Bachelor of

Science

Scientists are discoverers looking into the unknown, from the depths of the Antarctic Ocean to the workings of the human brain. A Tohu Paetahi Pūtaiao—Bachelor of Science (BSc) will help you gain the essential skills you need to become a science innovator in the evolving job market of the future. You could be developing new technologies, treating diseases, protecting the environment, or addressing the many other problems that require expert scientific minds.

Within the Bachelor of Science, you can also explore communication, the environment, social justice, and societies and cultures. This connection of science and social science generates a powerful platform for the development of new ideas and their implementation in industry, policy, and communities.

In this three-year degree, you can choose from 24 majors, focusing on everything from Biotechnology to Environmental Studies to Space Science. Our BSc gives you the ability to combine your interests and career aspirations to create a degree that is individual to you by combining a Science major with a second major from another degree in the University.

Our career-focused curriculum means that you'll graduate with the knowledge and skills to both understand scientific theories and undertake research. Your BSc will position you ahead of other graduates in Aotearoa New Zealand and the world, with skills in collecting, analysing, and understanding data, thinking critically and creatively, and communicating your ideas effectively.

As a student, you'll find yourself surrounded by people passionate about science. Our staff are world leaders in their fields of research, and you'll benefit from their expertise in lecture theatres and laboratory sessions. Much of their ground-breaking research is carried out in the University's excellent facilities and out in the field, utilising Wellington's vibrant science community.

Wellington is home to many national organisations and has the highest concentration of science organisations in the country. Our capital-city location places our University at the heart of science discovery, and our relationships with Wellington's science community provide you with opportunities to gain valuable work experience and summer internships. You'll be surrounded by researchers who are key voices in significant debates, discussions, and discoveries.

The 2025 QS World University Rankings by Subject placed Development Studies, Geography, and Psychology at Victoria University of Wellington in the top 150 worldwide. In the latest Performance-Based Research Fund national assessment of research excellence, we were ranked first in New Zealand for the proportion of top-quality researchers across Biomedical Science, Earth Sciences, and Human Geography. Join us in the heart of science discovery in Aotearoa and change the world for the better.

CAREER OPPORTUNITIES

A BSc provides the ideal foundation for a career in any scientific area. Employers recognise that our Science graduates, with adaptable skills and the ability to think critically and creatively about challenging issues, are especially suited to the jobs of the twenty-first century.

You could become a clinical psychologist, conservation biologist, data scientist, marine scientist, meteorologist, physicist, or teacher—the possibilities are endless and, in our changing world, your future career may not even exist yet.

ⓘ wgtn.ac.nz/careers

POSTGRADUATE STUDY

A BSc may lead to further study at Honours, Master's, or PhD level. Postgraduate study is the ideal grounding for a career in any area of science, from biotechnology to theoretical physics, and is a requirement for some careers in science.

wgtn.ac.nz/science/postgraduate

SCHOOL SUBJECTS

It is useful to have studied Science and Mathematics at NCEA Level 3. Some Science courses have specific NCEA Level 3 entry requirements, and others have no specified criteria. You'll find entry requirements on the subjects and courses pages (from page 167).

If you feel you haven't studied enough science at secondary school or have not met the NCEA (or equivalent) requirements for a subject, there are alternative pathways available—the Future Students team can give you more information.

MAJORS

Major	Code
Actuarial Science	ACTS
Artificial Intelligence	AIML
Biology	BIOL
Biotechnology	BTEC
Cell and Molecular Bioscience	CBIO
Chemistry	CHEM
Climate Science	CLIM
Computer Science	COMP
Data Science	DATA
Development Studies	DEVE
Earth Science	ESCI
Ecology and Biodiversity	EBIO
Electronic and Computer Systems	ELCO
Environmental Science	ENSC
Environmental Studies	ENVI
Geography	GEOG
Information Systems	INFO
Marine Biology	BMAR
Mathematics	MATH
Physics	PHYS
Psychological Science	PSCI
Science Communication	SCOM
Space Science	SPCE
Statistics	STAT

MINORS

- Computer Graphics and Games (CGRG)
- Geographic Information Science (GISC)
- Science in Society (SCIS)

DEGREE REQUIREMENTS

Three years of full-time study (or longer if studying part time).

A total of 360 points is required:

- at least 210 points from courses above 100 level, including at least 120 points from the BSc schedule
- at least 75 points from courses numbered 300–399
- at least 15 points from ENGR 121–123, ENGR 142, GEOG 115, MATH, PHYS, QUAN, STAT.

Other important information

You may also select a second major or minor for your BSc in undergraduate subject areas for the Bachelor of Arts, Bachelor of Biomedical Science, Bachelor of Design Innovation, Bachelor of Environment and Society, Bachelor of Health, Bachelor of Psychology, and Bachelor of Science.

For more information about minors, see page 51.

MAJOR REQUIREMENTS

It is recommended that you apply for admission as soon as possible (see page 28 for details).

The requirements listed below are the requirements to complete a major; degree regulations are listed in the University's *Calendar*.

You must complete major requirements in at least one major listed here. Many courses have specific prerequisites—check the subjects and courses pages (from page 167).

In most cases, but not all, the courses listed in the major requirements on the next pages are what you need to take in your first year. To find out details of what a course is about and when it is taught, refer to the subjects and courses pages (from page 167).

Actuarial Science (ACTS)

a. Complete six courses at 100 level:
   - ACCY 130
   - ECON 130
   - ECON 141
   - MATH 142
   - MATH 151 (or at least a B+ in QUAN 111)
   - MATH 177.

b. Complete four courses at 200 level: ACTS 201, ECON 201, FINA 201 or FINA 202, MATH 277.

c. Complete three courses at 300 level: ACTS 301, ACTS 336, STAT 335.

d. Complete one further course from 200- or 300-level FINA, MATH, or STAT.

FIND OUT MORE

info@vuw.ac.nz
wgtn.ac.nz/bsc
wgtn.ac.nz/science

Artificial Intelligence (AIML)

a. Complete five courses at 100 level:
   - AIML 131
   - COMP 102
   - COMP 103
   - either (ENGR 121 and ENGR 123) or (MATH 161 and one of MATH 177, QUAN 102, or STAT 193).

b. Complete five courses at 200 level: AIML 231, AIML 232; one course from COMP 261, NWEN 241, SWEN 221; MATH 177 or STAT 292; one course from DATA 201, DATA 202, ENGR 222.

c. Complete four courses at 300 level: AIML 335 or AIML 339; two further courses from AIML 331–335; one further course from AIML 331–338, COMP 361, DATA 301–305, SWEN 303, SWEN 304.

Biology (BIOL)

a. Complete four courses at 100 level:
   - BIOL 111
   - BIOL 113
   - BIOL 114
   - STAT 193 or equivalent.

b. Complete courses worth 60 points from BIOL, BMSC, or BTEC 201–299.

c. Complete courses worth 60 points from BIOL, BMSC, or BTEC 301–399.

Note: The Biology major is not recommended if you wish to progress into the Bachelor of Science with Honours (BSc(Hons)) or Master of Science (MSc) in Biological Sciences. If you're interested in doing this, you should enrol in one of the other Biological Sciences majors (Biotechnology, Cell and Molecular Bioscience, Ecology and Biodiversity, or Marine Biology).

Biotechnology (BTEC)

a. Complete four courses at 100 level:
   - BIOL 111
   - BTEC 101
   - CHEM 121
   - either CHEM 122 or PHIL 106 (or the non-100 level alternatives: SCIS 211 or PHIL 361).

b. Complete four courses at 200 level: BIOL 241, BTEC 201; two courses from BIOL 236, BIOL 244, BIOL 252, CHEM 207, CHEM 208.

c. Complete three courses at 300 level: BTEC 301, SCIE 310; one course from BIOL 340, BMSC 301, BMSC 334, BMSC 339, CHEM 307, CHEM 308, CHEM 309.

Cell and Molecular Bioscience (CBIO)

a. Complete four courses at 100 level:
   - BIOL 111
   - BIOL 113
   - BIOL 114
   - CHEM 121.

b. Complete four courses at 200 level: BIOL 241, BIOL 243, BIOL 244, BIOL 252.

c. Complete three courses at 300 level: BIOL 340, BMSC 339; one course from BMSC 334, BMSC 335, BMSC 343, BMSC 354, BTEC 301.

Chemistry (CHEM)

a. Complete four courses at 100 level:
   - CHEM 121
   - CHEM 122
   - one course from ENGR 121, MATH 100–199, PHYS 101, PHYS 142–145, QUAN 111
   - one course from BIOL 111, BMSC 117, BTEC 101, GEOG 114, GEOS 101, GEOS 102.

b. Complete three courses at 200 level: CHEM 207 and two courses from CHEM 208–210.

c. Complete three courses at 300 level: CHEM 307 and two courses from CHEM 308–312.

Climate Science (CLIM)

a. Complete the following courses at 100 level:
   - GEOS 101, GEOG 114, GEOG 115
   - one further course from MATH/PHYS/QUAN/STAT or ENGR 121–142.

b. Complete three courses at 200 level: SCIS 213; two further courses from GEOS 201, GEOS 203, GEOS 205, GEOS 206.

c. Complete three courses at 300 level from GEOS 301, GEOS 303, GEOS 305, GEOS 306, GEOS 311, SCIS 313, SCIS 317.

Computer Science (COMP)

a. Complete the following courses at 100 level:
   - COMP 102
   - COMP 103
   - either (ENGR 121 and ENGR 123) or (MATH 161 and one of MATH 177 or QUAN 102 or STAT 193).

b. Complete four courses at 200 level: COMP 261, and three further courses from AIML, CGRA, COMP, CYBR, NWEN, or SWEN 200–299.

c. Complete four courses at 300 level: two courses from COMP, SWEN, NWEN 300–399; two courses from AIML, CGRA, COMP, CYBR, NWEN, SWEN 300–399.

Data Science (DATA)

a. Complete three courses at 100 level:
   - DATA 101
   - one course from COMP 103, COMP 132
   - one course from MATH 177, QUAN 102, STAT 193.

b. Complete four courses at 200 level: AIML 231, DATA 202; one course from MATH 277, QUAN 203, STAT 292; one further course from AIML 232, COMP 261, GEOG 215, INFO 206 (or INFO 264), MATH 245, MATH 251, MATH 261, MATH 277, PHIL 269, QUAN 201, QUAN 203, STAT 292, STAT 293.

c. Complete four courses at 300 level: DATA 301, DATA 303; DATA 305; one course from AIML 331–339, DATA 304, DATA 306–399, ECON 303, GEOG 315, INFO 304, INFO 307, INFO 310, INFO 311, MARK 317, MATH 353, MGMT 315, MGMT 316, STAT 391, STAT 392, STAT 394, SWEN 304.

Development Studies (DEVE)

a. Complete three courses at 100 level:
   - GEOG 112
   - one approved regional-based course
   - one approved subject-based course.

b. Complete three courses at 200 level: GEOG 212 and one approved regional-based course and one approved subject-based course.

c. Complete three courses at 300 level: GEOG 312, GEOG 316, and one approved 300-level course.

Note: Lists of approved regional- and subject-based courses are online. GEOG 326 and GEOG 327 are strongly recommended for anyone interested in development studies research practice. At least one of these courses is within the ENSC, ENVI, ESCI, and GEOG major, so if you're taking Development Studies as a double major with one of these majors, you cannot count these courses as part of the Development Studies major.

This major requires careful planning. We recommend you look at the Geography, Environment and Earth Sciences website (wgtn.ac.nz/sgees) and talk to a student success adviser.

Earth Science (ESCI)

a. Complete four courses at 100 level:
   - COMP 132 (or 15 points from BIOL/CHEM/COMP/ENGR/MATH/PHYS/SPCE)
   - GEOG 115 (or 15 points from MATH, PHYS, QUAN, STAT, or ENGR 121–142)
   - GEOS 101
   - GEOS 102.

b. Complete three courses at 200 level from GEOS 201–205, GEOS 207–211.

c. Complete three courses at 300 level from GEOG 326, GEOS 301–304, GEOS 306–310.

Ecology and Biodiversity (EBIO)

a. Complete four courses at 100 level:
   - BIOL 111
   - BIOL 113
   - BIOL 114
   - STAT 193.

b. Complete four courses at 200 level: BIOL 222; BIOL 241 or STAT 292; two further courses from BIOL 227, BIOL 228, BIOL 236, BIOL 241.

c. Complete three courses at 300 level: BIOL 327; two further courses from BIOL 325, BIOL 328, BIOL 329.

Electronic and Computer Systems (ELCO)

a. Complete five courses at 100 level:
   - COMP 102
   - either (ENGR 121 and ENGR 122) or (MATH 142 and MATH 151)
   - either (ENGR 141 and ENGR 142) or (PHYS 142 and PHYS 145).

b. Complete four courses at 200 level: EEEN 202, EEEN 203, EEEN 204; one course from AIML 231, EEEN 201–299, ENGR 201, NWEN 241.

c. Complete four courses from EEEN 301–399, RESE 321, RESE 322.

Environmental Science (ENSC)

a. Complete four courses at 100 level:
   - GEOG 114
   - MAOR 126
   - one of CHEM 122, GEOS 101 or the pair BIOL 113 and BIOL 114
   - one of GEOG 115, MATH 177, QUAN 102, STAT 193.

b. Complete three courses at 200 level: GEOG 214; SCIS 213; one of BIOL 222, GEOS 210, GEOG 222.

c. Complete three courses at 300 level: GEOG 326, GEOG 327, GEOS 312.

Environmental Studies (ENVI)

a. Complete four courses at 100 level:
   - GEOG 112
   - GEOG 114
   - GEOG 115 (or STAT 193, QUAN 102, or equivalent)
   - one of GEOS 101, MAOR 123, POLS 111, PUBL 113.

b. Complete three courses at 200 level: GEOG 214, MAOR 216, one further course from GEOG 200–299 or GEOS 200–299.

c. Complete three courses at 300 level: GEOG 314; two further courses from GEOG 300–399, GEOS 300–399, MAOR 301, PUBL 307, SCIS 300–399.

Geography (GEOG)

a. Complete four courses at 100 level:
   - GEOG 112
   - GEOG 114
   - GEOG 115 (or STAT 193, QUAN 102 or equivalent)
   - GEOS 101.

b. Complete three courses at 200 level: GEOG 215, GEOG 217; one course from GEOG 201–299 or GEOS 201–206.

c. Complete three courses at 300 level: GEOG 326, GEOG 327; one further course from GEOG 301–399 or GEOS 301–305.

Information Systems (INFO)

a. Complete three courses at 100 level:
   - INFO 101
   - INFO 102 (or one of COMP 102, COMP 132)
   - INFO 103.

b. Complete three courses at 200 level: INFO 201, INFO 202, INFO 203.

c. Complete three courses at 300 level: one course from INFO 301–304, and two further courses from INFO 301–399.

Marine Biology (BMAR)

a. Complete four courses at 100 level:
   - BIOL 111
   - BIOL 113
   - BIOL 114
   - STAT 193.

b. Complete four courses at 200 level: BIOL 227, BIOL 228, BIOL 271, STAT 292.

c. Complete three courses at 300 level: BIOL 370, BIOL 371, BIOL 372.

Mathematics (MATH)

a. Complete three courses at 100 level:
   - MATH 142
   - MATH 151
   - MATH 161.

b. Complete one course from COMP 100–199, DATA 202, ENGR 222, MATH 245, STAT 293.

c. Complete eight courses from MATH 200–399, of which at least four courses must be from MATH 300–399.

Physics (PHYS)

a. Complete four courses at 100 level:
   - (MATH 142 and MATH 151) or (ENGR 121 and B+ or better in ENGR 122)
   - PHYS 142
   - PHYS 145.

b. Complete five courses at 200 level: PHYS 241 and PHYS 242; one of PHYS 243 or PHYS 245; one course from CHEM 207, EEEN 201–204, PHYS 201–259; one further course from COMP 261, MATH 200–299, NWEN 241, STAT 292.

c. Complete four courses at 300 level: PHYS 304, PHYS 305, PHYS 307, PHYS 345.

Psychological Science (PSCI)

a. Complete four courses at 100 level:
   - MAOR 126
   - PSYC 121
   - PSYC 122
   - STAT 193 (or QUAN 102).

b. Complete five courses at 200 level: PSYC 201, PSYC 202, PSYC 221, PSYC 232, PSYC 242.

c. Complete three courses at 300 level: PSYC 301, PSYC 302, PSYC 321.

Note: Educational Psychology (EDPS) and Psychological Science (PSCI) can only be taken as a double major in the BPsyc.

Science Communication (SCOM)

a. Complete two courses at 100 level:
   - COMS 101
   - SCIS 101.

b. Complete three courses at 200 level: COMS 201, SCIS 211, SCIS 213.

c. Complete three courses at 300 level: SCIS 311; either SCIS 314 or SCIS 316; one further course from COMS 300–399, SCIS 300–399.

d. One further course from SCIS 200–399.

e. Complete the requirements of a minor or major in another BSc, BBmedSc, BEnvSoc, or BPsyc subject, except the Science in Society minor.

Note: With permission of the associate dean, a candidate may be exempted from requirement (e) if they have previously completed a set of courses equivalent to a BSc, BBmedSc or BPsyc major or minor.

Space Science (SPCE)

a. Complete four courses at 100 level:
   - SPCE 101
   - SPCE 102
   - one course from COMP 102, COMP 132
   - one course from ENGR 121, MATH 132, MATH 141, MATH 142, or QUAN 111.

b. Complete four courses at 200 level: one course from (AIML 231, DATA 202, QUAN 203, STAT 292), GEOG 215, SPCE 201, and SPCE 245 (or PHYS 245).

c. Complete four courses at 300 level: GEOG 315, SPCE 301, two courses from (SCIS 311, SPCE 345, SPCE 360).

Statistics (STAT)

a. Complete two courses at 100 level:
   - either MATH 177 or STAT 193
   - one further course from MATH 100–199 or STAT 100–199.

b. Complete four courses at 200 level: either STAT 292 and STAT 293 or MATH 243 and MATH 277; two further 200-level Science courses.

c. Complete four courses at 300 level: STAT 332 or STAT 393; one further course from STAT 300–399; two further courses at 300 level from DATA 303, DATA 304, MATH, or STAT.

MINORS

You can choose to minor in a subject from the BSc, or another undergraduate degree. All BSc majors can also be taken as a minor. Computer Graphics and Games, Geographic Information Science, and Science in Society can only be taken as a minor. For more information, go to wgtn.ac.nz/bsc-minors

DEGREE EXAMPLES

BSc majoring in Marine Biology and Data Science

YEAR 1		YEAR 2		YEAR 3	
1/3	2/3	1/3	2/3	1/3	2/3
BIOL 113 15 points	BIOL 111 15 points	BIOL 228 20 points	BIOL 227 20 points	BIOL 370 20 points	BIOL 372 20 points
BIOL 114 15 points	STAT 193 15 points	STAT 292 15 points	BIOL 271 20 points	BIOL 371 20 points	DATA 301 15 points
DATA 101 15 points	COMP 132 15 points	AIML 231 15 points	DATA 202 15 points	DATA 303 15 points	DATA 300 LEVEL 15 points
ELECTIVE 15 points	ELECTIVE 15 points		STAT 293 15 points	DATA 305 15 points	
60 POINTS	60 POINTS	50 POINTS	70 POINTS	70 POINTS	50 POINTS
120 POINTS		120 POINTS		120 POINTS	

Total points required: 360
Total points completed: 360

BSc majoring in Biotechnology and Science Communication

YEAR 1		YEAR 2		YEAR 3	
1/3	2/3	1/3	2/3	1/3	2/3
BTEC 101 15 points	BIOL 111 15 points	BIOL 244 20 points	BIOL 241 20 points	BTEC 301 20 points	SCIE 310 20 points
SCIS 101 15 points	CHEM 121 15 points	CHEM 208 15 points	BTEC 201 20 points	SCIS 311 15 points	CHEM 309 20 points
COMS 101 20 points	CHEM 122 15 points	SCIS 211 15 points	SCIS 213 15 points	SCIS 300 LEVEL 15 points	SCIS 314 OR SCIS 316 15 points
ELECTIVE 15 points	ELECTIVE 15 points	COMS 201 20 points			SCIS OR COMS 300 LEVEL 15 points
65 POINTS	60 POINTS	70 POINTS	55 POINTS	50 POINTS	70 POINTS
125 POINTS		125 POINTS		120 POINTS	

Total points required: 360
Total points completed: 370

BSc majoring in Chemistry with a minor in Psychological Science

YEAR 1		YEAR 2		YEAR 3	
1/3	2/3	1/3	2/3	1/3	2/3
MATH 141 15 points	CHEM 121 15 points	CHEM 208 20 points	CHEM 207 20 points	CHEM 307 20 points	CHEM 309 20 points
STAT 193 15 points	CHEM 122 15 points	PSYC 232 15 points	CHEM 210 20 points	CHEM 310 20 points	PSYC 300 LEVEL 15 points
PSYC 121 15 points	BIOL 111 15 points	ELECTIVE 15 points	PSYC 221 15 points	ELECTIVE 15 points	ELECTIVE 15 points
ELECTIVE 15 points	PSYC 122 15 points	ELECTIVE 15 points	PSYC 242 15 points		
60 POINTS	60 POINTS	65 POINTS	70 POINTS	55 POINTS	50 POINTS
120 POINTS		135 POINTS		105 POINTS	

Total points required: 360
Total points completed: 360

KEY: MAJOR 1 | MAJOR 2 | MINOR | ELECTIVE

"Victoria University was the only university that gave me the flexibility to be able to study my two passions—design and chemistry—so it was an obvious choice. The highlight of my studies so far has been the connections I've made with lecturers, students, and guest speakers while learning new content and techniques. There's great support from staff when it comes to your future career and job opportunities too."

Dimitri

Student, Bachelor of Science in Chemistry

Student, Bachelor of Design Innovation in Communication Design and Fashion Design Technology