

# UC SCIENCE

# Undergraduate Degrees

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# Contents

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- 2 UC Science – Undergraduate Degree offering
- 3 Bachelor of Science (BSc)
- 11 Minors
- 16 Bachelor of Data Science (BDataSc)
- 19 Bachelor of Environmental Science with Honours (BEnvSci(Hons))
- 23 Bachelor of Speech and Language Pathology with Honours (BSLP(Hons))
- 24 Types of degrees
- 24 FAQ

## UC Science – Undergraduate Degree offering

We offer 4 undergraduate degrees:

- Bachelor of Science
- Bachelor of Environmental Science (Hons)
- Bachelor of Data Science
- Bachelor of Speech and Language Pathology (Hons)

# Bachelor of Science (BSc)

The BSc is a 3-year degree that allows students to mix and match subjects across a wide range of subjects, try things out and see what they like before they specialise. Science can open doors to many other careers too, including business, politics, medicine, finance and engineering. The BSc provides the following 18 majors and up to 58 minors taken from areas such as arts, business, commerce and health.

- Astronomy
- Biochemistry
- Biological Sciences
- Chemistry
- Computer Science
- Economics
- Environmental Science
- Finance
- Financial Engineering
- Geography
- Geology
- Linguistics
- Mathematics
- Medicinal Chemistry
- Philosophy
- Physics
- Psychology
- Statistics

## Bachelor of Science – example degree structure

### Year 1



### Year 2



### Year 3



<sup>1</sup> Students should allow for more than one potential major subject. Students should check the 100-level requirements for their potential majors as some majors require more than two 100-level courses or enrolment in a complementary subject such as Mathematics.

For full course requirements, go to [www.canterbury.ac.nz/regulations/academic-regulations/bsc-229/](http://www.canterbury.ac.nz/regulations/academic-regulations/bsc-229/)

To qualify for the Degree of Bachelor of Science a student must:

1. be credited with a minimum of 360 points towards the qualification
2. have a minimum of 255 points from the BSc schedule (i.e. up to 105 points/7 courses from other subjects/degrees)
3. have a minimum of 225 points from courses above 100 level; that is, a maximum of 135 points (9 courses) at 100 level

4. have completed the compulsory course SCIE101 Science, Society and Me
5. have at least 90 points (6 courses) at 300 level, of which, at least 60 points must be in a single subject.

### Summary of structure

- 100: maximum of 9 courses
- 200: given the regulations for levels 100 and 300, all remaining points come from 200 level
- 300: minimum of 6 courses, with minimum of 2 in same subject

### Bachelor of Science major: Astronomy

|                     |          |          |                 |          |          |                                       |         |
|---------------------|----------|----------|-----------------|----------|----------|---------------------------------------|---------|
| ASTR 112            | PHYS 101 | PHYS 102 | MATH 102        | MATH 103 | SCIE 101 | COSC 131                              | 100     |
| ASTR 211/212        | PHYS 285 | PHYS 203 | PHYS 205        | PHYS 206 | MATH 201 | Recommended<br>MATH 202<br>and/or 203 | 100/200 |
| ASTR<br>323/325/326 | PHYS 310 | ASTR 381 | PHYS<br>311/313 | 300      | 300      | 200/300                               | 200/300 |

### Bachelor of Science major: Biochemistry

|          |          |          |                         |  |                         |         |         |
|----------|----------|----------|-------------------------|--|-------------------------|---------|---------|
| BCHM 111 | BCHM 112 | SCIE 101 | CHEM 114*               | Recommended<br>BIOL 112, 113<br>and CHEM 111 | 100                     | 100     | 100     |
| BCHM 202 | BCHM 212 | BCHM 222 | BCHM 281 or<br>CHEM 281 | BCHM 253                                     | Recommended<br>BCHM 206 | 200     | 100/200 |
| BCHM 305 | BCHM 306 | BCHM 338 | BCHM 339                | Recommended<br>BCHM 381**                    | 300                     | 200/300 | 200/300 |

\*Required if you don't have 14 credits of NCEA L3 Chemistry

\*\*Required for entry into postgraduate level study in Biochemistry

## Bachelor of Science major: Biological Sciences

|                              |                              |                              |                              |          |  |         |         |
|------------------------------|------------------------------|------------------------------|------------------------------|----------|--|---------|---------|
| BIOL 111                     | BIOL 112                     | BIOL 113                     | STAT 101                     | SCIE 101 | Recommended: 15 points of 100-level Chemistry and 15 points of 100-level Mathematics | 100     | 100     |
| BIOL 209                     | 200 BIOL                     | 200 BIOL                     | 200 BIOL                     | 200      | 200  | 200     | 100/200 |
| 300 BIOL/<br>BCHM<br>305/306 | 300 BIOL/<br>BCHM<br>305/306 | 300 BIOL/<br>BCHM<br>305/306 | 300 BIOL/<br>BCHM<br>305/306 | 300      | 300  | 200/300 | 200/300 |

BIOL309 is required for entry into postgraduate level study in Biological Sciences

## Bachelor of Science major: Chemistry

|                              |                              |                              |                 |  |     |         |         |
|------------------------------|------------------------------|------------------------------|-----------------|--|-----|---------|---------|
| CHEM 111                     | CHEM 112                     | CHEM 114*                    | SCIE 101        | 100                                      | 100 | 100     | 100     |
| CHEM 211                     | CHEM 212                     | CHEM 242                     | CHEM 251        | CHEM 281                                 | 200 | 200     | 100/200 |
| CHEM 3__/<br>BCHM<br>338/339 | CHEM 3__/<br>BCHM<br>338/339 | CHEM 3__/<br>BCHM<br>338/339 | CHEM<br>381/382 | Recommended<br>CHEM 3__/<br>BCHM 388/339 | 300 | 200/300 | 200/300 |

\*Required if you don't have 14 credits of NCEA L3 Chemistry

### Bachelor of Science major: Computer Science

|                                 |                                 |                                 |                                 |          |                                |         |         |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|----------|--------------------------------|---------|---------|
| COSC 131/121                    | COSC 122                        | MATH 102                        | MATH 120                        | SCIE 101 | Recommended COSC 101, STAT 101 | 100     | 100     |
| COSC 261                        | 200 COSC SENG ENCE              | 200 COSC SENG ENCE              | 200                             | 200      | 200                            | 200     | 100/200 |
| 300 COSC/SENG/ ENCE or DATA 301 | 300 COSC/SENG/ ENCE or DATA 301 | 300 COSC/SENG/ ENCE or DATA 301 | 300 COSC/SENG/ ENCE or DATA 301 | 300      | 300                            | 200/300 | 200/300 |

### Bachelor of Science major: Economics

|          |          |          |  |     |     |         |         |
|----------|----------|----------|--|-----|-----|---------|---------|
| ECON 104 | ECON 105 | SCIE 101 | Recommended MATH 102, 103 and STAT 101 | 100 | 100 | 100     | 100     |
| ECON 206 | ECON 207 | ECON 208 | Recommended ECON 213                   | 200 | 200 | 200     | 100/200 |
| 300 ECON | 300 ECON | 300 ECON | 300 ECON                               | 300 | 300 | 200/300 | 200/300 |

### Bachelor of Science major: Environmental Science

|          |          |                    |           |           |           |                      |           |
|----------|----------|--------------------|-----------|-----------|-----------|----------------------|-----------|
| ENVR 101 | GEOG 106 | STAT 101/ MATH 102 | SCIE 101  | 100 MAJOR | 100 MAJOR | Recommended SCIM 101 | 100*      |
| ENVR 209 | ENVR 210 | BIOL 209           | 200 MAJOR | 200 MAJOR | 200 MAJOR | 200                  | 100/200   |
| ENVR 302 | PSYC 341 | GEOG 309           |           | 300 MAJOR | 300 MAJOR | 300 MAJOR            | 300 MAJOR |

Note: The ENVR major must be taken in conjunction with any other major in the Bachelor of Science. Note 2: With the permission of the Tumuaki Kura | Head of School, a student who has a double major in Geography and Environmental Science must take GEOG309 plus a further 60 points of 300-level Geography. \*15 points of CHEM, GEOL or BIOL required

## Bachelor of Science major: Finance

|          |          |  |  |                                      |     |         |         |
|----------|----------|--|--|--------------------------------------|-----|---------|---------|
| STAT 101 | MATH 102 | ACCT 102                                     | SCIE 101                                     | Recommended<br>ECON 104,<br>MATH 103 | 100 | 100     | 100     |
| FINC 201 | FINC 203 | Recommended<br>FINC 205 or 200<br>level STAT | Recommended<br>ECON 213 or<br>200 level STAT | 200                                  | 200 | 200     | 100/200 |
| FINC 331 | 300 FINC | 300 FINC                                     | 300 FINC                                     | 300                                  | 300 | 200/300 | 200/300 |

## Bachelor of Science major: Financial Engineering

|                 |                         |                       |                       |          |                 |          |                         |
|-----------------|-------------------------|-----------------------|-----------------------|----------|-----------------|----------|-------------------------|
| STAT 101        | MATH 102                | MATH 103              | COSC<br>131/121       | COSC 122 | ECON 104        | SCIE 101 | Required<br>ACCT 102    |
| FINC 201        | ECON 207<br>or FINC 203 | ECON 213              | MATH 201              | SENG 201 | STAT<br>211/221 | STAT 213 | Recommended<br>INFO 213 |
| FINC<br>311/312 | FINC 331/<br>ECON 331   | STAT 317/<br>ECON 323 | Schedule<br>for major | 300      | 300             | 200/300  | 200/300                 |

## Bachelor of Science major: Geography

|          |          |          |          |     |     |         |         |
|----------|----------|----------|----------|-----|-----|---------|---------|
| GEOG 106 | GEOG 110 | SCIE 101 | 100      | 100 | 100 | 100     | 100     |
| 200 GEOG | 200 GEOG | 200 GEOG | 200      | 200 | 200 | 200     | 100/200 |
| GEOG 309 |          | 300 GEOG | 300 GEOG | 300 | 300 | 200/300 | 200/300 |

Note: With the permission of the Tumuaki Kura | Head of School, a student who has a double major in Geography and Environmental Science must take GEOG309 plus a further 60 points of 300-level Geography.

### Bachelor of Science major: Geology

|          |          |          |          |                      |                      |         |         |
|----------|----------|----------|----------|----------------------|----------------------|---------|---------|
| GEOL 101 | GEOL 102 | SCIE 101 | 100      | 100                  | 100                  | 100     | 100     |
| GEOL 240 | GEOL 242 | GEOL 243 | GEOL 244 | GEOL 241             | 200                  | 200     | 100/200 |
| GEOL 351 | GEOL 352 | 300 GEOL | 300 GEOL | 300 Recommended GEOL | 300 Recommended GEOL | 200/300 | 200/300 |

### Bachelor of Science major: Linguistics

|          |              |          |          |     |     |         |         |
|----------|--------------|----------|----------|-----|-----|---------|---------|
| LING 101 | LING 102/103 | SCIE 101 | 100      | 100 | 100 | 100     | 100     |
| LING 215 | LING 217     | 200 LING | 200      | 200 | 200 | 200     | 100/200 |
| LING 310 |              | 300 LING | 300 LING | 300 | 300 | 200/300 | 200/300 |

### Bachelor of Science major: Mathematics

|  |           |          |            |     |     |         |         |
|--|-----------|----------|------------|-----|-----|---------|---------|
| MATH 102*  | MATH 103* | SCIE 101 | MATH 101** | 100 | 100 | 100     | 100     |
| 45 points (3 papers) selected from MATH201/202/203/220/240 |           |          | 200        | 200 | 200 | 200     | 100/200 |
| 300 MATH   | 300 MATH  | 300 MATH | 300 MATH   | 300 | 300 | 200/300 | 200/300 |

\*The combination of MATH102 and 103 is equivalent to MATH199

\*\*Required if you don't have 14 credits of NCEA L3 Maths



## Bachelor of Science major: Medicinal Chemistry

|                       |                       |           |                       |          |                       |         |         |
|-----------------------|-----------------------|-----------|-----------------------|----------|-----------------------|---------|---------|
| CHEM 111              | CHEM 112/<br>BCHM 112 | CHEM 114* | BIOL 116              | SCIE 101 | BCHM 111/<br>BIOL 111 | 100     | 100     |
| CHEM 212/<br>BCHM 212 | CHEM 242/<br>BCHM 206 | CHEM 246  | CHEM 281/<br>BCHM 281 | 200      | 200                   | 200     | 100/200 |
| CHEM 342              | CHEM 346              | CHEM 347  | CHEM 381              | 300      | 300                   | 200/300 | 200/300 |

\*Required if you don't have 14 credits of NCEA L3 Chemistry

## Bachelor of Science major: Philosophy

|                      |                            |                            |          |     |     |         |         |
|----------------------|----------------------------|----------------------------|----------|-----|-----|---------|---------|
| SCIE 101             | 100<br>Recommended<br>PHIL | 100<br>Recommended<br>PHIL | 100      | 100 | 100 | 100     | 100     |
| PHIL 233             | 200 PHIL                   | 200 PHIL                   | 200      | 200 | 200 | 200     | 100/200 |
| PHIL 305/310/311/317 |                            | 300 PHIL                   | 300 PHIL | 300 | 300 | 200/300 | 200/300 |

## Bachelor of Science major: Physics

|          |          |          |          |          |                                    |           |            |
|----------|----------|----------|----------|----------|------------------------------------|-----------|------------|
| PHYS 101 | PHYS 102 | MATH 102 | MATH 103 | SCIE 101 | Required<br>COSC 131               | PHYS 111* | MATH 101** |
| PHYS 285 | PHYS 203 | PHYS 205 | PHYS 206 | MATH 201 | Recommended MATH<br>202 and/or 203 | 200       | 100/200    |
| PHYS 310 | PHYS 311 | PHYS 313 | PHYS 381 | 300      | 300                                | 200/300   | 200/300    |

\*Required if you don't have 14 credits of NCEA L3 Physics \*\*Required if you don't have 14 credits of NCEA L3 Maths

### Bachelor of Science major: Psychology

|          |          |          |                      |          |     |         |         |
|----------|----------|----------|----------------------|----------|-----|---------|---------|
| PSYC 105 | PSYC 106 | SCIE 101 | Recommended SPSC 114 | 100      | 100 | 100     | 100     |
| PSYC 206 | 200 PSYC | 200 PSYC | 200 PSYC             | 200      | 200 | 200     | 100/200 |
| 300 PSYC | 300 PSYC | 300 PSYC | 300 PSYC             | 300 PSYC | 300 | 200/300 | 200/300 |

### Bachelor of Science major: Statistics

|           |           |          |                      |     |     |         |         |
|-----------|-----------|----------|----------------------|-----|-----|---------|---------|
| MATH 102* | MATH 103* | SCIE 101 | Recommended STAT 101 | 100 | 100 | 100     | 100     |
| 200 STAT  | 200 STAT  | 200 STAT | 200                  | 200 | 200 | 200     | 100/200 |
| 300 STAT  | 300 STAT  | 300 STAT | 300 STAT             | 300 | 300 | 200/300 | 200/300 |

\*The combination of MATH 102 and 103 is equivalent to MATH 199

# Minors

## Science

### Astronomy

must be credited with the following:

At least 75 points in Astronomy or Physics, including at least 45 points at 200-level or above

### Biochemistry

must be credited with the following:

At least 75 points in Biochemistry including at least 45 points at 200-level or above.

### Biology

must be credited with the following:

At least 75 points in Biology including at least 45 points at 200-level or above.

### Chemistry

must be credited with the following:

At least 75 points in Chemistry, including CHEM 111 and CHEM 112 (BCHM 112), and at least 45 points at 200-level or above.

### Computer Science

must be credited with the following:

At least 75 points in Computer Science including at least 45 points at 200-level or above.

### Economics

must be credited with the following:

- i. ECON 104 and ECON 105; and
- ii. ECON 207 or ECON 208; and
- iii. A further 15 points of Economics at 200-level or above; and
- iv. A further 15 points of Economics at 300-level.

### Environmental Science

must be credited with the following: STAT101, ENVR101, ENVR209, ENVR302 and at least 15 points at 200-level from ANTA201, BIOL274, CHEM247, GEOG201, GEOG211, GEOG215, GEOG222, GEOL246, HLTH214, SOIL203, WATR201, WATR203.

### Finance

must be credited with either:

- i. ACCT 102, STAT 101; and
- ii. MATH 101 or MATH 102; and
- iii. FINC 201, FINC 203; and
- iv. A further 15 points from FINC 301, FINC 311 or FINC 312.

or

- i. STAT 101; and
- ii. MATH 102 and MATH 103; and
- iii. FINC 201; and
- iv. A further 30 points of Finance, including at least one of FINC 301, FINC 311 or FINC 312

### Geography

must be credited with the following:

At least 75 points in Geography, including at least 45 points at 200-level or above.

### Geology

must be credited with the following:

At least 75 points in Geology, including at least 45 points at 200-level or above

### Linguistics

must be credited with the following:

At least 75 points in Linguistics, including at least 45 points at 200-level or above.

### Mathematics

must be credited with the following:

At least 75 points in Mathematics including at least 45 points at 200-level or above

## **Philosophy**

must be credited with the following:

At least 75 points in Philosophy, including at least 45 points at 200-level or above

## **Physics**

must be credited with the following:

At least 75 points in Physics, including at least 45 points at 200-level or above.

## **Psychology**

must be credited with the following:

At least 75 points in Psychology, including at least 45 points at 200-level or above.

## **Statistics**

must be credited with the following:

At least 75 points in Statistics (or from other relevant subjects with the approval of the Tumuaki Tari | Head of Department), including at least 45 points at 200-level or above

## **Non Science**

### **Accounting**

must be credited with the following:

- i. ACCT 102 and ACCT 103; and
- ii. Either ACCT 211 or ACCT 222; and
- iii. A further 30 points of Accounting at 200-level or above which may include INFO 243; and
- iv. A further 15 points of Accounting at 300-level.

### **Anthropology**

must be credited with at least 75 points in Anthropology, which must include at least 45 points at 200-level or above.

### **Art History and Theory**

must be credited with at least 75 points in Art History and Theory, which must include at least 45 points at 200-level or above.

### **Business and Sustainability**

must be credited with the following:

- i. MGMT 100
- ii. MGMT 230 and MGMT 335; and
- iii. A further 30 points from ECON 225, MGMT 270, ACCT 340, MGMT 333.

## **Chinese**

must be credited with at least 75 points in Chinese, which must include at least 45 points at 200-level or above, and which must include at least 15 points in Chinese language course(s) as approved by the Kairuruku Hōtaka | Programme Coordinator.

## **Cinema Studies**

must be credited with at least 75 points in Cinema Studies, which must include at least 45 points at 200-level or above.

## **Classics**

must be credited with at least 75 points in Classics, which must include at least 45 points at 200-level or above.

## **Cultural Studies**

must be credited with at least 75 points in Cultural Studies courses, or courses approved by the Cultural Studies Kairuruku Hōtaka Programme Coordinator, which must include at least 45 points at 200-level or above.

## **Digital Humanities**

must be credited with at least 75 points, including at least 45 points at 200-level or above from the Digital Humanities (DIGI) schedule. DIGI 101 is a required course. Note: A student

may include only one PACE internship course in their minor. Internship courses that are to be credited to the Digital Humanities minor must be approved in advance by the Kairuruku Hōtaka | Programme Coordinator.

### **Education**

must be credited with at least 75 points in Education, which must include at least 45 points at 200-level or above.

### **English Language**

must be credited with at least 75 points in English Language, which must include at least 45 points at 200-level or above.

### **Entrepreneurship**

must be credited with the following:

- i. ACCT 102, MGMT 100, MKTG 100; and
- ii. MGMT 223; and
- iii. MGMT 342, MGMT 343

### **European and European Union Studies**

must be credited with at least 75 points in European and European Union Studies, which must include EURA 101, and at least 45 points at 200-level or above. A student may include up to 30 points of a European language (French, German, Russian, or Spanish) in their EURA Minor.

### **French**

must be credited with at least 75 points in French, which must include at least 45 points at 200-level or above.

### **German**

must be credited with at least 75 points in German, which must include at least 45 points at 200-level or above, and must include at least GRMN 152. Note: EURA courses with German content may be included in the major or minor with the approval of the Kairuruku Hōtaka | Language Programme Coordinator.

### **History**

must be credited with at least 75 points in HIST coded courses which must include at least 45 points at 200-level or above.

### **Human Resource management**

A student intending to minor in Human Resource Management must be credited with the following: i. MGMT 100; and ii. MGMT 206, MGMT 207; and iii. MGMT 303, MGMT 308.

### **Human Services**

must be credited with at least 75 points in Human Services, which must include at least 45 points at 200-level or above.

### **Information Systems**

must be credited with the following:

- i. INFO 123; and
- ii. INFO 223 or INFO 253; and
- iii. A further 30 points of Information Systems at 200-level or above; and iv. A further 15 points of Information Systems at 300-level.

### **Innovation**

must be credited with the following:

- i. INOV 200
- ii. INOV 201
- iii. INOV 202 or MGMT 223
- iv. INOV 300 or MGMT 342
- v. A further 15 points in INOV at 200 or 300-level.

### **International Business**

must be credited with the following:

- i. MGMT 100, ECON 104, MKTG 100; and
- ii. ECON 222, MGMT 221; and
- iii. MGMT 332.

### **Japanese**

must be credited with at least 75 points in Japanese, which must include at least 45 points at 200-level or above, and must include at least one Japanese language course as approved by the Kairuruku Hōtaka | Programme Coordinator.

### **Māori and Indigenous Studies**

must be credited with at least 75 points in Māori and Indigenous Studies (or their co-coded equivalents), which must include at least 45 points at 200-level or above.

### **Marketing**

must be credited with the following:

- i. MKTG 100; and
- ii. MKTG 201, MKTG 202, MKTG 204; and
- iii. A further 15 points of Marketing at 300-level.

### **Media and Communication**

must be credited with at least 75 points in Media and Communication, which must include at least 45 points at 200-level or above.

### **Music**

must be credited with at least 75 points in Music, which must include at least 45 points at 200-level or above as approved by the Kairuruku Hōtaka Programme Coordinator.

### **Operations and Supply Chain Management**

must be credited with the following:

- i. MGMT 170; and
- ii. MGMT 270, MGMT 271; and
- iii. MGMT 370; and
- iv. 15 points from MGMT 371–379.

### **Political Science and International Relations**

must be credited with at least 75 points in Political Science and International Relations, which must include at least 45 points from POLS 201–249 and POLS 301–349.

### **Russian**

must be credited with at least 75 points in Russian, which must include at least 45 points at 200-level or above. Note: EURA courses with RUSS content may be included in the major or minor with the approval of the Kairuruku Hōtaka | Language Programme Coordinator.

### **Sociology**

must be credited with at least 75 points in Sociology, which must include 45 points at 200-level or above, and at least 15 points at 100-level and at least 30 points at 200-level.

### **Spanish**

must be credited with at least 75 points in Spanish, which must include at least 45 points at 200-level or above.

### **Taxation/ Taxation and Accounting**

must be credited with the following:

- i. ACCT 102, ACCT 103, ACCT 152; and
- ii. ACCT 254; and
- iii. ACCT 358, ACCT 359.

### **Te Reo Māori**

must be credited with at least 75 points in Te Reo Māori (or their co-coded equivalents), which must include at least 45 points at 200-level or above, including TREO 211 and TREO 212.

### **Tourism and Marketing and Management**

must be credited with the following:

- i. MKTG 100, MGMT 100, STAT 101; and
- ii. MKTG 205, MKTG 240; and
- iii. MKTG 314.

## **Education**

### **Youth and Community Leadership**

Must be credited with at least 75 points as follows:

- i. 30 points from courses at 200 level or above from Schedule C to the regulations for the BYCL
- ii. 45 points from Schedule S to the BYCL (ie CHCH101, YAACL101 and YAACL201)

## Health

### Health Education

A student must complete a minimum of 75 points, with at least 45 points at 200 level or above from the courses listed in the Health Education minor

### Physical Activity

A student must complete a minimum of 75 points, with at least 45 points at 200 level or above from the courses listed in the Physical Activity minor schedule

NOTE – if students are wanting to take this minor to later apply for a teaching qualification, we recommend they take the following courses – SPCO104, SPCO204, SPCO209, SPCO335 and SPCO336 (they are in the schedule of available courses, but the ones recommended for the PE teaching pathway)

### Public Health

A student must complete a minimum of 75 points, with at least 45 points at 200 level or above from courses listed in the Public Health major

### Society and Policy

A student must complete a minimum of 75 points, with at least 45 points at 200 level or above from courses listed in the Society and Policy minor schedule

## Sport Coaching

(in general – a minor consists of a minimum of:

- 75pts from a single subject area; and
- At least 30pts at 200 level or above; and
- At least 15pts at 300 level

### Adventure Sport and Environment

SPCO 126, SPCO 222, SPCO 226, SPCO 227, SPCO 326

One of the courses above at 200 level may be substituted with one of the following (SPCO 107, SPCO 224 or SPCO 231) with approval of the Programme Coordinator.

NOTE – this minor is being phased out and not all courses are offered every year. My advice to students at present is that they can enrol in courses that are offered, but they may not be able to complete as a minor

### Nutrition

SPCO 107, SPCO 242, SPCO 343, plus two courses from the following: SPCO 223, SPCO 241, SPCO 309

### Performance Analysis

SPCO103 or STAT 101, SPCO 204, SPCO 231, SPCO 331 Plus one of the following: SPCO103, SPCO 223, SPCO 332

### Sport Science

Must complete 75 points from the following, with at least 45 points above 200 level and at least 15 points at 300 level:

SPCO 103, SPCO 107

SPCO 204, SPCO 221, SPCO 223, SPCO 231, SPCO 241, SPCO 242

SPCO 304, SPCO 309, SPCO 331, SPCO 332, SPCO 341, SPCO 343

### Strength and Conditioning

SPCO 107, SPCO 241, SPCO 242, SPCO 309, SPCO 341

One of the courses above may be substituted with SPCO343 with approval from the Programme Coordinator

# Bachelor of Data Science (BDataSc)

The BDataSc degree contains a core of maths, data science and computer science. Along with these core subjects, students choose a 'major' subject to specialise in. The following majors are offered in the BDataSc:

- Bioinformatics
- Spatial data science
- Population health data science
- Data science
- Computational linguistics

## Bachelor of Data Science degree plan

|          |          |              |           |           |                              |           |         |
|----------|----------|--------------|-----------|-----------|------------------------------|-----------|---------|
| SCIE 101 | MATH 102 | DATA 101     | COSC 121  | COSC 122  | 100 MAJOR                    | 100 MAJOR | 100     |
| DATA 201 | DATA 203 | STAT 201/202 | COSC 262  | PHIL 240  | 200 MAJOR                    | 200 MAJOR | 100/200 |
| DATA 301 | DATA 303 | STAT 315/318 | 300 MAJOR | 300 MAJOR | 300 MAJOR (30 point project) |           | 200/300 |

## Bachelor of Data Science major: Bioinformatics

Use a wide range of applications and tools to understand and manage the vast amounts of complex biological data generated from scientific research.

|          |          |              |          |          |          |          |          |
|----------|----------|--------------|----------|----------|----------|----------|----------|
| SCIE 101 | MATH 102 | DATA 101     | COSC 121 | COSC 122 | BIOL 111 | BIOL 112 | 100      |
| DATA 201 | DATA 203 | STAT 201/202 | COSC 262 | PHIL 240 | BIOL 215 | BIOL 231 | BIOL 271 |
| DATA 301 | DATA 303 | STAT 315/318 | BIOL 333 | BIOL 334 | BIOL 338 |          | BIOL 337 |



## Bachelor of Data Science major: Business Analytics

|          |          |              |  |          |   |          |  |
|----------|----------|--------------|--|----------|---|----------|--|
| SCIE 101 | MATH 102 | DATA 101     | COSC 121   | COSC 122 | Two courses from: MGMT 100; MKTG 100; ACCT102; ACCT 103; ECON 104; ECON 105; INFO 123; MGMT 170 |          | 100  |
| DATA 201 | DATA 203 | STAT 201/202 | COSC 262   | PHIL 240 | INFO 260  | INFO 261 | One course from 200 level ACCT/ECON/FINC/ INFO/MGMT/MKTG |
| DATA 301 | DATA 303 | STAT 315/318 | Two courses from one of 300 level ACCT/ECON/ FINC/INFO/MGMT/MKTG |          | DATA 309  |          | 200/300  |

## Bachelor of Data Science major: Computational Linguistics

Apply computer science to the analysis, synthesis and comprehension of written and spoken language. Used in everything from speech recognition systems to search engines.

|          |          |              |          |          |          |          |         |
|----------|----------|--------------|----------|----------|----------|----------|---------|
| SCIE 101 | MATH 102 | DATA 101     | COSC 121 | COSC 122 | LING 101 | LING 102 | 100     |
| DATA 201 | DATA 203 | STAT 201/202 | COSC 262 | PHIL 240 | LING 217 | LING 223 | 100/200 |
| DATA 301 | DATA 303 | STAT 315/318 | COSC 367 | LING 315 | LING 310 |          | 200/300 |

## Bachelor of Data Science major: Data Science

Analyse past and current data to provide predictions and valuable insights into everything from social behaviours to the natural environment.

|          |          |              |          |          |          |                     |         |
|----------|----------|--------------|----------|----------|----------|---------------------|---------|
| SCIE 101 | MATH 102 | DATA 101     | COSC 121 | COSC 122 | 100      | 100                 | 100     |
| DATA 201 | DATA 203 | STAT 201/202 | COSC 262 | PHIL 240 | COSC 265 | 1 from STAT 211-299 | 100/200 |
| DATA 301 | DATA 303 | STAT 315     | COSC 367 | STAT 318 | DATA 309 |                     | 200/300 |

### Bachelor of Data Science major: Population Health Data Science

Find data-driven solutions to disease prevention and improve public health and well-being on a large scale.

|          |          |              |          |          |          |          |         |
|----------|----------|--------------|----------|----------|----------|----------|---------|
| SCIE 101 | MATH 102 | DATA 101     | COSC 121 | COSC 122 | HLTH 110 | GISC 101 | 100     |
| DATA 201 | DATA 203 | STAT 201/202 | COSC 262 | PHIL 240 | HLTH 213 | HLTH 214 | 100/200 |
| DATA 301 | DATA 303 | STAT 315/318 | HLTH 312 | GEOG 325 | DATA 309 |          | 200/300 |

### Bachelor of Data Science major: Spatial Data Science

Use location-based data and tools like geographic information systems to find patterns and tackle complex problems.

|          |          |              |          |          |              |          |         |
|----------|----------|--------------|----------|----------|--------------|----------|---------|
| SCIE 101 | MATH 102 | DATA 101     | COSC 121 | COSC 122 | GEOG 106/110 | GISC 101 | 100     |
| DATA 201 | DATA 203 | STAT 201/202 | COSC 262 | PHIL 240 | GEOG 205     | GEOG 208 | 100/200 |
| DATA 301 | DATA 303 | STAT 315/318 | GEOG 323 | GEOG 324 | GEOG 309     |          | 200/300 |

# Bachelor of Environmental Science with Honours (BEnvSci(Hons))

The BEnvSci(Hons) degree is a 4-year undergraduate degree focusing on bio-physical sciences and the impact of science on the social world. The first year of study centres on interdisciplinary science of biology, chemistry, and earth sciences while the second year includes a focus on the environmental major. The final year of study includes a community-based research project. Mātauranga Māori and bicultural concepts are embedded in the core of the degree as well as each of the majors.

## Bachelor of Environmental Science with Honours degree plan

|          |          |                              |          |              |              |              |           |
|----------|----------|------------------------------|----------|--------------|--------------|--------------|-----------|
| ENVR 101 | STAT 101 | CHEM 114/111                 | BIOL 112 | GEOG 106     | SCIE 101     | 100**        | 100**     |
| ENVR 209 | ENVR 210 | BIOL 209/<br>GEOG 205/208    | BIOL 274 | 200<br>MAJOR | 200<br>MAJOR | 200**        | 100/200** |
| ENVR 302 | ENVR 303 |                              | PSYC 341 | 300<br>MAJOR | 300<br>MAJOR | 300<br>MAJOR | 200/300** |
| ENVR 415 | ENVR 411 | ENVR 480<br>Research project |          | 400<br>MAJOR | 400<br>MAJOR | 400<br>MAJOR | 400**     |

\*You will also complete 400 hours of practical work placement arranged through UC with ENVR 300 Environmental Science Work Experience (0 points, 0 fees).

You can choose to take this course during the summer months (November-February) in either year 2 or 3 of the degree.

\*\*Chosen from the approved schedule of courses.

## Bachelor of Environmental Science major: Ecosystem Health and Biosecurity

Graduates will develop a deep understanding of ecological principles and a range of lab and field skills that will enable them to contribute to the sustainable use and management of natural resources.

|          |          |                              |          |  |   |          |         |
|----------|----------|------------------------------|----------|--|---|----------|---------|
| ENVR 101 | STAT 101 | CHEM 114/<br>CHEM 111        | BIOL 112 | GEOG 106   | SCIE 101  | 100      | 100     |
| ENVR 209 | ENVR 210 | BIOL 209/<br>GEOG 205/208    | BIOL 274 | BIOL 275   | SOIL 203/WATR 201/<br>GEOG 201/BIOL 213                 | BIOS 201 | 200     |
| ENVR 302 | ENVR 303 |                              | PSYC 341 | BIOL 309   | 30 points from: BIOL<br>332/336/371/375/377/378/383/384 |          | 200/300 |
| ENVR 415 | ENVR 411 | ENVR 480<br>Research project |          | 30 points from: BIOL<br>420/423/424/425/<br>426/427/428/ FORE447 |   | 400      | 400     |

## Bachelor of Environmental Science major: Environmental Change

Develop a toolbox to help tackle a range of environmental issues. There is a strong foundation in Earth system science and courses to assist with understanding the importance of human activities on our environment.

|          |          |                              |          |  |                 |          |         |
|----------|----------|------------------------------|----------|--|-----------------|----------|---------|
| ENVR 101 | STAT 101 | CHEM 114/111                 | BIOL 112 | GEOG 106   | SCIE 101        | ANTA 102 | 100     |
| ENVR 209 | ENVR 210 | BIOL209/<br>GEOG 205/208     | BIOL 274 | ANTA 201   | GEOG<br>201/215 | BIOS 201 | 100/200 |
| ENVR 302 | ENVR 303 |                              | PSYC 341 | 45 points from: GEOG 312/311/<br>BIOL 337 / PHYS 330 |                 |          | 200/300 |
| ENVR 415 | ENVR 411 | ENVR 480<br>Research project |          | GEOG 412   |                 | BIOL 427 | 400     |

## Bachelor of Environmental Science major: Environmental Contamination

There is a growing demand for skilled professionals who can work with mana whenua, communities, industry and governments to determine the extent and mitigate the impacts of environmental contamination. This major explores chemical and biological (e.g. microbial) contaminants and their impacts on the environment.

|          |          |                              |          |   |   |   |         |
|----------|----------|------------------------------|----------|---|---|---|---------|
| ENVR 101 | STAT 101 | CHEM 114/111                 | BIOL 112 | GEOG 106  | SCIE 101  | BIOL 111                                    | 100     |
| ENVR 209 | ENVR 210 | BIOL 209/<br>GEOG 205/208    | BIOL 274 | BIOL 213  | CHEM 247  | SOIL 203/WATR 201/<br>GEOG 201/<br>HLTH 214 | 100/200 |
| ENVR 302 | ENVR 303 |                              | PSYC 341 | 30 points from: CHEM 340/<br>BIOL 313/PHYS 330/<br>BIOL 309 |   | ENVR 304                                    | 200/300 |
| ENVR 415 | ENVR 411 | ENVR 480<br>Research project |          | WATR 402  | 30 points from: ENVR 414/<br>BIOL 455/WATR 403/WATR 401 |   | 400     |

## Bachelor of Environmental Science major: Environmental Hazards and Disasters

This major allows environmentally passionate students to develop their interest in reducing the negative impacts that result when natural hazard events trigger disasters and provides a pathway to a professional qualification in Disaster Risk and Resilience (e.g. MDRR), which is a rapidly-developing focus in NZ and globally.

|          |          |                              |          |          |          |                   |         |
|----------|----------|------------------------------|----------|----------|----------|-------------------|---------|
| ENVR 101 | STAT 101 | CHEM 114/111                 | BIOL 112 | GEOG 106 | SCIE 101 | GEOL 102          | 100     |
| ENVR 209 | ENVR 210 | BIOL 209/<br>GEOG 205/208    | BIOL 274 | GEOL 246 | GEOG 215 | COMS 232          | 100/200 |
| ENVR 302 | ENVR 303 |                              | PSYC 341 | GEOL 354 | GEOG 351 | GEOG 323/324/325  | 200/300 |
| ENVR 415 | ENVR 411 | ENVR 480<br>Research project |          | DRRE 401 | DRRE 402 | GEOL 404/HLTH 403 |         |

## Bachelor of Environmental Science major: Fresh Water

Graduates will develop an ability to think holistically about water management, and possess a range of skills that will enable them to contribute to the sustainable management of freshwater resources and ecosystems.

|          |          |                              |          |  |              |   |         |
|----------|----------|------------------------------|----------|--|--------------|---|---------|
| ENVR 101 | STAT 101 | CHEM 114/111                 | BIOL 112 | GEOG 106   | SCIE 101     | Recommended BIOL111 or BIOL113                  | 100     |
| ENVR 209 | ENVR 210 | BIOL 209/<br>GEOG 205/208    | BIOL 274 | WATR 201   | GEOG 201     | CHEM 247/<br>BIOL 213                           | 100/200 |
| ENVR 302 | ENVR 303 |                              | PSYC 341 | 30 points from: BIOL 375/<br>GEOG 311/312/CHEM 340 |              | WATR 301  | 200/300 |
| ENVR 415 | ENVR 411 | ENVR 480<br>Research project |          | WATR 402   | WATR 401/403 | BIOL 425/GEOG<br>409*/412/ENGE<br>414/ ENVR 414 | 400     |

\*30 points

## Bachelor of Environmental Science major: Sustainable Coasts

Graduates of this major will have a strong grounding in Earth and ecosystem science as it applies to coastal, marine and connected urban and river environments. They will have developed an ability to think holistically about the sustainable use and management of coastal and marine resources, and possess a range of skills that will enable them to contribute to a future where people thrive alongside, and as a part of, blue edge environments.

|          |          |                              |          |          |          |                                   |          |
|----------|----------|------------------------------|----------|----------|----------|-----------------------------------|----------|
| ENVR 101 | STAT 101 | CHEM 114/111                 | BIOL 112 | GEOG 106 | SCIE 101 | Required BIOL113                  | 100      |
| ENVR 209 | ENVR 210 | BIOL 209/<br>GEOG 205/208    | BIOL 274 | GEOG 201 | BIOL 212 | GEOG 215                          | BIOL 275 |
| ENVR 302 | ENVR 303 |                              | PSYC 341 | GEOG 311 | BIOL 384 | BIOL 309/377/378/<br>GEOG 323/324 | 200/300  |
| ENVR 415 | ENVR 411 | ENVR 480<br>Research project |          | GEOG 409 |          | BIOL 428                          | 400      |

# Bachelor of Speech and Language Pathology with Honours (BSLP(Hons))

## Bachelor of Speech and Language Pathology – Intermediate

|          |          |  |          |          |          |          |          |
|----------|----------|--|----------|----------|----------|----------|----------|
| SPSC 161 | STAT 101 | At least 1 of:<br>HLTH 106<br>MAOR 165/172<br>TREQ 110/111 | 100<br>* | 100<br>* | 100<br>* | 100<br>* | 100<br>* |
|----------|----------|--|----------|----------|----------|----------|----------|

\* courses can be selected from recommended list: SPSC 133, SPSC 114, EDUC 102, LING 101, PSYC 105, PSYC 106 or with guidance from an Advisor. To be considered for the BSLP (Hons), students need to apply by 1 October the year before.

## Bachelor of Speech and Language Pathology (Hons)

|          |          |          |          |          |          |                 |          |
|----------|----------|----------|----------|----------|----------|-----------------|----------|
| SPSC 222 | SPSC 223 | SPSC 232 | HEAR 243 | SPSC 262 | SPSC 263 | SPSC 281        | SPSC 282 |
| SPSC 320 | SPSC 363 | SPSC 365 | SPSC 366 | SPSC 367 | SPSC 369 | SPSC 381        | SPSC 382 |
| SPSC 421 | SPSC 451 | SPSC 461 | SPSC 468 | SPSC 482 | SPSC 484 | SPSC 490 or 491 |          |

# Types of degrees

## Conjoint degrees

We currently offer two conjoint degrees.

1. The Conjoint Bachelor of Product Design and Science: advising is done primarily in the Faculty of Engineering.
2. The Conjoint Bachelor of Commerce and Science: advising is done primarily in the School of Business.

### Key points:

Admission: students wishing to take a conjoint degree, must have a Merit endorsement minimum at NCEA Level 3.

Students are expected to maintain a B average (GPA of 4.0) in each year of study. Continuation in the conjoint degree is with the approval of the relevant Dean.

Students take 135 points each year for four years to complete the degree (540 points total).

At least 1 course from each degree must be taken in each year of study.

Advising is absolutely critical to a student completing this degree.

On completion, a student will receive one degree parchment with both degrees on it.

## Double degrees

Students can take double degrees at UC. The BSc can be taken with most other degrees at UC, with a few exceptions (BFA, BTchLn).

Most combinations can be taken in 5 years at 120 points per year (600 points total) – planning is critical to help with this.

Students must complete the majoring, minoring and compulsory requirements of both degrees.

The BE(Hons) double degree with the BSc has special regulations, and students will need to seek advice to ensure that they complete all the required elements.

On completion, a student will receive a degree parchment for each degree.

# FAQ

## Which papers are required for my major?

You can find the list of required papers for your major on our web site.

All students who enrolled in a BSc, BDataSc and BEnvSci(Hons) must take SCIE101.

The number of papers required for each major differs, and you can find information on this on our website. The rest of your enrolment needs to be filled with elective papers, which can be either complementary to your major, or they can be in completely different subject areas.

## What is SCIE101?

In this foundational course, we examine stimulating questions such as what science is, who does science, how science is practised, how culture, society and science interact and how science is communicated to differing audiences. This course will draw on a variety of historical and contemporary case studies, leading-edge research, ethical challenges and controversial issues. Students will gain an understanding of the civic roles, responsibilities and influence of science in our Māori, New Zealand, and global communities. Students



will learn how to work effectively as a team and communicate successfully to communities and end-users. Students will learn what it means to be a successful scientist in Aotearoa New Zealand and the world in the 21st century.

### **I need help with planning my degree. Who do I go to?**

If you want help with planning your degree, and choosing your papers, you need to get in touch with the UC Liaison team. 0800 827 748 or [liaison@canterbury.ac.nz](mailto:liaison@canterbury.ac.nz)

### **How do I drop a paper, or add another paper into my enrolment?**

You can drop a paper through your myUC account. Key dates are listed on our website.

### **If I fail or drop a paper, do I have to take it again?**

If the paper you failed is required for your major, you will need to take it again.

### **What is a major?**

A major is the main subject area you will be studying during your Bachelor degree. Very likely, half or more of the papers you do at UC will be in your major.

## **BSc Majors**

|                       |                     |
|-----------------------|---------------------|
| Astronomy             | Geography           |
| Biochemistry          | Geology             |
| Biological Sciences   | Linguistics         |
| Chemistry             | Mathematics         |
| Computer Science      | Medicinal Chemistry |
| Economics             | Philosophy          |
| Environmental Science | Physics             |
| Finance               | Psychology          |
| Financial Engineering | Statistics          |

### **Can I take any Arts or Commerce papers as a Science student?**

Yes, you can take up to 105 points of non-science papers throughout your BSc.

### **How long does it take to do a double major? Is it too hard?**

If the degree is planned carefully, in most cases it takes three years to graduate with a double major, which is the same time as a single major. The workload is also the same as doing a single major.

### **What is a minor?**

A minor is a selection of courses in a specific subject area. At UC the minimum requirements for a minor are 75 points in total – and of these,

45 points must be at 200 or 300 level. This allows you pick and choose courses from a major that interest you.

From 2020, you can add minors from the BA, BSc, BCom and BSpC to the BSc if you wish – a minor is an option, not a requirement for the BSc.

### **What is the difference between a double degree and a conjoint degree?**

At UC, you can do a **double degree** in Science and most other degrees. This does, however, take careful planning and coordination. It requires a minimum of 600 points and students must complete all the major/minor/compulsory course requirements of both degrees.

We also offer a limited number of conjoint degrees. A **conjoint degree** at UC has specific degree regulations, and requires a minimum of 540 points, and students are required to maintain a specified GPA to remain in this qualification. Students must complete all major/minor/compulsory course requirements that are specified in the degree requirements.

The conjoint degrees currently available with the BSc are:

- the Conjoint Bachelor of Commerce and Science (primary advising from the School of Business)
- the Conjoint Bachelor of Product Design and Science (primary advising from the Faculty of Engineering).

# Notes

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**Start now.**  
**[www.canterbury.ac.nz/science](http://www.canterbury.ac.nz/science)**