

## Course Information / *Ngā Whakamārama* - 2024

### **BIOL272**

### **Principles of Animal Behaviour**

0.125 EFTS 15 points

Semester 2

#### **Description / *Whakamahuki***

Using a mix of traditional lectures, selected case studies, and fieldwork, this course aims to provide a broad understanding of the adaptive significance of behaviour: how organisms interact with each other and with their environment. We explore the neural and hormonal basis of behaviour, as well as core subjects, like why and how animals communicate or have sex. This course is suited to anyone who may have wondered if animals can be dishonest, and if so, whether they are ‘actively lying’, and thus self-aware? Additional reading of scientific papers is an *essential* adjunct to the lectures and to assessments.

#### **Goals of the Course**

The primary aims of the course are to provide an **understanding of what animals do (behaviour) and why, based on field and theoretical work, including case studies**. This course is designed as a platform for BIOL 383 Behavioural Ecology and BIOL 355 Neurons, Hormones and Behaviour, and links with BIOL 250 Principles of Animal Physiology in order to provide a strong theoretical platform for students interested in Animal Behaviour.

#### **Course Coordinator / *Kairuruku Akoranga***

Ximena Nelson; Room 336 (von Haast)

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#### **Lecturers**

Jim Briskie: [jim.briskie@canterbury.ac.nz](mailto:jim.briskie@canterbury.ac.nz)

Elissa Cameron: [elissa.cameron@canterbury.ac.nz](mailto:elissa.cameron@canterbury.ac.nz)

Ximena Nelson: [ximena.nelson@canterbury.ac.nz](mailto:ximena.nelson@canterbury.ac.nz)

#### **Lectures Starting first week of Semester 2**

**See Course Information System for timetable:**

<http://www.canterbury.ac.nz/courseinfo/GetCourses.aspx?orgunitcode>

All lectures start on the hour.

#### **Lab work (see due dates for assessments below)**

**There will be a ‘virtual lab’ for this course which must be completed before the field trip.** This will be followed by a full-day field trip to Orana Park to be held over a weekend (two streams) later in the semester (Sat 27<sup>th</sup> July and Sat 3<sup>rd</sup> of August, subject to change depending on weather). You **must** attend one of the dates allocated (maximum: 40 per stream).

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

### ***In this course, I will develop critical competence in the core academic discipline through:***

- Up-to-date knowledge of the kinds of questions that are meaningful in the study of animal behaviour and how these questions can be answered scientifically (*assessment task: quizzes and final exam; GA: Mastery of discipline*).
- Ability to evaluate scientific primary literature and the scientific presentation of data (*assessment tasks: quizzes and exam - involve readings on Learn; GA: Mastery of discipline*)
- Ability to critically evaluate the adaptive significance of patterns of behaviour (*assessment task: laboratory write-up and final exam; GA: Mastery of discipline*)
- Ability to describe mechanisms that enable animals to interact with their surroundings (*assessment task: final exam; GA: Mastery of discipline*).
- Ability to explain how behavioural ecologists study animal behaviour and how knowledge of animal behaviour is used by different disciplines and cultures (*assessment task: quizzes and laboratory write-up; GA: Mastery of discipline, cultural competence*)
- Ability to identify the broader implications of knowledge about animal behaviour for biology and society (*assessment task: quizzes and final exam; GA: Mastery of discipline, community engagement, global awareness, cultural competence*)
- Ability to conceptualise a scientific hypothesis, develop and explain the idea and your results in depth (*assessment task: laboratory write-up; GA: Mastery of discipline, employability, innovation & enterprise*).
- Ability to extrapolate in-depth knowledge from ‘model organisms’ to other animals (*assessment task: final exam; GA: Mastery of discipline, employability, innovation & enterprise*).

## Transferable Skills / *Pūkenga Ngaio*

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

- Learn how to extrapolate information from one source to a novel situation. *Through the use of case studies, we aim to show how in-depth learning from one system enables you to hypothesize or predict what might happen in a different system, based on knowledge of the natural history of an animal. Extrapolation of knowledge is a fundamental skill in an era where access to information is overwhelming, meaning that a conceptual understanding that can lead to critical thinking in different areas is paramount. (Employable, innovative and enterprising; Globally Aware)*
- Learn how to read primary scientific literature. *This course relies heavily on the use of primary literature. Learning how to understand scientific writing enables you to learn scientific writing, and to delve into information beyond the - often incorrect - gloss portrayed by media or summarized reports. (Employable, innovative and enterprising)*
- The measurement and statistical analysis of animal behaviour. *You will have the opportunity to watch a variety of animals and learn different methods for quantifying behaviour; the virtual lab will review simple statistical methods needed for the analysis of behavioural data. These methods will be critical for writing lab reports, and learning scientific writing. (Employable, innovative and enterprising)*

<b>Student Feedback</b> (max. score = 5)	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2018</b>	<b>2021</b>
1. This was a well-organized course	4.5	4.2	4.7	4.0	4.3
3. Workload appropriate	4.3	4.1	4.4	4.1	4.3
4. Effective opportunities for student engagement	4.2	4.3	4.5	4.1	4.2
5. I received helpful feedback	4.2	3.5	4.2	3.9	4.2
6. The assessments measured my learning	3.7	3.6	3.9	3.9	4.4

The following issues were raised in written feedback by students at the end of the course. The responses were collated by the course coordinator.

**Which aspects of the course were the most positive or helpful?**

- *The lecturers*
- *Quizzes*
- *Field trip*
- *Writing reports*

**How could this course be changed to assist learning? Action taken in response to feedback is indicated in bold.**

- *Make quizzes online. **We have done this.***
- *Make quiz time longer than 12 min. **We have changed these to 25 min.***

**Course content / *Hōtaka* (subject to change)**

**Jim Briskie**

- How to read papers and interpret data
- Migration and navigation
- Dispersal and habitat selection
- Mating systems
- Parental care
- Behavioural adaptations to avoid diseases and parasites
- Behaviour and conservation biology
- Life history evolution and conservation of NZ birds

**Elissa Cameron**

- Living in Groups
- Altruism and cooperation
- Sexual Conflict
- Sex allocation

**Ximena Nelson**

- Communication (honest and dishonest)
- Antipredator adaptations and mimicry
- Basic neural basis of behaviour
- Basic hormonal basis of behaviour
- Case study of neural and hormonal basis of behaviour: birdsong

**Assessments and due dates**

<b>Assessment / <i>Aromatawai</i></b>	<b>Due (2024)</b>	<b>Weight (%)</b>
'Virtual lab' write-up	5 August, 5 pm	10
Field work write-up	9 September, 5 pm	20
Online quizzes on lecture and lab material (5 x 4% each)	Throughout	20
Final Exam	TBA	50

**What is expected in assessments?**

The expectations for assessment items relate to the learning outcomes above. A general marking rubric is as follows:

A to A+ : Evidence that the student has developed an individual conception of the subject from *extensive* reading of relevant primary literature and considered opinions based on an

understanding of these readings. This individual understanding will likely be applied to a novel situation/organism.

B+ to A- : Evidence of strategic reading from a few sources, and the ability to present lecture content in the student's own words.

C to B: Reproduction of lecture content following the structure used by the lecturer.

D to C- : Reproduction of some lecture content without clear structure.

E : Confusion of content or no meaningful content presented beyond knowledge that would be expected at the start of the course.

**For BIOL272, you must attain an average score of at least 40% for the two lab reports and an average score of at least 40% in the exam and the combined quizzes, AND score at least 50% overall for the course, to be awarded a passing grade.**

### **Reading / Pukapuka Ako**

There is no set textbook for this course. Material or links to primary sources (including scientific papers and chapters from books) will be posted on Learn. Additionally, reading of material in Goodenough J, McGuire B, Jakob E (2009) *Perspectives on Animal Behavior*. 3<sup>rd</sup> Edition. John Wiley & Sons, Inc., which can be found in the Library, is recommended.

### **Electronic Distribution of Course Material**

Information about the course, including the course handout, notices, summaries of lectures and other details will be placed on Learn.

From time to time notices about the course will be sent via email. It is assumed that all members of the class regularly check their email accounts on the UC student system.

### **Students with Disabilities:**

Students with disabilities should speak with someone at the Equity & Disability Service, if you have not already done so (<https://www.canterbury.ac.nz/equity-disability/>). Please speak to the course coordinator at least one week before any course activity for which you have a special requirement.

**Prerequisites** BIOL112 or PYSC105

## 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 test/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/special-consideration-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/academic-quality/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/assignment-coversheet.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 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