



Zoology

Animals, how they live and interact

"With Zoology you're not locked into a career path. You can steer it where you want at varsity or go in a number of directions afterwards."

Quinn Berentson
NHNZ

Did you know that New Zealand's only mammals were bats and seals, until about 1000 years ago? Animals are fascinating and there is so much to learn about them – the Zoology courses at Otago will blow your mind. Zoology is the study of animals, their behaviour, their physiology and evolution, as well as their interactions with each other and with their environment. Zoologists also study how animals evolved and the impact of environmental change on their survival. They search for ways to manage wildlife populations, and to conserve rare and endangered species, such as takahe, frogs and tuatara. They study costs and benefits of conservation and ways to enhance species survival.

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Why study Zoology at Otago?

You get to work in all sorts of spectacular environments. You will have the opportunity to explore all sorts of places where there is animal life, like mountains, grasslands, oceans, fiords and wetlands.

There are lots of travel opportunities with Zoology – check out our graduate profile for proof of that! Zoology is a global science that will take you to all corners of the world.

New Zealand has its own unique animal life and it is a great place to study zoology and other environmental sciences.

Zoology is one of the most interdisciplinary subjects. Staff in Zoology include ecologists, physiologists, developmental biologists, geneticists, evolutionary biologists, mathematicians, and even film makers.

In our modern world, it is more important than ever that we restore and manage our environment. Zoologists can help to do that.

Background required

There is no first-year course in Zoology. Students who intend to major in zoology should enrol in Biology (CELS 191, BIOL 112) and Statistics (STAT 110) in their first year. There are no special requirements, but it is recommended that you take NCEA level 3 Biology or its equivalent.

Careers in Zoology

A degree in Zoology opens the door to a wide variety of jobs and career options. There are opportunities in government departments and ministries such as the Department of Conservation, and the Ministries of Fisheries, Agriculture and Forestry, and Environment. In these areas, Zoology graduates are involved with research, harvest management and pest control, as well as writing reports and developing and monitoring policy. Graduates can find careers where they are responsible for the use and care of our natural resources and environment with Regional and District Councils, Fish and Game Councils and Trust Boards.

There are also jobs for Zoology graduates with Crown Research Institutes (e.g. Landcare, NIWA) and private research organisations (e.g. Cawthron Institute). Zoology graduates are also employed in medical, veterinary and biotechnology laboratories.

There are increasing opportunities to develop careers in eco-tourism as advisers, guides and managers. Some Zoology graduates are working in fisheries and aquaculture with private companies, while others have found jobs as environmental consultants. You may decide that you want to share your interest and knowledge of animals and their environments in a position as a curator, an information officer, or a guide for a museum, nature park or zoo. There are also teaching opportunities for graduates and Zoology is an important major subject for those wishing to become secondary school Biology teachers.

Zoology at Otago

Zoology is a modern science set not only in the mountains, grasslands, oceans, fiords and wetlands of the world, but also in the controlled environment of the laboratory. The Department of Zoology has an international reputation for research in freshwater ecology, wildlife and conservation biology, neurobiology and animal behaviour, parasitology, genetics, environmental physiology and evolutionary studies.

What will I learn?

In your first year you will learn about the biology of cells, the biology of animals and the basics of statistics. You will cover topics such as molecular biology, cell ultrastructure and function, genetics, bacteria and viruses and theories of evolution. The courses have a strong New Zealand flavour with an emphasis on the unique nature of the animals of New Zealand and their conservation problems. In your second and third years, you will continue your study of animal diversity, physiology and evolution, with the option of including papers from subjects such as ecology, genetics, statistics and computer modelling, and marine science.

How will I study?

In your first year your CELS 191 and BIOL 112 lectures and laboratory classes will be supplemented with student study groups, computer based self-assessment tests, CAL (computer aided learning) laboratories, and many in-house designed computer exercises. Your lectures will be accompanied by a set of notes (often interactive) and other course materials that are accessible via the Internet. Laboratory classes and field trips will complement your lectures in Zoology in your second and third years. Internal assessment forms 40 – 50% of the final grade for papers in Zoology, and the rest is derived from final examinations.

Can I combine my Zoology study with other subjects?

Many Zoology students also major in another subject such as botany, ecology and genetics. Other students complete a double degree in areas like Law, Commerce and Arts.

What about further study?

A Zoology major can lead on to a further degree, including an MSc, PhD or Postgraduate Diplomas in Natural History Filmmaking and Communication, Environmental Science or Wildlife Management.



Photo: Leon Berard

PROFILE Leon Berard

Leon Berard travelled from Nelson to study at Otago. He already knew people from Dunedin, and he could see that it was very accessible to the outdoors and offered a new adventure.

He enrolled for Geography and Zoology and thoroughly appreciated the breadth of study at the start of his degree.

"The programme was really broad at the start, and then you could target particular areas through your paper selection, tailoring it to your interest, and allowing for cross over into related areas like Marine Science."

Leon's studies sparked an abiding interest in photography, and the field work components lent themselves to exploring this as well as more academic areas.

"I spent three months on Ulva Island as part of my Wildlife Management PGDip placement, and took a lot of photos! I was able to document the awesome places I'd been, the birds and animals I saw. I want to show people what's there, make those places accessible through my photography."

Leon has been working as a Fisheries Observer for the Ministry for Primary Industries since 2013. He heard about the work in Marine Science – it's extremely flexible, and puts him on board fishing vessels for up to 10 weeks at a time.

"Being a fisheries observer has allowed me to go places I never would have visited like the subantarctic islands, and see birds you wouldn't see on land. I've developed a really good understanding of fisheries management in New Zealand, building on previous learning at Otago in Zoology and Marine Science departments. When you come in from one trip there's a debrief and you have the option to go straight out again, or spend some time off. It works really well with anything else I might want to do. In fact it's allowed to me to volunteer with research projects all over the country."



For questions about
Zoology
otago.ac.nz/zoology