

AQFI 301 Field Methods in Applied Marine Science 2024



AQFI 301 is an intensive field-focused course that allows students to apply methodology used to assess the status of key species or habitats in a fisheries reserve. The field course is based at a marae and a supportive environment provided to learn about tikanga (custom) and kawa (protocol) of the marae. Students develop complete field surveys that often include in-water components and then write an end user focused report after completion of the field trip.

Overall Learning Outcomes

Cross-cultural research skills and an understanding different worldviews. In this case Te Ao Māori focused on kaitiakitanga (environmental and resource management).

Critical Thinking: students are able to evaluate the strength and rigour of data; they show scholarship and understand the ethics of science; they can build and test hypotheses

Scientific Method: students develop their own projects, forming research questions based on observations, apply appropriate methodology in the field, they record and store information; they analyse, interpret results, and report them to fishery managers and the community.

Presentation and Communication: Skills surrounding communicating science and research using a variety of means to a range of end users of research

Teamwork: students work together on data collection, analysis and interpretation; they understand when teamwork is appropriate, and when individual work should be used; they give credit to others when necessary.

Field work skills: In water (snorkelling) and around water data collection, health and safety in the field, planning and carrying out fieldwork efficiently.

Course Design:

This course is run three times each year during the summer when weather is most suitable for fieldwork. The week-long field course is the only time you need to be available in person, support for write up and workshops are online.

Timing 2024

N1 January Fieldtrip 15-21st of January at Uenuku Marae, Moeraki

N2 February Fieldtrip 8-13th of February at Puketeraki Marae, Karitāne

N4 November Fieldtrip 13-18th of November at Puketeraki Marae, Karitāne

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Day One: Preparing to go onto the Marae and then going on (powhiri/mihi whakatau)

Morning workshop at University of Otago Main Campus: Local context and customary fisheries. Tikanga and Kawa, mihi mihi and waiata. What it is all about, being prepared and comfortable for noho marae

Midday: Powhiri or mihi whakatau, Go onto and be welcomed at marae

Afternoon. Prepare for fieldwork, build teams and team

Workshop: Scientific Diving and being safe in the field Being a diving scientist. Prep for working in the field, snorkelling on AQFI 301, health and safety

Get checked out to snorkel (if you want), get comfortable at the marae.

Day Two. Scoping – making a plan.

Morning Workshop: Topics and planning a research project. You will choose a topic that interests you and work on data sets gathered. Some projects you could do, getting into groups of 4ish, expectations within teams, developing a plan and a hypothesis.

Observation of potential field sites, test methods, get the gear you need, develop and present hypotheses and plans for self-guided group work.

Evening Workshop: Introduction to data management and GIS. How to look after hard-earned data, separating data sets from analysis, keeping it simple.

Day Three to Five

Get out in field and gather data. Enter, process and present data.

Day Five

Present what you did to the community,

Day Six

Poroporoaki and return home

Workshops will be provided as needed to support your data write up

Assessment Summary

Assessment	N1	N2	N4	Contribution to final mark
Contribution to team	n/a	n/a	n/a	10%
Development of hypothesis/objective	16 January	9 February	14 November	5%
Team presentation to the community	20 January	14 February	18 November	5%
Data report	26 January, 5pm	16 February, 5pm	22 Nov, 5pm	10%
Report outline	2 February, 5pm	23 February, 5pm	29 Nov, 5pm	20%
Final report	16 February, 5pm	8 March, 5pm	13 Dec, 5pm	50%

