 302 (CHEM 325) and BCHM 381; and additional points normally from CHEM 321, CHEM 322, CHEM 324, CHEM 362, CHEM 381, BIOL 313, BIOL 330, BIOL 351 or BIOL 352.

Biotechnology

Part 1: Four courses. BIOL 491 plus at least two other courses selected from BIOL 430–435, BIOL 453, BIOL 492, BIOL 493. The fourth course should be selected with the approval of the School of Biological Sciences Fourth Year Coordinator.

Part II: A thesis (BIOT 690) which shall normally be presented no later than 16 months after the date of enrolment for Part II. Students must consult the MSc regulations for details of other requirements for this degree. In determining the class of honours, Part I and Part II are weighted in the ratio 2:3.

P: (1) BIOL 252; and
(2) BIOL 352; and
(3) one course selected from BIOL 313, BIOL 330, BIOL 331.

Note: Students will normally be expected to take BIOL 309.

Cellular and Molecular Biology

Part I: Four courses. At least three courses are to be selected from BIOL 430–436, BIOL 491, BIOL 493. The fourth course should be selected with the approval of the School of Biological Sciences Fourth Year Coordinator.

Part II: A thesis (CEMB 690) which shall normally be presented no later than 16 months after the date of enrolment for Part II. Students must consult the MSc regulations for details of other requirements for this degree. In determining the class of honours, Part I and Part II are weighted in the ratio 2:3.

P: Three courses from BCHM 301, BIOL 313, BIOL 330, BIOL 331, BIOL 351, BIOL 352.

Note: Students will normally be expected to take BIOL309.

Chemistry

Part I: Eight courses chosen from CHEM 401-416 subject to the following qualifications:

Practical work is required in the Part I year and each candidate must submit a project report to the Head of Department not later than the date specified in the course information sheet issued upon enrolment.

The requirement for Part II is a thesis (CHEM 690) which, to be considered for Honours or for Distinction, must be submitted not later than 12 months after the date of enrolment for Part II.

In determining the class of Honours, Part I and Part II are weighted in the ratio 2:3.

P: (1) At least 66 points from CHEM 221-223 and 231-273; and
(2) CHEM 281 and 282; and
(3) at least 56 points from CHEM 321-373; and
(4) at least one of CHEM 381 and 382.

Candidates credited with only 56 points in 300-level Chemistry courses will be required to achieve concurrently a satisfactory standard in a further 14 points at 300-level as approved by the Head of Department.

Computational and Applied Mathematics

Part I: Eight approved courses chosen with the approval of the Course Co-ordinator from MATH 401-490 (other than MATH 449), MSCI 451-462, STAT 401-490 (other than STAT 449).

Note: With the approval of the Course Co-ordinator, candidates may substitute one or two courses from other subjects in an application area.

Part II: A thesis (CAMS 690).

The weighting of Parts I and II will be in the ratio 1:2.

P: Courses totalling 128 points made up as follows:
(1) 84 points at 300-level from MATH 323, 346, 352, 353, 361, 362, 363, 371 and 381; and
(2) 44 points from other approved courses at 200-level or above. Normally these would come from CHEM, COSC, MATH, MSCI, PHYS, STAT or ENGINEERING courses.

Computer Science

Part I: Eight half-courses chosen from COSC 401-439.

Part II: A thesis (COSC 690) is required, and students must consult the MSc Regulations for details of this and other requirements for the degree.

The weighting of the two Parts in the assessment (including the determination of Honours) shall be 1:2 for Part I to Part II.

P: 56 points at 300-level in Computer Science.

Ecology

Part I: Four courses to be selected, with the approval of the School of Biological Sciences Fourth Year Coordinator, from BIOL 421, BIOL 453, BIOL 470–479, BIOL 490, ENVR 410, ENVR 411, FORE 616.

Part II: A thesis (ECOL 690) which shall normally be presented no later than 16 months after the date of enrolment for Part II. Students must consult the MSc regulations for details of other requirements for this degree. In determining the class of honours, Part I and Part II are weighted in the ratio 2:3.

P: (1) 56 points from BIOL 370–379; and
(2) BIOL 309 or BIOL 301 or equivalent (eg, GEOG 309 or PSYC 206).

Engineering Geology

The course of study for Part I includes a total of eight courses. The course selection will normally include: ENGE 471, ENGE 472, ENGE 485, ENGE 486, and at least one course chosen from GEOL 473-489, and at least one course chosen from ENGE 476-482 (as for Engineering Geology (BSc(Hons)) with the approval of the Head of the Department of Geological Sciences.

Notes:

1. *With the approval of the Head of Department one of the courses ENGE 471, 472, 485, 486 may be replaced by one other ENGE course.*
2. *With the approval of the Head of Department up to two courses from GEOL 473-489 may replace up to two of the optional courses, or one full year course from another subject may replace two of the optional courses.*
3. *Practical and field work may be required as part of any ENGE 471-486 courses.*
4. *Not all courses may be offered in any one year.*

Part II: Thesis (ENGE 690). The thesis shall normally be presented not later than 16 months after enrolment.

Parts I and II are weighted in the ratio of 1:2. The concurrent thesis is assigned a course weight according to the course work carried out at the same time, so that the total EFTS for the year is 1.000.

In order to proceed to Part II, the Head of Department normally requires the student to have attained a B+ grade average in Part I. Students who fail to meet this requirement, and who are declined entry to Part II by the Head of Department, may apply to have the courses credited towards the Postgraduate Diploma in Engineering Geology.

P: (1) GEOL 351 and GEOL 352 (or equivalent fieldwork), and 56 points from other GEOL 300-level courses to have been passed with a grade average that meets the approval of the Head of Department (the normal requirement is at least a B grade average); and
(2) 18 points of MATH 100-level courses. (Note: This prerequisite may be waived by the Head of Department if the student can demonstrate an existing suitably high level of ability in Mathematics.)

Environmental Science

It is desirable that an appropriate course of data analysis and computing should have been included in the undergraduate degree.

Part I: ENVR 410 (Concepts and Principles in Environmental Science), ENVR 411 (Case Studies in Environmental Science), and courses totalling not less than 0.75 course weighting selected from relevant courses offered by the Environmental Science home departments/schools of Forestry (FORE), Geography (GEOG), Geological Sciences (GEOL and ENGE), and Biological Sciences (BIOL), and from relevant courses, as approved by the Coordinator, that are offered by Antarctic Studies (ANTA), Chemistry (CHEM), Chemical and Process Engineering (ENCH), Civil Engineering (ENCI) and Mathematics and Statistics (MATH and STAT).

The selection should form a coherent thematic programme, and must be discussed with the Co-ordinator. Note that normally all individual course prerequisites must be satisfied.

Part II: A thesis (ENVR 690) which shall normally be presented not later than 16 months after the date of enrolment for Part II.

In determining the class of Honours, Part I and Part II are weighted in the ratio of 2:3.

P: 84 points in appropriate 300-level courses in Science, Engineering and Forestry approved by the Co-ordinator. A minimum B grade in relevant 300-level courses is normally required.

Geography

Part I: Four courses chosen from GEOG 401-420, with approval of the Head of Department. Enrolment in GEOG 420 Research Project is recommended.

Note: Not all courses will be offered in any one year.

Part II: Thesis (GEOG 695).

In determining the class of Honours Part I and Part II are weighted in the ratio 1:1.

P: Students will normally be expected either to have passed 84 points in 300-level courses approved by the Head of the Department of Geography (including GEOG 309 and at least 28 other points in 300-level Geography courses) or to have completed 112 points at 300-level, of which 56 are in Geography and 56 are in subjects approved by the Head of the Department of Geography.

Geology

The course of study for Part I is GEOL 471, and seven courses chosen from GEOL 473-489 with the approval of the Head of the Department of Geological Sciences. Part II is a thesis (GEOL 690) which shall normally be presented no later than 16 months after the date of enrolment for Part II.

In determining the class of Honours, Part I and II are weighted in the ratio of 1:2.

In order to proceed to Part II, the Head of Department normally requires the student to have attained a B+ grade average in Part I. Students who fail to meet this requirement, and who are declined entry to Part II by the Head of Department, may apply to have the courses credited towards the Postgraduate Diploma in Science.

Notes:

1. *With the approval of the Head of the Department of Geological Sciences, up to three courses from ENGE 476-482 (Engineering Geology) may replace up to three of the optional courses, or one full year course from another subject may replace two of the optional courses.*
2. *Practical and fieldwork may be required as part of any GEOL 471-489 courses.*
3. *Not all courses may be offered in any one year.*

P: GEOL 351 and GEOL 352 (or equivalent fieldwork), and 56 points from other GEOL 300-level courses, these prerequisite courses to have been passed with a grade average that meets the approval of the Head of Department (the normal requirement is at least a B grade average).

Hazard and Disaster Management

Part I: The programme of study consists of HAZM 401, HAZM 403, ENCI 601, ENCI 462 (or equivalent), and four other courses chosen to form a coherent programme in the area of hazard and disaster management with the approval of the Programme Director, Department of Geological Sciences. *Note: Not all courses may be offered in any one year.*

Part II: A thesis (HAZM 690).

P: Part I:

(1) 18 points of 100-level STAT courses or equivalent*; and

(2) 84 points from 300-level courses in the Schedule to the BSc Regulations, these courses to have been passed with a grade average that meets the approval of the Head of the Department of Geological Sciences (the normal requirement is at least a B grade average); plus

Part II: Completion of Part I.

(3) In order to proceed to Part II, the Head of the Department of Geological Sciences normally requires the student to have attained a B+ grade average or better in Part I. students who fail to meet this requirement, and who are declined entry to Part II by the Head of Department, may apply to have the courses credited towards the Postgraduate Diploma in Science (Hazard and Disaster Management).

History and Philosophy of Science

Part I consists of four courses selected from HAPS 401-433 and HAPS 480, the selection to be approved by the Co-ordinator(s) of HPS Studies in consultation with the Heads of Department/School in which the courses selected are taught. Normally these courses will include HAPS 401, 402, unless these are specifically excluded by restrictions, and also include HAPS 480. One or more lecture courses may be replaced by 400-level courses with a total course weighting of 0.25 in another Science subject, with the approval of the Co-ordinator(s) of HPS Studies.

Part II: A thesis (HAPS 690).

The credit weighting of Parts I and II shall be 1:1.

P: 84 points in 300-level courses of the BSc degree approved by the Coordinator of HPS Studies.

Management Science

Part I: 120 points (or equivalent) from MSCI 601-679 with approval of the Head of the Department of Management.

Part II: A thesis (MSCI 690).

The weighting of Parts I and II in the assessment is 1:1.

P: At least 84 points of 300-level courses, normally including:
(1) MSCI 301 or (MSCI 315 and 316)
(2) MSCI 302 or (MSCI 310 and 311)

Mathematics

Part I: Eight courses chosen from MATH 401-490 and STAT 401-490 (other than MATH 449 or STAT 449). Normally one of the eight courses must be MATH 443 if the student has not been credited with MATH 343 previously. Normally at least six courses will be chosen from the MATH course list.

Part II: A thesis (MATH 690).

The weighting of Parts I and II shall be in the ratio 1:2.

P: Part I: 44 points from MATH 210-299; and 56 points from MATH 310-399; and an additional 28 points from MATH 310-399 or STAT 310-399 or other approved courses.

Medical Physics

Part I: Six courses from MDPH 401-410 and PHYS 407 and one course from PHYS 410-460; one of these courses may be replaced by an appropriate course from another subject, the choice of courses is subject to the approval of the Programme Director.

Part II: A thesis (MDPH 690) which shall normally be presented no later than 12 months after the date of enrolment for Part II.

In determining the class of Honours, Parts I and II are weighted in the ratio 2:3.

P: 84 points at 300-level, approved by the Head of Department.

Medical Physics (Clinical)

Only students accepted as Medical Physics Registrars by the Australasian College of Physical Scientists and Engineers in Medicine are eligible for this programme.

Part I: Six courses from MDPH 401-410 and PHYS 407 and one course from PHYS 410-460; one of these courses may be replaced by an appropriate course from another subject, the choice of courses is subject to the approval of the Programme Director.

Part II: A thesis (MDPH 690) which shall normally be presented no later than 12 months after the date of enrolment for Part II.

In determining the class of Honours, Parts I and II are weighted in the ratio 2:3.

P: 84 points at 300-leve,l approved by the Head of Department.

Microbiology

Part I: Four courses. BIOL 492 and BIOL 493 plus a further two courses selected with the approval of the School of Biological Sciences Fourth Year Coordinator.

Part II: A thesis (MBIO 690) which shall normally be presented no later than 16 months after the date of enrolment for Part II. Students must consult the MSc regulations for details of other requirements for this degree. In determining the class of honours, Part I and Part II are weighted in the ratio 2:3.

P: (1) BIOL 313; and
(2) One course selected from BIOL 331, BCHM 301, BIOL 330, BIOL 352.

Note: Students will normally be expected to take BIOL 309.

Philosophy

Part I: Eight courses from PHIL 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 463, 464, 467, 468, 469, 470, 471, 472, 474, 475 (as for Philosophy BA(Hons)).

Part II: A thesis (PHIL 695).

In determining the class of Honours, Part I and II are weighted in the ratio 1:1.

P: 56 points in Philosophy at 300-level.

Physics

Part I: PHYS 480 and five courses chosen from PHYS 401–460. At least three courses from PHYS 401–440. Not all courses may be available in any one year.

With the approval of the Head of Department, up to two of the courses may be replaced by appropriate courses from another subject. *Note: The choice of courses is subject to the approval of the Head of Department.*

Part II: A thesis (PHYS 690) which shall normally be presented not later than 12 months after the date of enrolment for Part II.

P: 84 points at 300-level approved by the Head of Department.

In determining the class of honours, Parts I and II are weighted in the ratio 2:3. Students should consult the MSc Regulations for further requirements.

Plant Biology

Part I: Four courses to be selected, with the approval of the School of Biological Sciences Fourth Year Coordinator, from BIOL 421, BIOL 430–432, BIOL 434–436, BIOL 453, BIOL 471–474, BIOL 476, BIOL 478, BIOL 479, BIOL 490–493.

Part II: A thesis (PBIO 690) which shall normally be presented no later than 16 months after the date of enrolment for Part II. Students must consult the MSc regulations for details of other requirements for this degree. In determining the class of honours, Part I and Part II are weighted in the ratio 2:3.

P: 84 points from 300-level BIOL courses

Note: Students will normally be expected to take BIOL 309.

Psychology

Part I: Four full courses (or their half course equivalents) from PSYC 401–475.

Part II:

PSYC 601 Research Methods in Psychology (for students who have not already been credited with PSYC 460 or PSYC 464)

PSYC 695 Psychology MSc Thesis

P: Six courses from 200-level PSYC and 300-level PSYC courses, including:

(1) PSYC 206 and
(2) one from PSYC 207-211, and
(3) PSYC 344, and
(4) two 300-level PSYC courses, and
(5) one further 200-level PSYC course or 300-level PSYC course.

A B average in three PSYC 300-level courses is normally required.

Statistics

Part I: Eight courses chosen from STAT 401-490 and MATH 401-490 (other than STAT 449 or MATH 449). One of the eight courses must be STAT 464 if the student has not been credited with STAT 214 previously. Normally at least six courses will be chosen from the STAT course list.

Part II: A thesis (STAT 690)

The weighting of Parts I and II shall be in the ratio of 1:2.

P: Part I: MATH 109 or MATH 199; 33 points from STAT 210-299; 56 points from STAT 310-399; and an additional 28 points from MATH 310-399 or STAT 310-399 or other approved courses.

Zoology

Part I: Four courses to be selected, with the approval of the School of Biological Sciences Fourth Year Coordinator, from BIOL 421, BIOL 430–432, BIOL 434–436, BIOL 451, BIOL 470–474, BIOL 476, BIOL 479, BIOL 490.

Part II: A thesis (ZOOL 690) which shall normally be presented no later than 16 months after the date of enrolment for Part II. Students must consult the MSc regulations for details of other requirements for this degree. In determining the class of honours, Part I and Part II are weighted in the ratio 2:3.

P: 84 points from 300-level BIOL courses

Note: students will normally be expected to take BIOL 309.

Schedule 2 to the Regulations for the Degree of Master of Science

Programme of Study

All candidates for the degree must complete Part II. Some candidates must complete both Parts I and II, and candidates are referred to Regulation 3 which explains what the requirements are for candidates with the various entry qualification.

Part I

Part I normally consists of courses prescribed for the subject, and which have a total course weighting of at least 1.0. The Prescriptions Section of the Calendar must be referred to for details of the requirements for each subject.

In Astronomy, Geography, and Physics, the prescribed courses include a research project. Regulations 7 allows a candidate, with the approval of the Head of Department/School, to replace up to 0.5 course weight of the prescribed programme with courses prescribed for another subject at an equivalent level, and in such cases the total course weight for Part I must be at least 0.95.

Part II

Part II consists of a thesis, except in Applied Psychology where Part II consists of course work with a weighting of 0.25 and a Research Project of weighting 0.75.

Time Limits and the Weighting of Parts I and II

Note: The time limits noted below are for full-time study. Candidates who wish to study on a part-time basis should refer to Regulations 5 and 6.

Subject	Max. time limit (months) for Part II only if taken alone or sequentially*, and retaining eligibility for Honours or Distinction/Merit	Max. time limit (months) for Part II only if taken alone or sequentially*, without eligibility for Honours or Distinction/Merit	Max. time limit (months) for Parts I and II if taken concurrently* and retaining eligibility for Honours	Max. time limit (months) for Parts I and II if taken concurrently* and without eligibility for Honours	Weighting ratio Part I to Part II
Applied Psychology	12	12	24	24	1:1
Astronomy	12	12	24	24	2:3
Biochemistry	16	24	28	36	2:3
Biotechnology	16	24	28	36	2:3
Cellular and Molecular Biology	16	24	28	36	2:3
Chemistry	12	24	24	36	2:3
Computational and Applied Mathematics	24	24	36	36	1:2
Computer Science	16	24	28	36	1:2
Ecology	16	24	28	36	2:3
Engineering Geology	16	24	28	36	1:2
Environmental Science	16	24	28	36	2:3
Geography	12	12	24	24	1:1
Geology	16	24	28	36	1:2
Hazard and Disaster Management	16	24	28	36	1:2
History and Philosophy of Science	24	24	36	36	1:1
Management Science	12	24	24	36	1:1
Mathematics	24	24	36	36	1:2
Medical Physics	12	12	24	24	2:3
Medical Physics (Clinical)	12	12	24	24	2:3
Microbiology	16	24	28	36	2:3

Philosophy	24	24	36	36	1:1
Physics	12	12	24	24	2:3
Plant Biology	16	24	28	36	2:3
Psychology	24	24	36	36	1:1
Statistics	24	24	36	36	1:2
Zoology	16	24	28	36	2:3

Note: For the purposes of calculating time limits, the nominal dates for most candidates are either 1 March or 1 August, depending on whether the candidate first enrolled at the start of the first or second semester.

Candidates who enrol in Part II only, to do a thesis, may start at any time, subject to the approval of the Head of Department/School, and for such candidates the time limits given here will be calculated from the actual start date, which must be recorded in the College of Science. Candidates who complete both Parts I and II sequentially may delay the start of Part II, and record a specific start date, but candidates doing this should be aware or Regulation 15(d) which requires completion of both Parts I and II within three years of the commencement of Part I, if eligibility for Honours is to be retained.

**See Regulation 4 for an explanation of concurrent and sequential enrolment in Parts I and II. Concurrent enrolment requires approval of the Head of Department/School, and a grade average of B+ in prerequisite courses.*

***Time limits in Applied Psychology are slightly less than 12 and 24 months, so that the research project required for Part II must be completed not later than the first Monday in February.*

The Degree of Master of Speech and Language Therapy (MSLT)

See also General Course and Examination Regulations.

1. Qualifications Required to Enrol in the Degree

A candidate for the Degree of Master of Speech and Language Therapy shall have:

(a) i. qualified for the award of the Degree of Bachelor of Speech and Language Therapy; or
ii. been admitted ad eundem statum as entitled to enrol for the degree of Master of Speech and Language Therapy, and

(b) been approved as a candidate for the degree by the Dean of Science.

Note: Relevance and standard of undergraduate studies are the main criteria for approval.

2. Qualifying Programme of Study

If a candidate does not qualify for admission under regulation 1, he or she may be admitted to a qualifying programme of study specified by the Head of Department and approved by the Dean of Science. Completion of this programme to a standard deemed satisfactory by the Dean of Science will qualify the candidate for enrolment in the Degree of Master of Speech and Language Therapy.

3. Full-time and Part-time Study

A candidate shall normally be enrolled as a full-time candidate. A full-time candidate is one who throughout the calendar year regards study and research for the Master of Speech and Language Therapy as a full-time occupation.

With the approval of the Academic Board, a candidate may be enrolled as a part-time candidate. A part-time candidate is one who because of employment, health, family or other reasons is unable to devote his or her full-time to study.

4. Structure of the Degree

The programme for the Degree of Master of Speech and Language Therapy consists of one course and a thesis. The candidate for the degree of Master of Speech and Language Therapy shall:

(a) enrol and pursue either full-time for one year or part-time for not less than two years and not more than three years a programme of study approved by the Dean of Science;

(b) during the programme of study, pass CMDS 605;

(c) at the completion of the programme of study, complete a thesis.

5. Preparation, Presentation and Examination of Project Report

i. The thesis work shall be completed, and the thesis submitted and examined, in accordance with the requirements of the General course and Examination Regulations, Part L, Theses.

ii. The examiners may require a candidate for MSLT to undergo an oral examination.

6. MSLT with Distinction

The degree may be awarded with Distinction. In recommending a candidate for admission to the degree and in recommending Distinction the combined results of the thesis and CMDS 605 will be taken into account. The thesis shall be weighted as contributing 87% toward the grade average. Note: The award of Distinction requires a grade point average of 7.0 or greater.

Schedule to the Regulations for the Degree of Master of Speech and Language Therapy

Students are required to take:

CMDS 605 Advanced Clinical Practicum, Supervision, and Administration (0.125 EFTS)

CMDS 695 MSLT Thesis* (0.875 EFTS)

Note: Part-time enrolment in the Thesis (0.65 EFTS) is available on approval.

**Thesis must be completed within 12 months (full-time) and may be started in either the summer at the end of Year 1, or the first semester of Year 2, finishing in either the second semester of Year 2 or the summer of Year 2, respectively.*

Postgraduate Certificate in Antarctic Studies (PGCertAntaStud)

(Subject to NZVCC CUAP approval due December 2008)

See also General Course and Examination Regulations.

1. Admission Requirements

Every candidate for the Postgraduate Certificate in Antarctic Studies shall have:

(a) i. qualified for the award of any appropriate degree in New Zealand; or
ii. be admitted ad eundem statum with graduate status in the University of Canterbury; and

(b) been approved as a candidate for the Postgraduate Certificate by the Dean of Science; and

(c) satisfied the medical examination as prescribed by Antarctica New Zealand.

Note: Admission to the Postgraduate Certificate is subject to Admission Regulations E Limitation of Entry Regulations.

Application for admission to the Postgraduate Certificate programme must be made by 1 August in the year of enrolment in the course.

2. Course of Study

A candidate shall satisfactorily complete the prescribed course of study in one year, comprising ANTA 601 Antarctica: Contemporary Issues and Perspectives Part 1; ANTA 602 Antarctica: Contemporary Issues and Perspectives Part 2; ANTA 603 Antarctic Field Work; ANTA 604 Supervised Project in Antarctic Studies. Participation in the Scott Base component of ANTA 603 is subject to a medical examination as prescribed by Antarctica New Zealand.

3. Award of Certificate with Distinction

The Postgraduate Certificate in Antarctic Studies may be awarded with distinction.

Postgraduate Diploma in Antarctic Studies (PGDipAntaStud)

See also General Course and Examination Regulations.

1. Qualifications Required to Enrol in the Diploma

Every candidate for the Postgraduate Diploma in Antarctic Studies, before enrolling for the diploma, shall have:

(a) either
   i. qualified for a degree in a New Zealand University which is of relevance to the proposed course of study; or
   ii. presented evidence of ability for advanced level academic study; or
   iii. been admitted ad eundem statum to enrol for the Postgraduate Diploma in Antarctic Studies.

(b) been approved as a candidate by the Dean of Science.

2. Award of the Diploma with Distinction or Merit

The Postgraduate Diploma in Antarctic Studies may be awarded with Distinction or Merit.

Note: The award of Distinction indicates a grade average in the range A+ to A-; the award of Merit indicates a grade average of B+.

3. Structure of the Course

(a) All students admitted to the Postgraduate Diploma in Antarctic Studies will complete a coherent programme of study approved by the Chair of the Board of Studies: Antarctic Studies.

(b) The requirements for the Postgraduate Diploma in Antarctic Studies shall be ANTA 401 and ANTA 402 and other 400-level courses listed in the University of Canterbury Calendar and other university Calendars relevant to a coherent programme of study for each student that is approved by the Chair of the Board of Studies: Antarctic Studies. The total course weight for the Postgraduate Diploma in Antarctic Studies will be at least 1.00 EFTS.

(c) At the discretion of the Board, an approved course of study may include up to a total of 0.5 EFTS in 400-level courses or higher from another New Zealand or overseas institution.

(d) Candidates must satisfy the Chair of the Board of Studies: Antarctic Studies, that they have the necessary prerequisite knowledge to undertake the proposed courses from the Schedule.

(e) Candidates who have completed the Postgraduate Certificate in Antarctic Studies with Distinction will be exempt from ANTA 401.

4. Full-time/Part-time Enrolment

A candidate may be enrolled for full-time or part-time study. A part-time candidate is one who, because of employment, health, family or other reasons, is unable to devote his or her full-time to study. Part-time enrolment requires the approval of the Dean of Science.

5. Duration of the Course

(a) A full-time candidate shall normally follow a course of study for not less than one year and not more than two years of study. Extension requires the approval of the Dean of Science.

(b) A part-time candidate shall be required to follow a programme of study with time limits determined by the Dean of Science on the recommendation of the Chair of the Board of Studies: Antarctic Studies. Normally, the maximum period for part-time study is four years.

6. Repeating of Courses

(a) A candidate who fails any of the courses offered will require the permission of the Dean of Science and approval of the Chair of the Board of Studies: Antarctic Studies, to repeat those failed courses or offer any other course in its place.

(b) A candidate who fails any courses offered and is not successful under Regulation 6(a) shall not be awarded the Postgraduate Diploma in Antarctic Studies, but will be awarded a Certificate of Proficiency for each course passed at the University of Canterbury.

7. Transfer from Postgraduate Diploma in Antarctic Studies to Master of Antarctic Studies

If the courses passed for the Postgraduate Diploma in Antarctic Studies satisfy the requirements for Part I of the Master of Antarctic Studies and if the candidate meets the standard required by the Board of Studies: Antarctic Studies (normally a B grade average or better) then, with the approval of the Dean of Science, a candidate may elect:

(a) to have the courses transferred to the degree of Master of Antarctic Studies in lieu of being awarded the Diploma; or

(b) to enter the degree of Master of Antarctic Studies under Master's Regulation 2(a)(i).

Schedule to the Regulation for the Postgraduate Diploma in Antarctic Studies

ANTA 401 Antarctic Global Connection, compulsory (0.3750 EFTS)

ANTA 402 Antarctic Legal System, compulsory (0.1250 EFTS)

Other 400-level courses relevant to a coherent programme of study. A total course weighting of at least 1.0 EFTS must be completed

Note: Courses other than those on the above Schedule will be approved by the Board of Studies: Antarctic Studies, for inclusion in a candidate's course of study.

Postgraduate Diploma in Clinical Psychology (PGDipClinPsyc)

See also General Course and Examination Regulations.

Requirements for Registration as a Clinical Psychologist

To be eligible for registration as a Psychologist by the Psychologists Board under the Clinical Scope of Practice, applicants must have:

(a) a minimum of a Masters degree in Psychology from an accredited educational organisation, and

(b) a postgraduate diploma in clinical psychology (or equivalent) from an accredited educational organisation; and

as part of the postgraduate diploma, applicants must have completed a Board-approved practicum/ internship of at least 1500 hours of supervised practice.

It is illegal under the Health Practitioners Competency Assurance Act 2003 to claim to be a psychologist or to practice psychology unless registered. The Psychologists Board offers registration as Intern Psychologist or Trainee Psychologist to those who have met the formal academic requirements for entry into the internship/practicum and where the internship/practicum is approved by the Board.

These Postgraduate Diploma Regulations are designed to ensure that candidates meet the Board's requirement for initial registration as Intern Psychologist and then for registration under the Clinical Scope of Practice upon graduating with the Diploma.

Candidates who do not have a Masters degree in Psychology on entry into the Diploma must concurrently enrol in either a Masters or PhD in Psychology (see Regulation 2 and 3) and complete the degree before they can graduate with the Diploma.

Candidates with a Masters degree in Psychology (and who therefore have met the Board's minimum degree requirement) may concurrently enrol in a PhD, but to avoid problems arising from time competition, concurrent enrolment in the PhD and the Internship is restricted.

1. Qualifications required to enrol in the Diploma.

Every candidate for the Postgraduate Diploma in Clinical Psychology shall have:

(a) been credited with PSYC 335 (or an equivalent course) and an approved 400/600-level course in research methods;

(b) been accepted as a candidate by the Head of Department of Psychology on the recommendation of the Director of Clinical Training following an interview and review of application materials (See Notes 1 & 2 below); and

(c) as a minimum academic requirement have fulfilled the requirements for the BA(Hons), or Master of Arts (Part 1), or BSc(Hons), or Master of Science (Part 1) in Psychology.

2. Concurrent enrolment in an MA or MSc

(a) Candidates who on entry to the Diploma have not qualified for the Degree of Master of Arts or Master of Science (or equivalent) in Psychology must have concurrently enrolled in a Master of Arts or Master of Science (Part 2) in Psychology before enrolling in Year 2 of the Diploma.

(b) Candidates who are enrolled in the Diploma and who are concurrently enrolled in Part 2 of the Master of Arts or Master of Science:

i. will, with the permission of the Dean of Postgraduate Studies on the recommendation of the Head of Department, be enrolled part time in the MA or MSc degree, and
ii. must maintain satisfactory progress in their work for the degree in order to maintain enrolment in the Diploma.

(c) On the recommendation of the Head of Department and with the permission of the Dean of Postgraduate Studies, students may be permitted to enrol in a PhD instead of a Master of Arts or Master of Science. (*Note: This includes transfer to the PhD under 3(d) of the PhD Regulations.)*

3. Concurrent enrolment in a PhD

Candidates for the Diploma who are qualified to do so may apply to enrol concurrently in a PhD. Such candidates

(a) will, with the permission of the Dean of Postgraduate Studies, on the recommendation of the Head of Department, be enrolled part time in the PhD, and
(b) must maintain satisfactory progress in their work for the degree in order to maintain enrolment in the Diploma.
(c) will only be permitted to enrol concurrently in PSYC 670 Internship in Clinical Psychology and the PhD if it is expected that the candidate will have submitted the PhD thesis by the end of the Internship (see the Preamble and Note 3 below).

4. Programme of Study

(a) Before applying to sit the graduating examination for the Diploma, candidates must have passed all the courses listed in the Schedule to the Postgraduate Diploma in Clinical Psychology except for PSYC 670 Internship in Clinical Psychology, and must have received satisfactory reports on their performance in PSYC 670 from their internship supervisors, and must be approved as a candidate for the examination by the Director of Clinical Training.
(b) Before being enrolled in PSYC 670 Internship in Clinical Psychology candidates enrolled under Regulation 2 in a Masters degree must have submitted their thesis for examination, and must have qualified for the award of the degree before the Diploma can be awarded.
(c) Candidates enrolled under Regulation 3 and who have not been awarded a Masters degree in Psychology must have qualified for the award of the PhD before the Diploma can be awarded.

5. Repeating of Courses

All courses must normally be passed at the first attempt (except for the Diploma examination, which is covered by Regulation 6c). Where a candidate's performance or ability to study has been impaired by illness or other circumstances, and an aegrotat consideration is not available, the Dean of Science may permit the candidate to repeat course work and/or undergo assessment one further time.

6. Examination for the Diploma

(a) Candidates who have qualified to sit the graduating examination for the Diploma must apply in writing to sit the examination.
(b) The application must be accompanied by case reports representative of those cases which the candidate has studied since enrolment for the diploma.
(c) Candidates who are unsuccessful in the graduating examination may apply to sit the examination a maximum of two additional times. However, candidates must successfully pass the exam within two years of the first attempt or within five years of first enrolling in the PSYC 670, whichever comes first.

7. Award of the Diploma with Distinction

The Diploma may be awarded with Distinction on the recommendation of the examiners.

Note: Distinction indicates a grade point average of A- or better in those courses in the Schedule which are awarded with grades, plus an exceptional level of performance in the graduating examination.

8. Transition Regulations

These regulations are to take effect from 1 January 2008. Students who enrolled prior to 2008 may graduate under the previous regulations until 31 December 2010.

Notes to the Regulations

1. *Candidates must also consult the Clinical Psychology Handbook for admission criteria and information on planning courses. The Director of Clinical Training and the Head of Department will determine whether the candidate has completed an appropriate set of 300 and 400-level courses (which if taken at Canterbury would be part of BSc(Hons), BA(Hons), Part I MSc, or Part 1 MA in Psychology.) The Handbook also provides information on recommended courses of study at both the undergraduate and the 400-level that precede completion of a Masters or PhD.*

2. *Application for admission must be made by 30 September in the previous year.*
3. *As provided for in Regulation 3 above, concurrent enrolment in PhD and the internship will only be approved if it is expected that the candidate will complete the PhD by the end of the internship training. If approval is not given then a candidate must demonstrate satisfactory progress on the PhD before concurrent enrolment in the internship is approved.*

Schedule to the Regulations for the Postgraduate Diploma in Clinical Psychology (PGDipClinPsyc)

Year 1: 0.6 EFTS

Course Code	Course Title	EFTS	09	P/C/R/RP/EQ
PSYC 641	Advanced Psychopathology	0.25	W	P: Subject to approval of the Head of Department.
PSYC 642	Interview and Psychometric Assessment Methods	0.15	W	P: Subject to approval of the Head of Department.
PSYC 643	Year 1 Practicum	0.2	W	P: Subject to approval of the Head of Department.

Year 2: 0.6 EFTS

Course Code	Course Title	EFTS	09	P/C/R/RP/EQ
PSYC 651	Psychotherapeutic Methods	0.25	W	P: Subject to approval of the Head of Department.
PSYC 653	Year 2 Practicum	0.25	W	P: Subject to approval of the Head of Department.
PSYC 654	Comprehensive Exam in Clinical Psychology	0.1	W	P: Subject to approval of the Head of Department.

Year 3: 1.0 EFTS

Course Code	Course Title	EFTS	09	P/C/R/RP/EQ
PSYC 661	Advanced Topics in Clinical Psychology I	0.25	W	P: PSYC 651, PSYC 653, PSYC 654
PSYC 662	Advanced Topics in Clinical Psychology II	0.25	W	P: PSYC 651, PSYC 653, PSYC 654
PSYC 670	Internship in Clinical Psychology	0.5	A	P: PSYC 651, PSYC 653, PSYC 654 C: PSYC 661, PSYC 662.

Postgraduate Diploma in Engineering Geology (PGDipEngGeol)

See also General Course and Examination Regulations.

1. Qualifications Required to Enrol in the Diploma

Every candidate for the Postgraduate Diploma in Engineering Geology shall have:

(a) either:
   i. qualified for the award of the Degree of Bachelor of Science in New Zealand, majoring in Geology or Earth Sciences; or
   ii. qualified for the award for the Degree of Bachelor of Engineering in New Zealand, majoring in Civil Engineering (see Notes, below); or
   iii. been admitted ad eundem statum with graduate status with suitable preliminary qualification to the University of Canterbury (see Notes, below); and

(b) have been approved as a candidate by the Dean of Science.

Notes:

1. *Relevance of undergraduate studies to Engineering Geology and standard of achievement are the main criteria for approval. Canterbury students who qualify for entry under Regulation 1(a)(i) will normally be required to have passed GEOL 351 and GEOL 352, and 56 other points in GEOL 300-level courses with a grade average that meets the*

approval of the Head of Department (the normal requirement is at least a B-grade average). In addition, 18 points of MATH 100-level courses are required. This may be waived by the Head of Department if the student can demonstrate an existing suitably high level of ability in Mathematics.

2. *Candidates seeking admission may be required to pass a qualifying programme prior to commencing the Postgraduate Diploma in Engineering Geology or students may be required to undertake studies concurrently.*
3. *A relevant tertiary qualification plus work experience may be deemed appropriate for entry to the Diploma.*

2. Programme of Study

The programme of study consists of ENGE 471, ENGE 472, ENGE 485, ENGE 486, ENGE 495, at least one course chosen from GEOL 473-489 and at least one course chosen from ENGE 476-482 (as for Engineering Geology BSc(Hons)), with the approval of the Head of the Department of Geological Sciences.

If the candidate is enrolled as a full-time student, the courses must be passed in one year. Part-time enrolment requires the approval of the Dean of Science, and a part-time student must follow a programme of study within time limits determined by the Dean of Science following recommendations of the Head of Department.

Notes:

1. *With the approval of the Head of the Department of Geological Sciences, one of the courses ENGE 471-486 may be replaced by one other ENGE course.*
2. *With the approval of the Head of the Department of Geological Sciences, up to two courses from GEOL 473-489 may replace up to two of the optional courses, or one full year course from another subject may replace two of the optional courses.*
3. *The time limit for a candidate studying part-time shall normally be two years.*

3. Repeating of Courses

(a) A candidate who fails any of the courses, or who otherwise does not attain a standard satisfactory to the Dean of Science, shall not be permitted to repeat any of those courses, or offer any other course in their place.

(b) In the case of a candidate who fails no more than 0.25 EFTS of the diploma programme, the Dean of Science, on the advice of the Head of Department, may recommend a pass in the diploma as a whole, provided the candidate has achieved a grade average of at least B- in the diploma programme as a whole, including any failed courses.

(c) A candidate who fails more than 0.25 EFTS of the diploma programme, or who failed no more than 0.25 EFTS but was not offered a pass in the diploma as a whole under Regulation 3(b), will be awarded a Certificate of Proficiency for each course passed.

(d) Notwithstanding 3(a), 3(b) and 3(c), a candidate who qualifies for an aegrotat award in some or all of his or her courses (see General Course and Examination Regulation H) may elect: either:

   i. to accept for the courses affected the grades recommended by the examiners under that Regulation; or
   ii. to present all or some of those courses once at a subsequent examination; and his or her eligibility for Distinction shall not be affected.

4. Award of Diploma with Distinction or Merit

The Postgraduate Diploma in Engineering Geology may be awarded with Distinction or Merit.

Note: The award of Distinction indicates a grade average in the range A- to A+; the award of merit indicates a grade average of B+.

5. Transfer from PGDipEngGeol to MSc Part II

If the courses passed for the Diploma also satisfy the requirements for Part I of the MSc, and if the courses have been passed with an average grade of at least B+, then, subject to the Admission Regulations and with the approval of the Dean of Science, a candidate may elect either:

i. to have the courses transferred to the Degree of Master of Science in lieu of being awarded the Diploma; or
ii. to enter for the Degree of Master of Science under Regulation 2(a)(v) if the Diploma has been awarded.

6. Award of PGDipEngGeol instead of MSc Part I

A candidate who has successfully completed Part I of the Degree of Master of Science in Engineering Geology may with the approval of the Head of Department have this part of the degree programme credited towards a Postgraduate Diploma in Engineering Geology instead of the Degree of Master of Science.

Postgraduate Diploma in Industrial and Organisational Psychology (PGDipIndOrgPsyc)

See also General Course and Examination Regulations.

1. Qualifications Required to Enrol in the Diploma

Every candidate for the Diploma in Industrial and Organisational Psychology, before enrolling for a course of study for the diploma, shall have:

(a) qualified for the Degree of Bachelor of Arts with Honours in Psychology or Master of Arts, or Bachelor of Science with Honours in Psychology or Master of Science; and

(b) completed such work that is judged by the Head of Department, Psychology, to be equivalent to the University of Canterbury degree of Master of Science in Applied Psychology.

(c) been credited with the qualifying courses, PSYC 631 Advanced Personnel Psychology and PSYC 632 Advanced Organizational Psychology.

2. Diploma Requirements

To qualify for the diploma a candidate must satisfy the following conditions:

(a) present a certificate, from an organisation approved by the Head of Department of Psychology, stating that the candidate has been employed full-time for at least one year either as a psychologist or in a position in which the practice of psychology is a significant component;

(b) submit for assessment six reports of cases, or projects, approved by the Head of Department of Psychology, and completed since enrolling for the diploma;

(c) complete such additional readings and exercises as the Head of Department may require;

(d) pass an oral and practical examination.

3. Application to Sit Examination

A candidate shall give notice in writing by 1 September in any year, of their intention to sit the examination.

4. Timing of Examinations

Examinations will be held by the University at regular intervals.

5. Award of Diploma with Distinction or Merit

The Postgraduate Diploma in Industrial and Organisation Psychology may be awarded with Distinction or Merit.

Note: The award of Distinction indicates a grade average in the range of A- to A+; the award of merit indicated a grade average of B+.

Schedule to the Regulations for the Postgraduate Diploma in Industrial and Organisation Psychology

PSYC 501 Diploma in Industrial and Organisation Psychology 1.0000 EFTS

Postgraduate Diploma in Science (PGDipSc)

See also General Course and Examination Regulations.

1. Subjects in Which the Diploma May be Awarded

The subjects for the Postgraduate Diploma in Science are: Astronomy, Biochemistry, Biotechnology, Cellular and Molecular Biology, Chemistry, Computer Science, Computer Security and Forensics, Ecology, Environmental Science, Geography, Geology, Hazard and Disaster Management, History and Philosophy of Science, Management Science, Mathematics, Medical Physics, Microbiology, Philosophy, Physics, Plant Biology, Psychology, Statistics, Zoology.

2. Qualifications Required to Enrol in the Diploma

(a) Every candidate for the Postgraduate Diploma in Science shall, before enrolling for the Diploma, fulfil one of the following conditions: either

i. qualify for the Degree of Bachelor of Science; or

ii. qualify for a Bachelor's degree and if necessary passed a qualifying programme in such courses from the schedule to the regulations for the Degree of Bachelor of Science as may be required by the Dean of Postgraduate Studies; or

iii. be admitted ad eundem statum as entitled to enrol for the Postgraduate Diploma in Science.

(b) A candidate shall have met the prerequisites prescribed in the Schedule to these Regulations.

(c) Every candidate for the diploma shall have been approved as a candidate by the Dean of Science.

3. Structure of the Diploma

(a) The programme for the Diploma shall consist of courses as laid down in the Prescriptions for the subject, to be passed in one year unless in a particular case the Dean of Science resolves otherwise.

(b) With the approval of the Heads of Departments/Schools, a candidate may replace courses up to 60 points with 400-level courses prescribed for other subjects.

4. Repeating of Courses

(a) A candidate who fails any of the courses, or who otherwise does not attain a standard satisfactory to the Dean of Postgraduate Studies shall not be permitted to repeat any of those courses, or offer any other course in their place.

(b) In the case of a candidate who fails no more than 0.25 EFTS of the diploma programme, the Dean of Science, on the advice of the Head of Department/School concerned, may recommend a pass in the diploma as a whole, provided the candidate has achieved a grade average of at least B- in the diploma programme as a whole, including any failed courses.

(c) A candidate who fails more than 0.25 EFTS of the diploma programme, or who failed no more than 0.25 EFTS but was not offered a pass in the diploma as a whole under Regulation 4(b), will be awarded a Certificate of Proficiency for each course passed.

(d) Notwithstanding 4(a), 4(b) and 4(c), a candidate who qualifies for an aegrotat award, in some or all of the courses (see General Course and Examination Regulation H) may elect either:

i. to accept for the courses affected the grades recommended by the examiners under that Regulation;

ii. to present all or some of those courses once at a subsequent examination.

5. Transfer from PGDipSc to MSc

If the courses passed for the Diploma also satisfy the requirements for Part I of the MSc, and if the candidate meets the standard required by the department for entry to MSc Part II, then, subject to the Admission Regulations and with the approval of the Dean of Science, a candidate may elect either:

i. to have the courses transferred to the Degree of Master of Science in lieu of being awarded the Diploma;

ii. to enter for the Degree of Master of Science under Regulation 2(a)(iv) if the Diploma has been awarded.

6. Award of PGDipSc Instead of MSc Part I

A candidate who has successfully completed Part I of the Degree of Master of Science may have this part of the degree programme credited towards a Postgraduate Diploma in Science instead of the Degree of Master of Science.

7. Award of PGDipSc after Attempting MSc Part I

Where a candidate for the Degree of Master of Science does not attain a satisfactory standard in the Part I examination, but does fulfil the requirements for the Postgraduate Diploma in Science, the Dean of Science, on the advice of the examiners, may recommend the award of the Postgraduate Diploma in Science.

8. Award of PGDipSc With Distinction or Merit

The Postgraduate Diploma in Science may be awarded with Distinction or Merit.

Note: The award of Distinction indicates a grade average in the range A- to A+; the award of merit indicates a grade average of B+.

Schedule to the Regulations for the Postgraduate Diploma in Science

Astronomy

EITHER: ASTR 424, ASTR 480 and four courses, chosen as follows:

(i) at least one course from ASTR 421–423, 425–426

(ii) the remainder from PHYS 401–460, but no more than two courses from PHYS 441–460.

OR: ASTR 424 and seven courses, chosen as follows:

(i) at least one course from ASTR 421–423, 425–426

(ii) the remainder from ASTR 430, PHYS 401–460, but no more than three courses from PHYS 441–460.

Not all courses may be offered in any one year.

With the approval of the Head of Department, up to two courses may be replaced by appropriate courses from another subject. *Note: The choice of courses is subject to the approval of the Head of Department.*

P: 56 points in 300-level ASTR or PHYS courses approved by the Head of Department.

Biochemistry

Courses totalling at least 1.0 EFTS as for Biochemistry honours, selected with the approval of the Programme Co-ordinator. Courses normally selected from BCHM 401 (BIOL 436), BCHM 403 (BIOL 435), BCHM 405 (BIOL 434), BCHM 406 (BIOL 430), BCHM 410 (CHEM 405), BCHM 411 (CHEM 411), BCHM 412 (CHEM 412). Other suitable courses include: BCHM 407–409, BIOL 431–432, BIOL 451, BIOL 491, CHEM 402, CHEM 408.

P: 84 points in 300-level courses: 70 points from BCHM 301 (BIOL 331), BCHM 302 (CHEM 325) and BCHM 381; and additional points normally from CHEM 321, CHEM 322, CHEM 324, CHEM 362, CHEM 381, BIOL 313, BIOL 330, BIOL 351 or BIOL 352.

Biotechnology

Four courses. BIOL 491 plus at least two other courses selected from BIOL 430–435, BIOL 453, BIOL 492, BIOL 493. The fourth course should be selected with the approval of the School of Biological Sciences Fourth Year Coordinator.

P: (1) BIOL 252; and
(2) BIOL 352; and
(3) one course selected from BIOL 313, BIOL 330, BIOL 331.

Note: Students will normally be expected to take BIOL 309.

Cellular and Molecular Biology

Four courses. At least three courses are to be selected from BIOL 430–436, BIOL 491, BIOL 493. The fourth course should be selected with the approval of the School of Biological Sciences Fourth Year Coordinator.

P: Three courses from BCHM 301, BIOL 313, BIOL 330, BIOL 331, BIOL 351, BIOL 352.

Note: Students will normally be expected to take BIOL 309.

Chemistry

Eight courses chosen from CHEM 401-416, plus a project report on practical work. Note: With the approval of the Head of Department, up to two of the courses CHEM 401-416 may be replaced by Honours 400-level courses with a total EFTS value of at least the same from another subject.

P: 56 points at 300-level in the same subject.

Computer Science

Eight courses chosen from COSC 401-439. Not all half-courses may be available in any one year.

P: 56 points at 300-level in the same subject.

Computer Security and Forensics

Eight courses, including COSC 407, 419, 424, 425, 429, 430, and two courses from COSC 401–439, MATH 409, ENCI 601 or as approved by the Head of Department.

With permission from the Head of Department, two of the core courses may be substituted with other 400-level computer science papers.

Ecology

Four courses to be selected, with the approval of the School of Biological Sciences Fourth Year Coordinator, from BIOL 421, BIOL453, BIOL 470–479, BIOL 490, ENVR 410, ENVR 411, FORE 616.

P: (1) 56 points from BIOL 370–379; and
(2) BIOL 309 or BIOL 301 or equivalent (eg, GEOG 309 or PSYC 206).

Environmental Science

It is desirable that an appropriate course of data analysis and computing should have been included in the undergraduate degree.

The course of study is ENVR 410 (Concepts and Principles in Environmental Science), ENVR 411 (Case Studies in Environmental Science), and courses totalling not less than 0.75 course weighting selected from relevant courses offered by the Environmental Science home departments/schools of Forestry (FORE), Geography (GEOG), Geological Sciences (GEOL and ENGE), and Biological Sciences (BIOL), and from relevant courses, as approved by the Coordinator, that are offered by Antarctic Studies (ANTA), Chemistry (CHEM), Chemical and Process Engineering (ENCH), Civil Engineering (ENCI) and Mathematics and Statistics (MATH and STAT).

The selection should form a coherent thematic programme, and must be discussed with the Co-ordinator. Note that normally all individual course prerequisites must be satisfied.

P: 84 points in appropriate 300-level courses in Science, Engineering, and Forestry approved by the Co-ordinator.

Note: Normally all prerequisites must be satisfied.

Geography

Four courses chosen from GEOG 401-420, with approval of the Head of Department. Enrolment in GEOG 420 Research Project is recommended.

P: Students will normally be expected either to have passed 84 points in 300-level courses approved by the Head of Department, including GEOG 309 and at least 28 other points in 300-level Geography courses, or to have completed 112 points at 300-level, of which 56 are in Geography and 56 are in subjects approved by the Head of Department.

Not all courses will be offered in any one year.

Geology

GEOL 471 and seven courses from GEOL 473-489 with the approval of the Head of the Department of Geological Sciences.

Notes:

1. *With the approval of the Head of the Department of Geological Sciences, up to three courses from ENGE 476-486 (Engineering Geology) may replace up to three of the optional courses, or one full year course from another subject may replace two of the optional courses.*
2. *Practical and fieldwork may be required as part of any GEOL 471-489 courses.*
3. *Not all courses may be offered in any one year.*

P: GEOL 351 and GEOL 352 (or equivalent fieldwork), and 56 points from other GEOL 300-level courses, passed with a grade average that meets the approval of the Head of Department (the normal requirement is at least a B grade average).

Hazard and Disaster Management

The programme of study consists of HAZM 401, HAZM 403, ENCI 601, ENCI 462 (or equivalent), and four other courses chosen to form a coherent programme in the area of hazard and disaster management with the approval of the Programme Director, Department of Geological Sciences. *Note: Not all courses may be offered in any one year.*

P: (1) 18 points of 100-level STAT courses or equivalent*; and
(2) 84 points from 300-level courses in the Schedule to the BSc Regulations, these prerequisite courses to have been passed with a grade average that meets the approval of the Programme Director (the normal requirement is at least a B grade average).

History and Philosophy of Science

Four courses from HAPS 401-433 and HAPS 480 (as for MSc), to be approved by the Course Co-ordinator(s) of HPS Studies, in consultation with the Heads of Department/School in which the courses selected are taught.

P: 84 points in 300-level courses of the BSc degree approved by the Co-ordinator(s) of HPS Studies.

Management Science

120 points (or equivalent) from MSCI 601–679 with approval of the Head of the Department of Management.

P: At least 84 points of 300-level courses, normally including:
(1) MSCI 301 or (MSCI 315 and 316)
(2) MSCI 302 or (MSCI 310 and 311)

Mathematics

Eight courses chosen from MATH 401-490 and STAT 401-490 (other than MATH 449 or STAT 449). Normally one of the eight courses must be MATH 443 if the student has not been credited with MATH 343 previously. Normally at least six courses will be chosen from the MATH course list.

P: 44 points from MATH 210-299; and 56 points from MATH 310-399; and an additional 28 points from MATH 310-399 or STAT 310-399 or other approved courses.

Medical Physics

Six courses chosen from MDPH 401-410 and PHYS 407 and one course chosen from PHYS 410-460. One of these courses may be replaced by an appropriate course from another subject, the choice of courses is subject to the approval of the Programme Director.

P: 56 points at 300-level, approved by the Head of Department of Physics and Astronomy.

Microbiology

Four courses. BIOL 492 and BIOL 493 plus a further two courses selected with the approval of the School of Biological Sciences Fourth Year Coordinator.

P: (1) BIOL 313; and
(2) One course selected from BIOL 331, BCHM 301, BIOL 330, BIOL 352.

Note: Students will normally be expected to take BIOL 309.

Philosophy

Eight courses from PHIL 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 463, 464, 467, 468, 469, 470, 471, 472, 474.

P: 56 points at 300-level in the same subject.

Physics

EITHER: PHYS 480 and five courses chosen from PHYS 401–460, including at least three courses from PHYS 401–440.

OR: Eight courses chosen from PHYS 401–460, including at least five courses from PHYS 401–440.

Not all courses may be offered in any one year. With the approval of the Head of Department, up to two courses may be replaced by appropriate courses from another subject. *Note: The choice of courses is subject to the approval of the Head of Department.*

P: 56 points in 300-level PHYS courses approved by the Head of Department.

Plant Biology

Four courses to be selected, with the approval of the School of Biological Sciences Fourth Year Coordinator, from BIOL 421, BIOL 430–432, BIOL 434–436, BIOL 453, BIOL 471–474, BIOL 476, BIOL 478, BIOL 479, BIOL 490–493.

P: 56 points from 300-level BIOL courses

Note: Students will normally be expected to take BIOL 309.

Psychology

Four full courses (or their half-course equivalents) selected with the approval of the Head of Department from PSYC 401–475. One PSYC 300-level course may be substituted for a PSYC 400-level full course with the approval of the HOD.

P: Six courses from 200-level PSYC and 300-level PSYC courses, including:

(1) PSYC 206 and
(2) one from PSYC 207-211, and
(3) PSYC 344, and
(4) two 300-level PSYC courses, and
(5) one further 200-level PSYC course or 300-level PSYC course.

A B grade average in three PSYC 300-level courses is normally required.

Statistics

Part I: Eight courses chosen from STAT 401-490 and MATH 401-490 (other than STAT 449 or MATH 449). One of the eight courses must be STAT 464 if the student has not been credited with STAT 214 previously. Normally at least six courses will be chosen from the STAT course list.

P: Part I: MATH 109 or MATH 199; 33 points from STAT 210-299; 56 points from STAT 310-399; and an additional 28 points from MATH 310-399 or STAT 310-399 or other approved courses.

Zoology

Four courses to be selected, with the approval of the School of Biological Sciences Fourth Year Coordinator, from BIOL 421, BIOL 430–432, BIOL 434 – 436, BIOL 451, BIOL 470 – 474, BIOL 476, BIOL 479, BIOL 490.

P: 56 points from 300-level BIOL courses

Note: Students will normally be expected to take BIOL 309.