Welcome to the School of Biological Sciences

Each year the School of Biological Sciences welcomes more than 100 new postgraduate students seeking to acquire internationally competitive skills and research training through diplomas and masters degrees, or professional postgraduate training that contributes directly to the New Zealand economy through the Master of Bioscience Enterprise programme.

As a postgraduate student you’ll be working much more closely with our staff and professional researchers based in the school, in areas as diverse as biomedicine, bioinformatics and conservation ecology. Our staff are recipients of national and international research funding and awards, and feature regularly in scientific communication through all forms of media.

We offer real-world research experience in the Institute for Innovation in Biotechnology (IIB) with industry co-locators, or our Joint Graduate School partnerships with Crown Research Institutes like Plant & Food and the Cawthron Institute, or the Department of Conservation, the Auckland Museum and Auckland Zoo, and many more government and industry partners.

The School of Biological Sciences is a fun, vibrant and supportive place to learn and train for a science-based career – we look forward to welcoming you.

PROFESSOR EILEEN McLAUGHLIN
Head of School
Bachelor of Science (Honours) (BSc(Hons))

Prerequisites
- A BSc or an approved equivalent with at least 90 points at Stage III or above, including at least 60 points from Stage III Biological Sciences
- You will require a GPA of at least 5.0 in 45 points at Stage III or above in Biological Sciences
- Approval from the Head of School is required. Students with a GPA below 7 are advised to consider taking the PGDipSci followed by the 120-point MSc degree.

Programme structure
- One year full-time or two years part-time, including a research dissertation (BIOSCI 788) worth 45 points
- The courses, worth a total of 75 points, must include:
  - 15 points from BIOSCI 762
  - At least 45 points from BIOSCI 724-759, BIOINF 701
  - Up to 15 points from a 700-level course in a related subject

Postgraduate Diploma in Science (PGDipSci)

Prerequisites
- A BSc or an approved equivalent with a major in Biological Sciences, and a GPA of at least 3.0

Programme structure
- 90 points from BIOSCI 724-761 or BIOINF 701. 30 points may be taken from 600 or 700-level courses in related subjects. The total enrolment for the PGDipSci must not exceed 160 points.
- A class size limit is imposed (on BIOSCI 724, 725, 727, 731, 735, 736, 739, 741, 747, 748, 749, 755, 757, 758, 759, BIOINF 701) and students may be placed on a waitlist.
- Students wishing to proceed to MSc should enrol in the Thesis Proposal course (BIOSCI 761) as part of their PGDipSci programme, provided they have achieved the required grades and identified a thesis research topic in consultation with a member of the academic staff who has agreed to supervise the MSc project.
Master of Science (MSc)

Prerequisites
- A PGDipSci in Biological Sciences, including BIOSCI 761 or equivalent with a GPA of at least 4 in 90 points, at least 75 points of which must be in 700-level courses; or a BSc(Hons) in Biological Sciences, with a GPA of at least 4 in 90 points.
- Applications for admission to the MSc following a Bachelor of Technology (Biotechnology) will be considered on a case-by-case basis.

Programme structure
- A Thesis (BIOSCI 796) worth 120 points, completed between one year full-time to two years part-time, or some combination
- Enrolment must begin on 1 December, 1 March or 15 July, as arranged with the supervisor.
- Students who have passed BIOSCI 762, BTECH 432, ENVSCI 701 or MEDSCI 701 are not required to complete BIOSCI 761.
- If BIOSCI 761 was not completed as part of the PGDipSci, students must obtain special permission to complete this course in the first semester of the MSc programme.

Doctor of Philosophy (PhD)

Quick facts
- Points per degree: 360 points
- Full-time study: 3-4 years
- Part-time study: 6-8 years
- Degree structure: Research
- Application closing dates: Apply at any time
- Start date: Start at any time
For more information, go to www.science.auckland.ac.nz/phd

Entry to PhD
The normal requirement for admission to the PhD is an honours degree with second class honours (first division) or better, either BSc(Hons), BTech or MSc. Candidates with overseas qualifications will have their eligibility for admission to PhD assessed by the Admissions Office upon receipt of all required documentation. Candidates may be required to enrol in one or more courses concurrent with research work to complement either their research work, or their background in the subject.

For a searchable database where you can find masters and doctoral supervisors and research projects that you can join visit www.findathesis.auckland.ac.nz
Research areas

Research in the School of Biological Sciences is conducted across three research groups and several research centres and institutes. Subject areas range from biomedical, microbial and plant biotechnology to environmental, ecological and conservation science. The school operates cutting-edge facilities and services supporting both academic groups and co-located companies. Many services are also available to external companies on a contract basis.

• Biomedical and applied biology
• Cellular, molecular and organismal biology
• Ecology, evolution and behaviour
• Joint Graduate Schools with Crown Research Institutes

Scholarships and awards

The University of Auckland will provide guaranteed scholarships to high achieving domestic students admitted to programmes, including BSc(Hons), PGDipSci, MSc and PhD.

Find out more on www.auckland.ac.nz/scholarships

“My interest in Biology and the research environment meant that postgraduate study was the most likely direction for me to take after my undergraduate studies.

“My research is focused on drug development to target and treat obesity and diabetes. My area of study utilises the theory and practicality of all fields of research within the biological sciences, ranging from structural biology to translational animal studies.

“When I complete my PhD, I hope to enter the highly competitive research field. My experiences could also lead into academia and teaching.

“I’ve been involved with the Postgraduate Students’ Association (PGSA). The group frequently holds social activities and events specifically for postgraduate students, which has made it easy for me to meet new people from different backgrounds and disciplines.

“It can be a daunting experience to study in a large university and faculty, but I think the amount of support and resources available and the people you meet on your journey more than make it worthwhile!”

Aqfan Jamaluddin is studying for a PhD in Biological Sciences. He received a Maurice Wilkins Centre PhD Student Scholarship.
<table>
<thead>
<tr>
<th>Course code</th>
<th>Title</th>
<th>Semester</th>
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<tbody>
<tr>
<td>BIOINF701</td>
<td>Bioinformatics</td>
<td>S1</td>
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<tr>
<td>BIOINF 702</td>
<td>Comparative Bioinformatics</td>
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<tr>
<td>BIOSCI 724</td>
<td>Marine Ecology</td>
<td>S1</td>
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<tr>
<td>BIOSCI 725</td>
<td>Ecological Physiology</td>
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<tr>
<td>BIOSCI 728</td>
<td>Neuroethology</td>
<td>S1</td>
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<tr>
<td>BIOSCI 735</td>
<td>Advanced Behavioural Ecology</td>
<td>S1</td>
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<tr>
<td>BIOSCI 737</td>
<td>High Resolution Imaging of Biological Molecules</td>
<td>S1</td>
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<tr>
<td>BIOSCI 738</td>
<td>Advanced Biological Data Analysis</td>
<td>S1</td>
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<tr>
<td>BIOSCI 739</td>
<td>Dialogues in Biology</td>
<td>S1</td>
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<tr>
<td>BIOSCI 741</td>
<td>Applied Microbiology and Biotechnology</td>
<td>S1</td>
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<tr>
<td>BIOSCI 747</td>
<td>Biosecurity and Invasion Biology</td>
<td>S1</td>
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<tr>
<td>BIOSCI 752</td>
<td>Plant Genomics and Biotechnology</td>
<td>S1</td>
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<tr>
<td>BIOSCI 755</td>
<td>Genomics and Gene Expression</td>
<td>S1</td>
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<tr>
<td>BIOSCI 759</td>
<td>Molecular Cell Biology and Biomedicine</td>
<td>S1 &amp; 2</td>
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<td>BIOSCI 761</td>
<td>MSc Thesis Proposal</td>
<td>S1 &amp; 2</td>
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<td>BIOSCI 762</td>
<td>BSc(Hons) Dissertation Proposal</td>
<td>S1</td>
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<tr>
<td>BIOSCI 788 A+B</td>
<td>Dissertation in Biological Sciences</td>
<td>S1 &amp; 2</td>
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<td>BIOSCI 796 A+B</td>
<td>Thesis in Biological Sciences</td>
<td>S1 &amp; 2</td>
</tr>
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<td>BIOINF 703</td>
<td>Genome Bioinformatics and Systems Biology</td>
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<td>BIOINF 704</td>
<td>Statistical Bioinformatics</td>
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<td>BIOSCI 727</td>
<td>Aquaculture</td>
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<td>BIOSCI 729</td>
<td>Evolutionary Biology</td>
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<td>BIOSCI 730</td>
<td>Entomology and Biosecurity</td>
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<tr>
<td>BIOSCI 731</td>
<td>Biogeography</td>
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<td>BIOSCI 733</td>
<td>Molecular Ecology and Evolution</td>
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<td>BIOSCI 734</td>
<td>Terrestrial Plant Ecology</td>
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<tr>
<td>BIOSCI 736</td>
<td>Microbial Genomics and Metabolism</td>
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<tr>
<td>BIOSCI 746</td>
<td>The Molecular Machinery of The Cell</td>
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<tr>
<td>BIOSCI 748</td>
<td>Weed and Pest Management</td>
<td>S2</td>
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<td>BIOSCI 749</td>
<td>Ecology of Microbial Interactions</td>
<td>S2</td>
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<td>BIOSCI 751</td>
<td>Plant-microbiology Interactions</td>
<td>S2</td>
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<tr>
<td>BIOSCI 753</td>
<td>Synthesis of Plant Products and Foods</td>
<td>S2</td>
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<td>BIOSCI 754</td>
<td>Plant Genomes and Gene Expression</td>
<td>S2</td>
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<tr>
<td>BIOSCI 757</td>
<td>Structural Biology</td>
<td>S2</td>
</tr>
<tr>
<td>BIOSCI 758</td>
<td>Development, Differentiation and Disease</td>
<td>S2</td>
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For course descriptions and more information, go to sbs.auckland.ac.nz/courses
I love being immersed in the academic literature and debates that form the foundation of my area, and the idea of contributing something new to the discourse excites me.

“My masters thesis is focused on improving capture methods for parasitoid wasps. Before we can begin to understand the estimated 3,000 species of parasitoid wasps in New Zealand, it is crucial to understand how to catch them more efficiently and in more cost-effective ways.

“I received two summer studentships at Landcare Research which gave me paid experience in the field of biodiversity and ecology. I fostered links with my future masters supervisor during that time and developed an understanding of what ‘real research’ and experience looks like.

“When I finish my masters, I hope that it will lead me into a career in academia or within applied sciences.

Tom Saunders is studying for a Master of Science in Biological Sciences.

Biological Sciences investigates all levels of life, from biological molecules to global ecosystems. The number of graduates in this area has grown rapidly in recent years. Possible career options are as follows:

- Agriculture
  - Aquaculture
  - Aquatic biologist
- Biomedical research scientist
- Biomedical company representative
- Biotechnologist in Government and industrial laboratories
- Brewing industry
- Clinical biochemist
- Conservation biology
- Dairy industry
- Ecologist
- Entomologist
- Environmental resource management planning
- Environmental consultant
- Fisheries scientist
- Food scientist
- Government service (MPI, DOC)
- Health-related occupations
- Journalism
- Laboratory technician
- Marine biologist
- Medical research
- Museum curator
- Nursery management
- Parks conservator
- Patent law/intellectual property
- Pharmaceutics
- Physiologist
- Plant tissue culture
- Plant protection and conservation
- Publishing
- Research scientist
- Science librarian
- Teaching: primary, secondary, polytechnic, university
- Zoological curator
Helpful information

- **Academic dates**
  www.auckland.ac.nz/dates

- **Accommodation**
  www.accommodation.auckland.ac.nz

- **Apply for postgraduate study**
  www.auckland.ac.nz/applynow

- **Career Development and Employment Services**
  www.cdes.auckland.ac.nz

- **Childcare**
  www.auckland.ac.nz/childcare

- **Course advice and degree planning in Science**
  www.science.auckland.ac.nz/student-centre

- **Disability Services**
  www.disability.auckland.ac.nz

- **How to enrol**
  www.auckland.ac.nz/enrolment

- **Information for postgraduate students**
  www.postgraduate.ac.nz

- **International students**
  www.international.auckland.ac.nz

- **Libraries and Learning Services**
  www.library.auckland.ac.nz

- **Māori and Pacific students**
  www.science.auckland.ac.nz/tuakana

- **Need help?**
  www.askauckland.ac.nz

- **Postgraduate Students’ Association**
  www.pgsa.org.nz

- **Rainbow Science Network for LGBTI students**
  www.science.auckland.ac.nz/rainbowscience

- **Scholarships and awards**
  www.scholarships.auckland.ac.nz

- **Support for students**
  www.science.auckland.ac.nz/support

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**Disclaimer**

Although every reasonable effort is made to ensure accuracy, the information in this document is provided as a general guide only for students and is subject to alteration. All students enrolling at the University of Auckland must consult its official document, the University of Auckland Calendar, to ensure that they are aware of and comply with all regulations, requirements and policies.

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**APPLICATIONS CLOSE ON 8 DECEMBER**

**Questions about Biological Sciences?**

pgscience@auckland.ac.nz

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**Connect with us**

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