



BIOC54H3S: ANIMAL BEHAVIOUR

Winter Session 2019

Department of Biological Sciences, University of Toronto Scarborough

COURSE SYLLABUS

INSTRUCTOR: **Dr. K. Persaud (AC320C)**
Office Hours: Tues. 1:30-3:30pm

(*Please do not just “drop by”.
 Please use office hrs. or make an appt.*)

T.A.S: Alexandra Leclair
 Monica Mowery
 Nishant Singh } Office Hours: SW524A; Thurs. 11am-12pm

LECTURES: MW170; Wed. 2 - 4pm

TUTORIALS: TUT1: Thurs. 9 - 10am; AA204 (Monica)
 TUT2: Thurs. 10 - 11am; AA209 (Alexandra)
 TUT3: Thurs. 3 - 4pm; AA208 (Nishant)

*NOTE: You must attend
 the tutorial in which you are enrolled.
 Attendance is monitored and contributes
 to your course grade.

COMMUNICATION: Email: **bioc54@utsc.utoronto.ca**
Online Course Management: “Quercus” (*announcements, notes, assignments, etc.*)

READINGS: Textbook (required): Rubenstein & Alcock. “Animal Behaviour” 11th Ed.
 (Hard copy available through the Bookstore, e-copy available through
<https://www.redshelf.com/book/917040/animal-behavior-917040-9781605357706-dustin-r-rubenstein-john-alcoc>)

PRE-REQ.'S: BIOB50H & BIOB51H EXCLUSIONS: EEB322H, (ZOO322H), (BGYC54H)
NOTE: If, when BIOC54H begins, you have not already passed the pre-required courses (or if you have passed an excluded course), you WILL be removed from BIOC54H unless special arrangements have been made with the instructor.

COURSE OVERVIEW:

This course is concerned with the relationship between the behaviour of animals, as it contributes to their survival and reproduction, *in light of evolutionary theory*. Approaches to the study of animal behaviour, as demonstrated by examples from the scientific research community, are also integrated.

You will learn to (*Learning Goals*):

- (i) identify questions of ultimate or evolutionary importance
- (ii) apply Darwinian theory when forming ultimate hypotheses & predicting behavioural strategies
- (iii) understand the role of “The Scientific Method” (in particular, hypothesis testing) in theory development and the ever-changing nature of scientific knowledge
- (iv) appreciate the tremendous variety of behaviours that are exhibited by numerous species in a wide range of contexts to address a great multitude of needs

COURSE STRUCTURE:

This course centers on the various topics, concepts, theories and approaches that are described and discussed in lecture, tutorial and the textbook. Lecture and textbook content do not directly overlap, but are complementary. Material from ALL sources is testable. Class time will be split between lectures (2 hrs/wk) and tutorials (1 hr/wk, every other week). Lectures will consist of content presented by the instructor supported with PowerPoint slides, video and the discussion of case studies. Tutorials will involve T.A.-led exercises, which help solidify concepts using interactive learning approaches.

HOW TO DO WELL IN THIS COURSE...

1. COMMUNICATION

- (a) **ANNOUNCEMENTS:** The main source of information for this course, including emergency postings and announcements, is the course Quercus page. Students are responsible for monitoring the course Quercus page regularly for updates. Lecture slides, handouts, assignments, links and forms (including the course syllabus and schedule) will be posted on Quercus. Email announcements are automatically sent through Quercus to students' ".utoronto.ca" account and thus students are responsible for either checking their ".utoronto.ca" account regularly or having it forwarded to the email account they typically use.
- (b) **T.A.s & INSTRUCTOR:** Questions about course material can be directed to the instructor or teaching assistants (bioc54@utsc.utoronto.ca), though we ask that you direct questions to only one person at a time. Questions being simultaneously addressed by more than one person takes valuable time away from other students needing help. Please indicate the name of the person who you are emailing in your subject line. **STUDENTS ARE HIGHLY ENCOURAGED TO ATTEND OFFICE HOURS.** Research has repeatedly shown that students who attend office hours learn more and achieve a higher course grade than students who do not. Office hours have been set aside so that we can focus on your needs. Though email may be used at times when you have a specific question that requires a short answer, email will be responded to as time permits. If you are absolutely unable to attend office hours, please schedule an appointment.
- (c) **PEERS:** One of the most useful resources you have available to you is your fellow classmate. It is highly recommended that you exchange contact information with at least one other student in the course, preferably someone in your tutorial section. **Notes from missed classes will NOT be lent out by T.A.s or the instructor.** Answers to frequently asked questions will be posted on the course Blackboard page.

2. ATTENDANCE

- (a) **LECTURES:** Attendance is *highly recommended*. Keep in mind that course content centers on topics addressed in lecture and that the material that your instructor has chosen to focus on in lecture is what they feel is important for you to learn.
- WEBOPTION: THERE IS NO WEBOPTION FOR THIS COURSE.**

- (b) **TUTORIALS**: Unlike many other courses, tutorials are ***NOT OPTIONAL*** for this course and attendance will be monitored for participation marks. **You MUST attend the tutorial to which you are assigned.** Contact your TA (in advance if possible) if you need to miss a tutorial. Official documentation may be required.
PLEASE BRING PRINTOUTS OF TUTORIAL DOCUMENTS TO TUTORIAL CLASS.

3. NOTES & READINGS

- (a) **LECTURE NOTES**: Every effort possible will be made to post a skeletal version of lecture slides, in PDF format, *before* class on the course Blackboard site. Please consider that pre-posting is a *courtesy* and NOT the *responsibility* of instructors. Final versions of lecture slides (in PDF format) will be posted following each lecture. Lecture slides are provided in an effort to encourage students to *listen* with understanding during class time instead of writing down all displayed text. As you will experience, lecture slides tend to include headings, figures and diagrams with only a modest amount of explanatory text. It will be the challenge of each student to expand on the points referred to on slides, using their own understanding of what is being discussed during lecture. ***Please note that because they contain only some explanatory text, it is almost impossible to understand lecture material by just downloading posted lecture slides instead of attending class.***
- (b) **READINGS**: Required readings are intended to complement lecture content by providing detailed explanation of ideas as well as specific examples. Depending on their learning style, students can decide whether they would most benefit from reading the corresponding textbook material before or after a lecture. However, it is highly recommended that students keep up with assigned readings to get the most out of both lecture and textbook material. Material from all sources is testable. However, students are advised to use lecture content to **guide** their focus when reading.
OTHER TEXTBOOK EDITIONS: If students choose to use a previous edition the textbook (e.g. 10th ed.), they are responsible for any differences between the 11th and 10th eds.

4. CAMPUS RESOURCES

As UTSC students, you are fortunate to have access to many resources offering additional academic assistance. ***Academic Advising and Career Counseling*** (utsc.utoronto.ca/~counselling/) provides both seminars and individual consultations on effective note taking, reading and study skills. ***The Writing Centre*** (utsc.utoronto.ca/twc/) offers specific guidance on scientific writing. The ***English Language Development Centre*** supports students and their academic English understanding and expression. UTSC's ***Health and Wellness Centre*** is dedicated to helping student as with their physical and mental health needs. Appointments can be made in person (SL270) or by phone (416-287-7065).

Students with diverse learning styles and needs are welcome in this course. If you have a disability/health consideration that may require accommodations, please feel free to approach the ***AccessAbility Services*** Office as soon as possible. The UTSC ***AccessAbility Services*** staff (located in Room S-302) are available by appointment to assess specific needs,

provide referrals and arrange appropriate accommodations. You can contact *AccessAbility Services* at (416) 287-7560 or utsc.utoronto.ca/~ability/

Please note that all students have the right to learn in an environment that is safe and free from hostility or harassment of any kind. If, at any time, a student feels unsafe or threatened in any way, please contact the course instructor, a T.A. and/or the University Police (416-287-7398).

MISSED DEADLINES AND ABSENCES:

As mentioned above, students are expected to attend all tutorials and exams. If a student is unable to attend a tutorial session, they should contact their tutorial leader as soon as possible, and even before their absence, if known. Documentation may be required. Students are responsible for obtaining missed material and are reminded that lecture/tutorial notes will not be given out by either teaching assistants or the course instructor. If a student is unable to submit an assignment on time or misses a test/exam for some legitimate reason, they must provide valid documentation to the course instructor as soon as they return (e.g. for medical reasons, the attending physician must complete the standard UTSC Verification of Illness form). Unless a legitimate reason is given, a **late penalty of 5% per day** will be deducted from late assignments.

ACADEMIC INTEGRITY:

As a University of Toronto student, you are expected to demonstrate honest and ethical behaviour with respect to all academic matters. For more information, please see Student Code of Conduct, <http://www.utsc.utoronto.ca/vpdean/code-student-conduct> This is important when interacting with not only your course instructor and teaching assistants, but also your fellow classmates. Any conduct deemed dishonest, unethical or harmful to others in any way may be considered grounds for immediate removal from the course.

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters (www.governingcouncil.utoronto.ca/policies/behaveac.htm) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences.

Potential offences include, but are not limited to:

IN PAPERS AND ASSIGNMENTS:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course. Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment.

ON TESTS AND EXAMS:

- Using or possessing unauthorized aids. Looking at someone else's answers during an exam or test. Misrepresenting your identity.

IN ACADEMIC WORK:

Falsifying institutional documents or grades. Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (see <http://www.utoronto.ca/aacc/academic-integrity>).

EVALUATION:

Midterm	30%	<i>(in class, Feb. 27th, 2019)</i>
Tutorial Quizzes & Participation	12%	<i>(ongoing)</i>
Mini Tutorial Assignment	3%	<i>(Jan. 17th, 2019)</i>
Final Tutorial Assignment	15%	<i>(Submit through Quercus April 5th, 2019)</i>
Final Exam	40%	<i>(TBA; on <u>entire</u> course)</i>

1. TUTORIAL CONTRIBUTION & ASSIGNMENTS

During tutorial sessions, you will run through exercises designed to help demonstrate concepts and approaches from the field of Animal Behaviour. **Activity outlines will be posted prior to tutorial sessions and students are asked to review the information before attending and bring activity documents to tutorial. A brief quiz on tutorial pre-reading will be administered at the beginning of each tutorial.** Both tutorial attendance and contribution will factor into students' participation marks. Tutorial material is testable.

2. MIDTERM & FINAL EXAM

The midterm and final exam will assess understanding, and some recall, of material from lecture, textbook and tutorial material. The midterm will include both short answer and multiple-choice questions while the final exam will consist mainly of multiple-choice with the possibility of some short-answer questions. The final exam will cover the entire term (cumulative). You will be tested primarily on your understanding of concepts. Synthesis of ideas from multiple themes and sources, as well as some straight recall of important terms, theories and facts, will also be assessed. ***Please note that many times, questions are carefully designed to tease out common misconceptions.*** Sample questions will be provided before tests.

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TENTATIVE COURSE SCHEDULE

LECTURE				TUTORIAL		
Wk	CLASS DATE (WEDNESDAYS)	TOPIC	TEXTBOOK READINGS	TUTORIAL DATE (THURSDAYS)	GROUP	TUTORIAL TOPIC
1.	Jan. 9 th	Course Introduction: Syllabus, structure, instructor, questions	Course Syllabus	Jan. 10 th	A & B	TUTORIAL <u>1</u> : <i>Students choose Group A or B</i>
2.	Jan. 16 th	An EVOLUTIONARY Approach: Asking Questions	Ch.1: p.2-23	Jan. 17 th	A & B	TUTORIAL <u>2</u> : Measuring Behaviour
3.	Jan. 23 th	Genes, Behaviour, Selection	Ch.3: p.58-74	Jan. 24 th	A	TUTORIAL <u>3</u> : Runaway Selection
4.	Jan. 30 th	Sexual Selection I: Sex Differences, Intrasex Competition	Ch.9: p.302-328	Feb. 1 st	B	
5.	Feb. 6 th	Sexual Selection II: Inter-sex Mate Choice, Mating Systems	Ch.9: p.328-341 Ch.10: p.352-399	Feb. 8 th	A	TUTORIAL <u>4</u> : Evolution of Cooperation
6.	Feb. 13 th	Sexual Conflict	Ch.9: p.341-350	Feb. 15 th	B	
7.	Feb. 20 st	----- Reading Week (No class or tutorial) -----				
8.	Feb. 27 th	----- MIDTERM -----		Mar. 1 st	A	TUTORIAL <u>5</u> : Honest Signaling
9.	Mar. 6 th	Parental Care Kinship	Ch.11: p.400-443	Mar. 8 th	B	
10.	Mar. 13 th	Sociality	Ch.12: p.445-458 Ch.13: p.477-511	Mar. 15 th	A	TUTORIAL <u>6</u> : Group Defense
11.	Mar. 20 st	Feeding & Defense	Ch.6: p.185-217	Mar. 22 nd	B	
12.	Mar. 27 th	Communication & Learning	Ch.8: p.257-301 Ch.3: p.74-83	Mar. 29 th	A	TUTORIAL <u>7</u> : Optimal Foraging
13.	Apr. 3 th	Evolution of Human Behaviour	Ch.14: p.513-548	Apr. 5 th	B	