Te Kura Pūtaiao Koiora
School of Biological Sciences

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

Ngā Whakamārama | Course Information 2024 (Semester 1)

BIOL412-S1
Research Proposal

0.125 EFTS 15 Points
S1 & S2

Whakamahuki | Description

The general aim of the course is to **prepare postgraduate students to engage in research through the development of a detailed research proposal** – it has been designed for BSc (Hons), MSc Pt I and PGDipSci students as a compulsory component of the 4th year postgraduate experience. It comprises a series of modules in contemporary research methodology and proposal preparation and time to engage with potential supervisors to discuss project ideas. The skills and perspectives developed in this course will serve students progressing to research projects (in BSc Hons and MSc PtII) and those students who decide to pursue other careers.

Kairuruku Akoranga | Course Co-ordinator

Professor Matthew Turnbull, Room 234 Julius von Haast
Matthew.turnbull@canterbury.ac.nz

Pūkenga | Teachers

This is a team-taught course with contributions from a range of staff within the school.

Goals of the Course

To introduce and develop skills in the synthesis of research findings and the writing of a detailed research proposal.

Hua Akoranga / *Aromatawai* | Learning Outcomes and Associated Assessment

As a student in this course, I will develop the ability to:

- Communicate the findings of scientific research in plain English and verbally for a scientifically-literate audience (*assessment task: verbal proposal presentation*).
- Synthesise primary scientific literature to generate a clear and concise argument in support of a perspective (*assessment task: research proposal*).
- Critically evaluate a colleague's work and generate constructive feedback (*assessment task: peer-assessment of research proposal draft*).

- Synthesise primary scientific literature to provide in-depth background and context for understanding and critical evaluation of topics in biological sciences (*assessment task: research proposal*).
- Apply an understanding of scientific practice in a bicultural context to the generation of testable hypotheses and to the development of advanced methodologies (*assessment tasks: modules and research proposal*).

Pūkenga Ngaio | Transferable Skills

As a student in this course, I will develop the following skills:

- Writing a literature review to focus ideas for research proposals. This is essential for MSc Pt I students to be fully prepared for Pt II. Beyond University this skill is important for any career in research or in an NGO, where you will need to write convincing applications for increasingly-limited funding. *We will have face-to-face tutorials and online modules to provide instruction on the elements of successful proposals and develop your abilities to identify these elements in group and peer-to-peer sessions.*
- Critical synthesis of information. In everyday life and in many job situations you will be required to read information from different sources, construct your own understanding and shape your own viewpoint. *In BIOL412, we develop your abilities to identify the essential elements of research outputs and you will use these skills to develop your research proposal.*
- Research design. Important for research and in governmental and non-governmental organisations. *We will provide discipline-specific advice on the major elements involved in developing testable questions and designing research projects.*
- Writing critical summaries of other work. Clear and constructive written criticism is essential in most professional careers. *In a tutorial, we will provide instruction on the elements of successful critical assessment and help you identify these elements with clear marking rubrics – you will use these in your peer-review of a colleague's work.*
- Verbal presentation. In most careers in science the ability to present findings clearly in verbal form is likely to be critical. *In BIOL412, we provide clear guidance on what makes a good presentation and you will test these skills in your proposal presentation.*

Āhuatanga Tāura | Graduate Attributes

Critically competent	Employable, innovative and enterprising	Biculturally competent and confident	Engaged with the community	Globallyaware
X	X	X		X

In planning activities and assessments for this course we will be guided by the descriptors for Level 8 of the NZQF:

Knowledge

Skills

Application

Advanced technical and/or theoretical knowledge in a discipline or practice, involving a critical understanding of the underpinning key principles	Analyse and generate solutions to complex and sometimes unpredictable problems Evaluate and apply a range of processes relevant to the profession or discipline	Developing identification with a profession and/or discipline through application of advanced generic skills and/or specialist knowledge and skills Some responsibility for integrity of field of work or study

Timetable

***Akoranga* | Tutorials and Activities**

These have been included in the course to allow for in-depth instruction as well as group or peer-to-peer discussions on specific topics, and to provide skills training to enable you to be more effective in planning and writing a research proposal. There will be formal components. These will include:

1. **Tutorial 1 (and associated modules): Research and Experimental Design**, Becoming a successful research student. Led by Matthew Turnbull. Preparation required.

2. **Tutorial 2 (and associated modules): Proposal writing**, Creating and communicating ideas from the literature. Led by Matthew Turnbull. Preparation required.

3. **Tutorial 3 (and associated modules): Developing bicultural understanding and competence in research.** (led by tbc). Preparation required.

4. **Project development:** Participating as part of a research team to develop a research project. Requires meeting with at least one academic staff member and their associated research team to discuss and develop research opportunities. **If possible, we recommend that this process starts late in your first semester of 4th year and continues during the break between semesters so that you are in a better position to make progress on your proposal in your second semester of 4th year**.

5. **Research engagement:** You are required to attend at least **four research seminars** given within the School (these are generally held on **Thursday at 12 pm**, but keep an eye out for weekly announcements as times/venues do change). This is a **compulsory requirement** and you will be asked to sign a register for the seminars you attend. You will also be asked to submit a brief compulsory reflection of these seminars with an emphasis on science communication.

It is important that you treat these sessions as important for your personal development – **please take notes** and **actively engage** in the group and peer-to-peer activities. You will be assigned to a 'work-team' to work in during some of the sessions (if appropriate). You will also be assigned to a 'peer-to-peer team' to work on modules together between sessions.

IMPORTANT - Beyond the formal sessions there is an expectation of **significant self-directed learning** (*Ako takitahi*) – this is true of all 4th-year course, but particularly this one. The sessions will require a degree of up-front preparation. Beyond the formal sessions,

students will have time to engage with academic staff and postgraduate students within the School to discuss research opportunities and project ideas, and to write their research proposal. Students should note that in the Science Faculty the average student is responsible for 10-12 hours of study per credit point – this equates to approximately 150+ hours for this course.

Assessment / *Aromatawai* (all students) Assessment

will be via:

1. Research modules will be completed during term 1 (S1) or term 3 (S2) **(10%)** Note: The modules will cover four research themes and each student will be required to complete one module per theme. Peer-to-peer discussion required.
2. A draft research proposal will be submitted at the start of term 2 (S1) or start of term 4 (S2) and will be assessed by your peers. **(0%)** Note: The draft will not be graded, but feedback will be given via a marking rubric and comments should be used to improve your proposal.
3. Peer-review of a fellow student's research proposal draft **(10%)**
4. Short (5 mins, 4 slides) oral presentation on your research proposal/project in a miniconference setting in late term 2 (S1) or late term 4 (S2) **(20%)**
5. Research proposal to be submitted at the end of term 2 (S1) or end of term 4 (S2) **(60%)**

Details of each of these assessment items and their precise due dates will be supplied as required **on the Learn site**.

Note that the course will be subject to the Biology policy on submission of work (see below).

Readings

Additional reading of recent books and scientific papers will be an essential adjunct to the tutorials, and development of the ability to evaluate such readings is an important objective for the course.

Class material on Learn (*Ako*) & use of *Turnitin*

We will be using Learn extensively to develop the **sense of community** within the course, and as a **forum** to conduct a range of learning activities. Resources used or referred to in tutorials will be available on-line on the course link in Learn. Please make contact with the Learn page for BIOL412 on a regular basis.

Please also note that we may request that you submit written work in both hard copy (for grading) **and in electronic form** (for assessment of originality using "*Turnitin*"). Instructions will be given on how you do this via Learn.

Prerequisite - BSc in Biological Sciences or equivalent as determined by the Head of School and/or 4th-year coordinator. Successful completion of BIOL411. For those students who begin 4th year in the middle of the year, BIOL411 and BIOL412 must be completed in Semester 1 of the following year.

RULES, REGULATIONS, AND WHAT TO DO WHEN THINGS GO WRONG

[updated March 2023]

If in doubt: ASK! The course coordinator is happy to answer questions. All staff involved in the course are available for advice on specific issues.

What do I do if I have to miss a test/exam or if my performance was impaired?
In Biological Sciences, we require a satisfactory level of achievement in both the theoretical aspects of the discipline and in practical activities. **This means you must attend all class activities (labs, tutorials, fieldtrips)** and submit all items of assessment unless you have a very good reason not to (e.g. medical reasons) and if this has been approved by your course coordinator.

If you feel that **illness, injury, bereavement or other extenuating circumstances beyond your control** prevented you from completing a **test/exam** worth 10% or more of the total course assessment, or if these circumstances affected your performance in such assessments, you should apply for Special Consideration. Applications for Special Consideration should be submitted via the Special Consideration website http://www.canterbury.ac.nz/study/special-consideration/ *within five working days* of the assessment or its due date. You should also notify the course coordinator. If you apply for Special Consideration because of medical reasons, you should visit a doctor within a reasonable timeframe (application form available on the website above or from the Student Health Centre).

The Special Consideration provisions are intended to assist students who have covered the work of a course but have been prevented by illness or other critical circumstances from demonstrating their mastery of the material or skills at the time of a text/exam – **they do not excuse you from doing the test/exam** within a reasonable time agreed with the course coordinator.

What do I do if I have to miss a quiz or assignment or if I need an extension?
You cannot apply for Special Consideration if you miss an assessment that is not a test/exam, such as a quiz, lab report, essay, literature review or other assignment, or if the test/exam is worth less than 10% or more of the total course assessment. If this happens or if you need an extension because of **illness, injury, bereavement or other extenuating circumstances beyond your control**, please contact the course coordinator and arrange an alternate activity and/or submission date. You should also do this if you have to miss a laboratory, tutorial or field trip.

What are other valid reasons to miss an assessment or mandatory course activity?
The Special Considerations policy (https://www.canterbury.ac.nz/about/governance/ucpolicy/student/specialconsideration-procedures-and-guidelines/) outlines only a few kinds of activities that UC considers valid reasons for missing an assessment or mandatory course activity other than those outlined above. These include **involvement in international or national representative sport or cultural groups.** Holiday trips, birthday parties, weddings, work-related commitments etc. are not given special status in this University policy. Please contact your course coordinator to ask for an alternate activity and/or submission date if you are eligible.

Special Consideration for late discontinuation of a course
Students prevented by **extenuating circumstances** from completing the course after the final date for withdrawing, may apply for Special Consideration for late discontinuation of the course. Applications must be submitted via http://www.canterbury.ac.nz/study/special-consideration/ no later than five working days after the examination period has finished.

Academic Integrity
It is the responsibility of each student to be familiar with the definitions, policies and procedures concerning academic misconduct/dishonest behaviour. Instances of academic misconduct will be dealt with in a serious and appropriate manner. Students should refer to: https://www.canterbury.ac.nz/about/ako/academicquality/academic-integrity/

Plagiarism
It is essential that you are aware that plagiarism is considered a very serious offence by the academic community, the University and the School of Biological Sciences. Plagiarism is defined as taking content from another work or author and presenting it, without attribution, as if it is your own work. Content here includes text (sentences or major parts of sentences), display items (graphs and tables), and overall structure (the detailed sequence of ideas). Plagiarism includes:

- re-use of previous assignments (even if each individual sentence has been rephrased to say the same thing in different words, if the overall structure is re-used).

- copying of another student's work (with or without their consent).
- the unreferenced use of published material or material from the internet, e.g. cutting and pasting of paragraphs or pages into an essay.
- the generation of text using artificial intelligence technology without disclosure and when it is not intended to be part of an assignment.

For most pieces of in-term assessment you will be given information concerning the use of direct and indirect quotes from previously published work. If you have any doubt about the appropriate use of published material, please speak with an academic staff member. If you are unsure what plagiarism is, seek advice.

It is a School policy that courses will likely that you submit work electronically for subsequent analysis of originality using *Turnitin*. Students agree that by taking courses in BIOL, assessments may be submitted to Turnitin.com for textual similarity review. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Terms and Conditions of Use as posted on the Turnitin.com site.

Where do I hand in assignments and then collect them once marked?
All assignments should be submitted as directed by the course coordinator. Typically, this will be electronically via Learn for on-line grading and for analysis in *Turnitin*. If a hard copy is requested, assignments should be placed in the designated collection boxes in the foyer of the 2nd floor of the School of Biological Sciences (Julius von Haast building, at the top of the stairs). All assignments must be accompanied by a cover sheet signed by you stating that the submitted work is not plagiarised. Cover sheets are available on top of the collection boxes, or you can download one from the Biology website (http://www.canterbury.ac.nz/media/documents/science-documents/assignmentcoversheet.pdf).

Marked assignments will be returned through Learn or, if in hard copy, can be collected from the School of Biological Sciences reception, unless directed otherwise by the course coordinator. Teaching staff will endeavour to return work as soon as possible, and should contact you if there are likely to be any delays that will prevent return within the maximum 4-week timeframe.

What if I can't get it finished in time?
Reports and assignments should be handed in on time. Extensions may be granted if you have a valid reason (see above). **If you require an extension, you should request one from the course coordinator** (or the lecturer responsible for marking the work), with as much notice as possible. Please do this BEFORE the deadline for the assignment. **If you have been given an extension and you have been asked to submit a hard-copy of your work, you should hand the work DIRECTLY to the course coordinator** (do not put it in the drop box as it may not be cleared after the due date). If an extension has not been granted:

- work handed in within 1 hour of the deadline: penalty of up to 5 percentage points of the mark for the assignment (e.g., a mark of 75% might be reduced to 70%).
- work handed in 1 – 24 hours after the deadline: penalty of 10 percentage points of the mark for the assignment (e.g., a mark of 75% is reduced to 65%).
- work handed in 1 – 7 days after the deadline: penalty of 15 percentage points of the mark for the assignment (e.g., a mark of 75% is reduced to 60%).
- work handed in more than 7 days after the deadline will not be marked or earn credit.

What if I have written more than the word or page limit?
If there is a word limit on an assignment, it is usually there to stop you doing too much work and to encourage you to write succinctly. You can be up to 10% over without too much worry, but if the length increases beyond that your mark may suffer due to failure to follow the requirements. If you find yourself way over the word limit talk to the lecturer concerned about how to get your assignment to an acceptable length. Unless specifically advised that there is flexibility, you must adhere to the word limit indicated.

What if I fail part of the course?
In Biological Sciences, we require a satisfactory level of achievement in both the theoretical aspects of the discipline and in practical activities. This means you must attend all class activities and submit all items of assessment unless you have a very good reason not to (e.g. medical reasons). **A student must attain an average score of at least 40% for in-course assessments (e.g. assignments, reports, quizzes) and an average score of at least 40% in the exam and/or tests, AND score at least 50% overall for the course, to be awarded a passing grade. See the course outlines for clarification of the assessment items included in each category and ask the coordinator if you are still unsure.**

What's the best way to give feedback?
We welcome constructive feedback at all times – help us to make this a valuable course for you. We endeavour to remain approachable at all times. If you would rather give feedback anonymously, please use the online course survey or talk to lab demonstrators, or your class rep (who will all report back to the staff-student liaison committee that includes a representative from each of the undergraduate classes). Class representatives will be selected from each class at the start of course.

What's the best way to complain?
If you feel you have not been fairly treated during this course, please raise the issue with the lecturer or course coordinator in the first instance. Other avenues include your class rep., who can raise issues anonymously, or the UCSA education coordinator.

Grading

A+	90% or above
A	85 – 90
A-	80 – 84
B+	75 – 79
B	70 – 74
B-	65 – 69
C+	60 – 64
C	55 – 59
C-	50 – 54

A restricted pass (R) **may** be awarded to those who are close to a pass (i.e. an overall score of 48-49.9%) AND who have achieved at least a 40% overall score in both in-course assessment and tests/exams. If an R grade is awarded you gain credit for the course but **cannot continue into papers that require this course as a prerequisite**. NB. The R grade is only available at 100 and 200 level - it cannot be awarded for third year papers.

Failing grades: D 40-49 E 0–39