BIOD53 – Special Topics in Behavioural Ecology

Instructor: Malcolm Rosenthal
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Office Hours: Wednesday 1-3pm or by appointment

Lecture/Tutorials Location/Time
Mondays 12:00 – 14:00 (MW262)
Fridays 12:00 – 14:00 (MW120)

COURSE OVERVIEW

The field of Behavioural Ecology uses ecological and evolutionary perspectives to produce a predictive framework for understanding the evolution and maintenance of the behaviour of animals (and sometimes, of plants) in their natural context. We will consider this field broadly as the study of behaviour, the morphology, life history, and physiological traits underlying adaptive behaviour, and the effects of behaviour on population-level phenomena. This course will introduce you to the higher-level reasoning, empirical and theoretical research that underlies modern Behavioural Ecology. In this course, we will emphasize scientific approaches to information use in a way that is applicable to many different fields of inquiry.

Learning Objectives

1) Develop your ability to identify, answer, and communicate questions in any area of scientific inquiry

2) Develop your ability to access, evaluate, and interpret factual information from a variety of sources, and use information to make inferences in the context of hypothesis testing.

3) Develop your ability to read and interpret papers from the primary literature.

4) Learn the methodologies & approaches used to answer questions in Behavioural Ecology

5) Understand the theory & history of selected areas of Behavioural Ecology

COURSE MATERIALS

All essential course information will be posted to blackboard

Readings There is no assigned text for this course. Instead, we will be drawing extensively on primary literature papers. Citation information/DOI's for the papers we will be reading will be posted on blackboard at least a week in advance of the date on which we will discuss them. We will go over how to find and access papers online in class.

Lecture Slides For your reference, lecture slides will be posted to blackboard the day after the lecture as pdf files. It is your responsibility to take notes, engage with the materials, and ask questions in class to clarify whenever it would help your understanding. Most lecture slides will focus on diagrams, figures, and other images. As such, do not depend on lecture pdf's for your note taking.

COURSE FORMAT

Lectures – Lecture sessions will provide background and the theoretical framework underlying a given topic in behavioural ecology. These will usually be 1 – 2 hour sessions, and are intended to be interactive. Questions, discussion, and challenges are encouraged.

Tutorials – Tutorial sessions will primarily consist of reading clubs that will give us the opportunity to explore historical and recent advances in the field of behavioral ecology in a discussion-oriented setting. The success and effectiveness of these clubs will depend strongly on having carefully read the assigned papers and coming prepared to participate in the discussion.

Workshops – We will have several workshop sessions designed to prepare you for specific assignments. Workshops

ASSIGNMENTS

This is a brief overview of the required assignments in this class. Further information regarding expectations and grading outlines will be provided in class or on blackboard.

Paper Leader

Twice in the course you will be responsible for leading the discussion on a paper in the Friday journal club. Paper leaders will be expected to have read their papers very carefully, and should come to class ready to summarize the questions and findings of the paper if necessary. In addition, paper leaders will prepare 3 to 6 written questions designed to stimulate discussion.

Peer Reviews
You will write a peer review for any two papers from the Friday journal club excepting the papers for which you are the discussion leader. These reviews should be approximately 500 words long, and should be written as if you were determining the suitability of the paper for publication. Peer reviews should highlight both the positive and negative aspects of the paper, as well as any areas that were confusing or hard to read.

Research Proposal
You will prepare an 8 – 10 page (double spaced) research proposal. This proposal will outline a hypothetical project that you intend to undertake, and will include background on the study system, an description of hypotheses to be tested, the proposed methods of research, expected findings, and a bibliography. This paper will be submitted in two drafts, the first of which will be peer-reviewed by another student in the class.

Oral Presentation
You will present the findings of a research paper of your choosing in the form of an oral presentation. These presentations will be 20 minutes long, with 10 minutes for questions. These oral presentations will follow the format of research presentations given at scientific conferences. It is expected that you will contribute to the discussion by asking relevant questions following other students' presentations.

Grade Breakdown

Item	**Value**	**Due Date**
Participation	10%	Every Class
Paper Club leader	15% (7.5% each)	TBD (on blackboard)
Peer reviews	15% (7.5% each)	Due at 12:00 on day of paper
Research Grant	25%	
1st draft	5%	Monday, February 22
real-time peer review	5%	Friday, February 26
final paper	15%	Monday, February 29
Oral Presentation	15%	TBD (on blackboard)
Open-book Final Exam	20%	TBA, exam week

COURSE POLICIES & ADMINISTRATION

AccessAbility
Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services Office as soon as possible. We will work with you and AccessAbility Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC AccessAbility Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or ability@utsc.utoronto.ca

Late Assignments

Students who are unable to submit an assignment on time due to illness or other extenuating circumstances should contact me within 3 working days of the deadline. Students must then present me a completed UTSC medical certificate that confirms their illness and medical attention at the time specified. If the medical excuse is valid, no late penalty will be assessed for the assignment. However, I will require submission of earlier draft versions of the assignment, as illness on the due date is not an excuse for lack of progress.

Contact

The easiest way to get feedback or assistance outside of class will be to visit me during my office hours (Wednesdays, 1pm – 3pm), or to send me an email. I will do my best to respond to emails the same day if they are sent between 9:00 and 5:00 on a weekday. Emails sent after 5:00 on a weekday may not get answered until the next day, and emails sent over the weekend may not get answered until the next Monday.

Tentative Schedule

*Meetings in **MW262** on Mondays and **MW120** on Fridays, noon to 2pm unless otherwise noted*

Date	Monday 12pm – 2pm (MW262)	Date	Friday 12pm – 2pm (MW120)
Jan 4	Intro to Behavioural Ecology	Jan 8	Library tools, Peer Reviewing + Leading a reading club
Jan 11	Plasticity, constraints & Personalities	Jan 15	Reading Club 1 (Plasticity, constraints & personalities)
Jan 18	Information & Telling the future (communication)	Jan 22	Reading Club 2 (communication)
Jan 25	Sexual Selection I	Jan 29	Reading Club 3 (sexual selection I)
Feb 1	Sexual Selection II (mate choice edition)	Feb 5	Reading Club 4 (sexual selection II)
Feb 8	Why things diverge – character displacement	Feb 12	Workshop: research grants **Meet in BV466**
READING WEEK (Feb 15 – 20)			
Feb 22	Research grant draft 1 due: 11am Workshop: research papers	Feb 26	Peer review notes due: 11am Workshop: real-time peer review Research grant draft 2 due: 2pm **Meet in BV466**
Feb 29	Students' choice + Workshop: oral presentations	March 4	Reading Club 5 (divergence)
March 7	Oral Presentations I	March 11	Reading Club 6 (students' choice I)
March 14	Oral Presentations II	March 18	Reading Club 7 (students' choice II)
March 21	Oral Presentations III	March 25 (good Friday)	**NO CLASS**
March 28	Why we do Behaviour – research in the public view	April 1	Course Review Session
April 4 – 8 Study Break!			
April 9 – 22 Open-book final exam			