

# What can I do with a degree in Biological Sciences?

# Biological Sciences.



## Career planning: what do I need to know?

Knowledge of yourself is important for career decision making. Start by looking at your personal goals, abilities, values and interests to explore study and career options that are relevant to you. Some of these may change over time, so it is important to self-reflect and evaluate your career on an ongoing basis.

### What do employers look for?

Many employers look for generic skills such as communication, customer-focus, bicultural competence, cultural awareness and teamwork. With technology and globalisation changing the nature of society, skills such as resilience, problem solving and adaptability are valuable at work as well as in life.

### How can I develop these skills?

- Some skills are developed through your degree

- Extra-curricular activities can help, for example getting involved in clubs, mentoring, cultural groups, part-time work or volunteering
- Be open to professional and personal development opportunities. Whether it is undertaking an internship, overseas exchange, skills seminar, or joining an industry group – these activities will enhance your employability.

### What else should I know?

The career options in this brochure are examples only and the list is not exhaustive. Some careers may require further study beyond a first degree or additional work experience. Some pathways and degrees have a recommended school background.

Find more subject details at  
[www.canterbury.ac.nz/subjects/biology](http://www.canterbury.ac.nz/subjects/biology)

If this brochure does not answer your questions, talking to an expert such as a career consultant can help you to identify the next steps in your career decision making journey.

[www.canterbury.ac.nz/careers](http://www.canterbury.ac.nz/careers)

## What is Biological Sciences?

Biology means the study of living things. Biologists investigate animals, plants and microbes in many different ways and on a huge range of scales from molecules and cells to individual organisms, populations and ecosystems.

During the past few decades the study of biology has undergone rapid change and has had a significant impact on the way we live. We are now able to produce antibiotics and vaccines, grow disease resistant crops, transplant organs and manipulate genes. Biologists are actively researching solutions to vital concerns such as increasing world food supply, improving and protecting our environment and conquering disease. We need to know how micro-organisms, plants and animals work and how they interact. Of increasing importance to us is global climate change and how this affects the living world.



## AT A GLANCE

**\$680m** of government funding over 10 years for the 11 National Science Challenges

**50.6%** of scientific publications written by New Zealand scientists have international co-authors. New Zealand scientists are well connected internationally\*\*

**425,000km** of rivers and streams in Aotearoa New Zealand\*

## What skills have UC graduates gained?

Through their Biological Sciences degree, graduates develop a valuable set of skills that are transferable to a range of careers. These skills include:

- Advanced written and oral communication
- Critical analysis of information
- Cooperation, teamwork and leadership
- Numeracy and statistical analysis
- Computing
- Innovative thinking
- Ability to solve complex biological challenges.

Opportunities to apply your learning outside the classroom are available in this major, through field courses and trips. These experiences deepen your skillset, awareness of others, working knowledge and employability.

## Where have UC graduates been employed?

There are wide-ranging employment opportunities for biologists. Recent UC Biological Sciences graduates have gained roles in:

- National and regional government bodies eg, Department of Conservation, Ministry for Primary Industries, Statistics New Zealand, Environment Canterbury, Waikato-Tainui Te Kauhanganui
- Tertiary institutions and secondary schools
- Crown Research organisations eg, Plant and Food Research NZ, Environmental Science and Research (ESR), Landcare Research, Scion, Callaghan Innovation
- Biotechnology, medical technology and pharmaceutical companies eg, Thermo Fisher Scientific, Applied Research Associates NZ, ENZTEC, Baxter Healthcare
- Agribusiness and food manufacturing eg, Landcorp, Ngāi Tahu Holdings Ltd, Genetic Technologies Ltd, Fonterra, Three Boys Brewery, Meadow Mushrooms, United Fisheries
- Consultants and engineering firms eg, AECOM, Boffa Miskell, Downer, EOS Ecology
- Not-for-profits eg, BirdLife International, Cancer Society of New Zealand, World Wildlife Fund
- Laboratory services eg, Eurofins NZ, Canterbury Southern Community Laboratories
- Public and private organisations around the world.

\*\* MBIE National Statement Science Investment 2015-2025  
\* Te Papa Atawhai Department of Conservation



## What jobs and activities do UC graduates do?

Graduates with this degree are employed in a range of jobs from the lab to the field. See examples below.

*Note: Some of the jobs listed may require postgraduate study. See the 'Further study' section.*

### Field / laboratory technician

- Plans and carries out research experiments with guidance
- Maintains and calibrates equipment
- Liaises with scientists and industry personnel
- Collects and collates data, and drafts reports

### Laboratory manager

- Manages laboratory staff, budgets, workloads
- Maintains and updates lab documentation
- Ensures safety and quality standards
- Reviews methods and validates results

### Ecologist, biologist, environmental scientist

- Develops scientific solutions to problems
- Carries out field and lab tests, records data
- Conducts analysis and writes technical reports
- Interprets regulations and monitors compliance

### Secondary school teacher

- Plans and delivers instructional lessons
- Evaluates performance and provides feedback
- Sets and marks assignments and tests

### Biosecurity officer

- Prevents the introduction of pest plants and animals into a country, region or habitat
- Monitors geographical entry points and transport vessels
- Supervises the destruction of pests

### Medical laboratory technician

- Carries out tests on samples eg, blood, tissue
- Communicates results to patients and/or medical professionals

### Biotechnology technician

- Tests micro-organisms and monitors data
- Develops and tests methods
- Assists with developing new products

### Resource management / consents officer

- Ensures adherence to environmental regulations
- Processes resource consent requests
- Manages stakeholder engagement processes

### Science communicator

- Presents science topics to various audiences eg, publicising research findings
- Manages educational programmes eg, exhibitions, outreach events, seminars
- Produces content eg, media releases, videos

### Scientist

- Develops scientific solutions to problems in diverse fields from genomics to marine science
- Carries out field and lab tests, records data
- Conducts analysis and writes technical reports
- Communicates results/impacts to various audiences such as policy analysts and the public

### Data analyst, bioinformatician

- Analyses data and models techniques to solve problems
- Gains insight across differing domains for decision-making purposes

### Quality manager

- Ensures that products, processes and systems meet quality standards
- Develops policies and procedures
- Solves problems, makes decisions and supports others to achieve these standards

### Entrepreneur & self-employment

Entrepreneurship and innovation are an increasing part of the working landscape. Through generating a business idea, or getting involved in a start-up/business venture, you have the potential to create a work opportunity that aligns with your knowledge, skills, values and risk profile. To get started on how to establish, run and grow a new business, go to Te Pokapū Rakahinonga, Centre for Entrepreneurship at the University of Canterbury [www.canterbury.ac.nz/uce](http://www.canterbury.ac.nz/uce)

## What professional organisations can I engage with?

Connecting with professional bodies and organisations can help you to establish professional networks and learn more about

### Useful links

Te Rōpū Rapuara UC Careers  
[www.canterbury.ac.nz/careers](http://www.canterbury.ac.nz/careers)

Careers New Zealand  
[www.careers.govt.nz](http://www.careers.govt.nz)

Crown Research Institute careers  
[www.careers.sciencenewzealand.org](http://www.careers.sciencenewzealand.org)

different career options in your area of interest. Gaining valuable insight into a profession can assist in making informed career decisions.

- New Zealand Microbiological Society  
[www.nzms.org.nz](http://www.nzms.org.nz)
- New Zealand Society of Plant Biologists  
<http://plantbiology.science.org.nz>
- New Zealand Ecological Society  
[www.nzes.org.nz](http://www.nzes.org.nz)
- Te Apārangi Royal Society of New Zealand  
[www.royalsociety.org.nz](http://www.royalsociety.org.nz)
- New Zealand Association of Scientists  
<http://scientists.org.nz>
- Genetics Society of Australasia  
[www.genetics.org.au](http://www.genetics.org.au)
- Science Communicators Association of New Zealand  
[www.scanz.co.nz](http://www.scanz.co.nz)

Having a professional presence on social media networks such as [www.linkedin.com](http://www.linkedin.com) and Facebook can help you to keep up to date with important industry developments and trends, networking opportunities, events and job vacancies. Following relevant professional bodies, organisations, companies and thought leaders is a great way to gain a deeper awareness of the industries that interest you. Social media presents an opportunity to build and enhance networks as well as to display your involvement in projects and any academic successes.

## Why do further study and what are my options?

Postgraduate study can facilitate career benefits such as specialist skills, higher starting salary, faster progression rate, and advanced research capability. It can also lead to an academic career. It is important to determine which, if any, further study will help you in your career.

Biological Sciences graduates can progress into a number of programmes from honours to PhD level. Some do further training eg, in teaching, forensic science, management, or communications. For UC options visit [www.canterbury.ac.nz/courses](http://www.canterbury.ac.nz/courses).



## Morgan



### Ngāi Tahu

Studying towards a Bachelor of Science in Biological Sciences with an endorsement in Ecology and a Bachelor of Laws

### Why did you choose these subjects?

I've always been interested in the environment and living things, which naturally drew me to biology. I decided to take law as well because I want to help people and give them a voice.

### What do you enjoy about Biological Sciences?

I enjoy learning about the remaining endemic species in New Zealand, and love that we have access to so many fascinating ecosystems around Christchurch, from the mountains to the sea.

I love the localised and global issues that we are taught — there is an emphasis on New Zealand biology and environmental impact. I recently took the water resource paper, which was an eye opener to the current local situation and methods of mitigation.

### How do your studies prepare you for the real world?

The UC course advisors helped me to work out what papers I could do that were relevant to both law and science, such as freshwater studies. This helped me to do the things I love as well as what's useful towards employment. It also helped me to manage my workload.

### Any highlights so far?

Applied learning has been valuable for me in understanding and building interest in specific areas of study so I really enjoy the opportunities to go out into the field. A highlight for me was the BIOL 270 fieldtrip to Cass field station and the opportunity to study in such a beautiful and natural place.

### So, what's next for you?

Maybe I will go into environmental law or biosecurity. So far I have had a lot of opportunities in both fields. For example, I did an internship with the New Zealand Public Interest Project where we worked on miscarriages of justice. I worked with an inspiring team of lawyers, private investigators and forensic scientists, and the experience opened my eyes to forensics which was really cool.

### Read more online

Read more stories about our students' university experiences online. UC alumni make a difference in varied ways around the globe. To find out where graduates are now visit [www.canterbury.ac.nz/getstarted/whyuc/student-profiles](http://www.canterbury.ac.nz/getstarted/whyuc/student-profiles)

*The information in this brochure was correct at the time of print but is subject to change.*

## More information

### UC students seeking study advice.

Te Kura Pūtaiao Koiora | School of Biological Sciences

We offer a diverse range of courses to suit students' interests and needs. As well as field and lab learning, our teachers and researchers aim to push the frontiers of knowledge and act as a conscience of society and we'll challenge you to do the same. Come and see us to chat about your programme of study.

T: +64 3 369 4141

E: [scienceugadvice@canterbury.ac.nz](mailto:scienceugadvice@canterbury.ac.nz)

[www.canterbury.ac.nz/science/biology](http://www.canterbury.ac.nz/science/biology)

### Anyone seeking careers advice.

Te Rōpū Rapuara | UC Careers

UC offers intending and current students and recent graduates a wide range of services, including individual career guidance, seminars, career resources and student and graduate employment opportunities.

T: +64 3 369 0303

E: [careers@canterbury.ac.nz](mailto:careers@canterbury.ac.nz)

[www.canterbury.ac.nz/careers](http://www.canterbury.ac.nz/careers)

### Prospective students seeking study advice.

Te Rōpū Takawaenga | Student Liaison

The liaison team provide advice to future students who are starting their degree for the first time. They can assist with information on degrees, scholarships, accommodation, and other aspects of university life. We have offices in Christchurch, Auckland and Wellington.

Ōtautahi | Christchurch

T: 0800 VARSITY (0800 827 748)

E: [liaison@canterbury.ac.nz](mailto:liaison@canterbury.ac.nz)

Tāmaki Makaurau | Auckland

T: 0800 UCAUCK

E: [auckland@canterbury.ac.nz](mailto:auckland@canterbury.ac.nz)

Te Whanganui-a-Tara | Wellington

T: 0800 VARSITY (0800 827 748)

E: [wellington@canterbury.ac.nz](mailto:wellington@canterbury.ac.nz)

[www.canterbury.ac.nz/liaison](http://www.canterbury.ac.nz/liaison)

