



# Bachelor of Pharmaceutical Science

## Medication innovation

“There will be ongoing demand for the skilled, innovative pharmaceutical scientists our new degree will deliver.”

Professor Sarah Hook  
Chair of Pharmaceutics

Contribute to the discovery and development of new medicines and therapies. Otago's unique lab-based pharmaceutical science degree opens doors to the diverse and rapidly growing pharmaceutical industry and health-related research careers.

If you are interested in science and technology and have a passion for medicines that prevent and treat disease in plants, animals and humans, this degree is for you. Areas of study include medicinal chemistry, microbiology, pathology, formulation science, pharmacognosy, pharmacology, pharmacokinetics, pharmacodynamics, and more. You will also gain key practical skills for your future career.

Gain a world-class pharmaceutical science degree with a unique Aotearoa New Zealand perspective. The Bachelor of Pharmaceutical Science incorporates rongoā Māori to give you training that's only available at Otago.

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## Why study for the Bachelor of Pharmaceutical Science (BPharmSc)?

Otago's new three-year BPharmSc is the only degree of its type in Aotearoa New Zealand. It offers a curriculum that is responsive to industry needs and intertwines rongoā Māori to help understand medicines beyond western practices.

Otago's School of Pharmacy is ranked in the top 100 pharmacy schools globally (2019 QS ranking), and the BPharmSc is taught by industry experts and academics.

As a pharmaceutical science student at Otago, you will benefit from small class sizes, personalised instruction, and a modern student-centred curriculum. You will have access to a state-of-the-art laboratory, an interprofessional learning environment, and a supportive student culture.

Second and third-year papers are taught via lectures, laboratory classes and tutorials, and incorporate contemporary student-centred learning, including interactive workshop sessions.

## Background required

There are no secondary school subject requirements for entry into the first year at Otago, but we strongly recommend you take chemistry, biology and maths.

All applicants seeking admission to the Bachelor of Pharmaceutical Science programme must have completed 108 points in Health Sciences First Year at the University of Otago (or equivalent) and a further 18 100-level points.

## Degree structure

The first year has a similar structure to the Otago Health Sciences First Year programme. It consists of papers in general chemistry, biology, biochemistry, anatomy, physiology and physics, with an optional seventh paper.

In the second year, you will learn foundational knowledge and skills in pharmaceutical chemistry, formulation principles, and principles of disease.

In third year, you will begin to apply your knowledge to contemporary challenges in chemical biology, medicinal chemistry, natural products and medicines, rongoā Māori, pharmacokinetics and pharmacodynamics, drug delivery and topics in the pharmaceutical industry.

The degree's flexibility allows you to fine-tune your study to your interests and career aspirations with room for two additional second and third-year papers offered by other departments at the University of Otago.

BPharmSc graduates are encouraged to do an honours degree to begin their journey into postgraduate research and a PhD.

## Papers

- PSCI 201 Pharmaceutical Chemistry
- PSCI 202 Medicines and Disease
- PSCI 203 Formulation Principles
- PSCI 204 Formulation Principles II
- PSCI 301 Chemical Biology
- PSCI 302 Medicinal Chemistry
- PSCI 303 Natural Products and Medicines
- PSCI 304 Pharmacokinetics and Pharmacodynamics
- PSCI 305 Drug Delivery
- PSCI 306 Topics in Pharmaceutical Industry

*Note: Students completing other bachelor's degrees at Otago can also take papers in this degree as a minor.*

## Career opportunities

Otago produces independent, innovative and career-ready graduates. With a degree in pharmaceutical science, you will be qualified to take on many professional roles, including:

- **Scientist** researching and developing new drugs and medicines
- **Formulation scientist** in food, cosmetics, pharmaceuticals and agricultural industries
- **Regulatory affairs officer** evaluating medicines for government agencies and companies
- **Border control agent** conducting identification and analysis of drugs
- **Clinical trials associate** testing the safety and efficacy of medicines
- **Marketing and sales** of medicines for human, veterinary and agricultural use
- **Quality control chemist** testing to ensure high-quality medicines are produced
- **Patent attorney** advising on intellectual property and patent law.

For questions about the Bachelor of Pharmaceutical Science  
[otago.ac.nz/bpharmsc](http://otago.ac.nz/bpharmsc)



Email [pharmsci@otago.ac.nz](mailto:pharmsci@otago.ac.nz)

## PROFILE

"The importance of medicines to individuals and our society has never been more apparent and will continue to gain significance with increasing globalisation and urbanisation.

This reliance on medicines means there will be ongoing demand for the skilled, innovative pharmaceutical scientists our new degree will deliver.

The expertise of our staff in the design, synthesis, formulation and delivery of pharmaceuticals and rongoā will excite and empower students for a wide variety of careers both nationally and internationally."



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