

BIOL423 Evolutionary Ecology

0.125 EFTS, 15 Points.

Second Semester

Goals of the Course

This course aims to equip ecology students with the evolutionary biology underpinning the discipline. Students will advance their knowledge of current issues and approaches in evolutionary ecology. The course focuses on real time, rapid evolution and thus is particularly relevant to applied problems in biodiversity, agriculture and conservation.

We will consider natural selection and epigenetics (heritable change not involving change in DNA sequences) in the context of interactions within and between species and their environment.

Intended Learning Outcomes /Hua Akoranga and Associated Assessment /Aromatawai

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

- have a critical appreciation of current questions and approaches in evolutionary ecology (*assessment task: internal assessment*).
- understand how evolutionary processes underpin ecological interactions (*task: seminar*).
- access, synthesise and critically assess primary scientific literature on evolutionary ecology (*Assessment task: final exam*).
- synthesise primary scientific literature in order to generate a clear and concise argument in support of a perspective (*assessment task: final exam*).

Transferable Skills Register / Pūkenga Ngaio

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

- Discovery, interpretation and synthesis of information. (GP1)
- Evaluation of arguments and evidence, and debating alternative points of view. (GP2)
- Presenting arguments in a cogent and reasoned way. (GP2)
- Engaging in science and technology issues with a broader understanding of their social context, and of New Zealand's global position. (GP5)

GP1-5 refer to Graduate Profile attributes: (1) Critically competent in a core academic discipline of their degree; (2) employable, innovative and enterprising; (3) biculturally competent and confident; (4) engaged with the community; and (5) globally aware.

Pūkenga/ Lecturers

| | Room | Phone | Email |
|---|-------------|-------|--|
| Assoc Prof Hazel Chapman (coordinator) | Biology 335 | 95140 | hazel.chapman@canterbury.ac.nz |
| Dr Amy Osborne | Biology 552 | 92532 | amy.osborne@canterbury.ac.nz |
| Prof. Dave Kelly | Biology 339 | 95182 | dave.kelly@canterbury.ac.nz |

You can phone in from off campus by dialling 369-3999, then the listed extension.

Course Times

The course includes six two-hour slots which will function as tutorial/seminars.

Wātaka/Tutorial Topics and Timetable

The proposed topics are listed below.

The Timetable currently has it running on Fridays 1200-1400 hr, but check for updates.

| Date | Tutorial number and topic | Run by |
|-----------------------|---|--------|
| 04 August | 1. Evolution in the Anthropocene (natural selection and adaptation) | Hazel |
| 11 August | 2. Evolution in urban landscapes | Hazel |
| 18 August | 3. Evolution of life histories | Dave |
| 25 August | 4. Evolution in the Anthropocene (epigenetics and plasticity) | Amy |
| September Study Break | | |
| 15 Sept | 5. Using genomics to answer ecological questions | Amy |
| 22 Sept | 6. Evolutionary consequences of species introductions | Hazel |

Aromatawai/Assessment

30 % essay (tentatively due Friday 20th August).

10 % on-line quiz

60 % on the final exam.

Note that the course assessment will be subject to the Biology policy on late submission of work, and essays may be required in both hard and electronic formats so we can run plagiarism checking software on them (see below). Also note that Biol policy requires you to average at least 40% on the interm work (**essay**) and at least 40% on the **final exam**, and get an overall mark of at least 50%, to pass the course.

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

[updated 3 April 2020]

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

What do I do if I have to miss something or if my performance was impaired?

If you feel that **illness, injury, bereavement or other extenuating circumstances beyond your control** prevented you from completing an item of assessment 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 will also need to 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 assessment – they do not excuse you from doing the assessment within a reasonable time agreed with the course coordinator. You should expect to be required to submit additional work if you miss a major assignment (e.g. a field trip for which a major write-up is required).

You should also apply for Special Consideration if you are not able to complete an assessment or attend a field trip because of **involvement in international or national representative sport or cultural groups**. Please review the Special Considerations policy, because very few kinds of activities will be eligible for such consideration (e.g. holiday trips, birthday parties etc. are not given special status in the University policy).

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.

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.

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 may request 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 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), unless directed otherwise by the course coordinator. 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/assignment-coversheet.pdf>). In addition, you may also be asked to submit your work electronically (via Learn) for analysis in *Turnitin*.

Marked assignments 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. **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 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.

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) 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 pre-requisite**. 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