

# Marine Science

Undergraduate Handbook 2018



THE UNIVERSITY OF  
**AUCKLAND**  
Te Whare Wānanga o Tāmaki Makaurau  
NEW ZEALAND

**SCIENCE**

# Welcome to the Institute of Marine Science

The marine environment plays an important role in many of our lives. Whether you are interested in seafood, conservation, management or contributing to the science that will influence our future, Marine Science offers you the opportunity to learn about many different facets of our coasts and oceans.

---



The Institute of Marine Science has an active and diverse programme in Marine Science. Our enrolments continue to grow, reflecting interest and the relevance of Marine Science.

While most of our undergraduate teaching is conducted on the city campus, we have field courses that use our excellent research facilities at the Leigh Marine Laboratory, including our research vessel Hawere.

Enjoy your marine studies. I'll see you in our core second year course, MARINE 202 Principles of Marine Science.

PROFESSOR SIMON THRUSH  
Director Institute of Marine Science





# Bachelor of Science in Marine Science

A major in Marine Science opens up a world of opportunities to students who want to study and work in the marine environment. There are plenty of issues to investigate, from the management of New Zealand's extensive marine areas, to oceanography and climate impacts, to the welfare of marine animals and fish stocks. All of these issues need good scientists and well-trained technicians who understand the marine environment.

## Complementary majors

A double major is strongly recommended as it will enhance your career options by providing a broader base of skills and knowledge.

### MARINE SCIENCE +

Biological Science

Earth Science

Environmental Science

Mathematics

Statistics

[www.science.auckland.ac.nz/doublemajors](http://www.science.auckland.ac.nz/doublemajors)



Adjacent to  
New Zealand's first  
marine reserve

For course planning and enrolment: [www.science.auckland.ac.nz/student-centre](http://www.science.auckland.ac.nz/student-centre)

For postgraduate study options: [www.marine.auckland.ac.nz/postgraduate](http://www.marine.auckland.ac.nz/postgraduate)

# BSc degree planner – Marine Science

## BSc

Year 1

|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|

Marine Science is designed to be taken in conjunction with another science major. All Science majors may be considered but preferred are: BIOSCI, CHEM, GEOG, EARTHSCI, MATHS, PHYSICS or STATS.

With appropriate prerequisites can also be filled by Stage II or III.

Year 2

|               |  |  |  |  |  |  |  |        |
|---------------|--|--|--|--|--|--|--|--------|
| MARINE<br>202 | BIOSCI<br>209, GEOG<br>250, (S1)<br>or STATS 201 |  |  |  |  |  |  | GEN ED |
|---------------|--|--|--|--|--|--|--|--------|

Any Stage

Year 3

|               |                      |                      |                      |  |  |  |  |        |
|---------------|----------------------|----------------------|----------------------|--|--|--|--|--------|
| MARINE<br>302 | Stage III<br>Science | Stage III<br>Science | Stage III<br>Science |  |  |  |  | GEN ED |
|---------------|----------------------|----------------------|----------------------|--|--|--|--|--------|

Stage III Science

Stage II or III Science

1. Courses in a minimum of three subjects listed in the BSc Schedule
2. At least 180 points (12 courses) must be above Stage I
3. Up to 30 points (two courses) may be taken from outside the faculty
4. 30 points (two courses) must be taken from the appropriate General Education Schedules for BSc students
5. At least 75 points must be at Stage III, of which 60 points must be in the majoring subject.

It is the student's responsibility to check that the final programme complies with University Regulations. The Faculty of Science is the final authority on all BSc regulations.

To view regulations for majors, and course descriptions, see [www.calendar.auckland.ac.nz](http://www.calendar.auckland.ac.nz)  
BSc degree requires: 360 points (24 x 15-point courses). Each box represents one 15-point course.  
We recommend that students enrol in eight courses each year.

Degree planners for double majors can be found at [www.science.auckland.ac.nz/course-planning](http://www.science.auckland.ac.nz/course-planning)

## Undergraduate Marine Science courses

| Course code  | Title   |
|--|---|
| <b>General Education</b>   |   |
| <i>Students majoring in Marine Science are not eligible to take MARINE 100G or BIOSCI 100G as one of their General Education requirements.</i> |   |
| MARINE 100G  | The Oceans Around Us  |
| BIOSCI 100G  | Antarctica: The Frozen Continent                                  |
| <b>Stage I</b>   |   |
| <i>There are no prescribed marine science courses at Stage I, but we recommend:</i>  |   |
| BIOSCI 104   | New Zealand Ecology and Conservation                              |
| ENVSCI 101   | Environment, Science and Management                               |
| STATS 101  | Introduction to Statistics, OR STATS 108 Statistics for Commerce  |
| SCIGEN 101   | Communicating for a Knowledge Society                             |
| <i>We also recommend one of the following courses:</i>   |   |
| CHEM 150   | Concepts in Chemistry (for students with no chemistry background) |
| CHEM 110   | Chemistry of the Living World (for bio-oriented students)         |
| CHEM 120   | Chemistry of the Material World                                   |
| <b>Stage II</b>  |   |
| MARINE 202   | Principles of Marine Science                                      |
| BIOSCI 206   | Principles of Ecology   |
| BIOSCI 208   | Invertebrate Biodiversity   |
| BIOSCI 209   | Biometry  |
| STATS 201  | Data Analysis   |
| GEOG 250   | Geographical Research in Practice                                 |
| <b>Stage III</b>   |   |
| MARINE 302   | Dynamics of Marine Systems  |
| MARINE 303   | Freshwater and Estuarine Ecology                                  |
| BIOINF 301   | Introduction to Bioinformatics                                    |
| BIOSCI 328   | Fisheries and Aquaculture   |
| BIOSCI 329   | Biology of Fish   |
| BIOSCI 333   | Marine Ecology  |
| BIOSCI 335   | Ecological Physiology   |
| BIOSCI 394   | Conservation Ecology  |
| BIOSCI 395   | Pacific Biogeography and Biodiversity                             |
| GEOG 330   | Research Methods in Physical Geography                            |
| GEOG 351   | Dynamics of Coastal Systems                                       |
| EARTHSCI 303   | Sedimentary Paleoenvironments                                     |
| EARTHSCI 360   | Climate and Ocean Processes                                       |
| EARTHSCI 361   | Exploration Geophysics  |
| GEOPHYS 331  | Physics of the Atmosphere and Ocean                               |

# Careers in Marine Science

---

New Zealand has the world's fourth largest exclusive economic zone. It must be managed sustainably to ensure it provides for our social and economic wellbeing. This means Marine Science graduates have opportunities in a huge variety of fields, ranging from research to Crown Research Institutes and the private sector. The skills you acquire will also enable you to take your career path to other oceans and marine environments:

---

Aquaculture

---

Biodiversity management

---

Conservation

---

Fisheries management

---

Marine Biologist

---

Policy advice

---

Resource planning

---

**Natalie Gilligan** graduated with a Bachelor of Science majoring in Marine Science in 2016. She is now employed as a fisheries observer at the Ministry for Primary Industries.

*"I chose to study at the University of Auckland as it is one of New Zealand's most internationally recognised universities, has a good reputation and is close to home.*

*"I made some of the most amazing friends with people who share the same passions and interests as me. Some lecturers were particularly helpful in getting me experience outside of University where I completed an aquaculture internship at NIWA and worked alongside many talented scientists and technicians.*

*"I believe that my qualification in Marine Science has provided me with useful and relevant knowledge that has enabled me to pursue a career doing something that I love.*

*"I am currently working in the fisheries industry where day to day I am involved with species identification and taxonomic classification, as well as data collection and report writing. The University of Auckland enabled me to gain relevant experience that I can now apply to my work."*



# Helpful information

## Academic dates

[www.auckland.ac.nz/dates](http://www.auckland.ac.nz/dates)

## Academic Integrity Course

[www.auckland.ac.nz/academic-integrity](http://www.auckland.ac.nz/academic-integrity)

## Accommodation

[www.accommodation.auckland.ac.nz](http://www.accommodation.auckland.ac.nz)

## Buy coursebooks

[www.science.auckland.ac.nz/resource-centre](http://www.science.auckland.ac.nz/resource-centre)

## Career Development and Employment Services

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

## Course advice and degree planning in Science

[www.science.auckland.ac.nz/student-centre](http://www.science.auckland.ac.nz/student-centre)

## General education

[www.auckland.ac.nz/generaleducation](http://www.auckland.ac.nz/generaleducation)

## How to apply

[www.apply.auckland.ac.nz](http://www.apply.auckland.ac.nz)

## How to enrol

[www.auckland.ac.nz/enrolment](http://www.auckland.ac.nz/enrolment)

## International students

[www.international.auckland.ac.nz](http://www.international.auckland.ac.nz)

## Māori and Pacific students

[www.science.auckland.ac.nz/tuakana](http://www.science.auckland.ac.nz/tuakana)

## Need help?

[www.askauckland.ac.nz](http://www.askauckland.ac.nz)

## Rainbow Science Network for LGBTI students

[www.science.auckland.ac.nz/rainbowsience](http://www.science.auckland.ac.nz/rainbowsience)

## Scholarships and awards

[www.scholarships.auckland.ac.nz](http://www.scholarships.auckland.ac.nz)

## Support for students

[www.science.auckland.ac.nz/support](http://www.science.auckland.ac.nz/support)



Applications close on 8 December

**Questions about Marine Science?**  
**[marine@auckland.ac.nz](mailto:marine@auckland.ac.nz)**

### 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.



THE UNIVERSITY OF  
**AUCKLAND**  
Te Whare Wānanga o Tāmaki Makaurau  
NEW ZEALAND

## Connect with us

Faculty of Science, The University of Auckland  
Private Bag 92019, Auckland 1142, New Zealand

Phone: 0800 61 62 63 | Email: [scifac@auckland.ac.nz](mailto:scifac@auckland.ac.nz)

Web: [www.marine.auckland.ac.nz](http://www.marine.auckland.ac.nz)



[twitter.com/ScienceUoA](https://twitter.com/ScienceUoA)



[www.facebook.com/science.uoa](https://www.facebook.com/science.uoa)