

**Instructor:**

Name: Sue Bertram, PhD  
Email: [Sue.Bertram@carleton.ca](mailto:Sue.Bertram@carleton.ca)  
Office Hours: By appointment  
Office: CTTC 4631

**Teaching Assistant:**

Name: Vivian Nguyen  
Email: [Vivian.Nguyen@carleton.ca](mailto:Vivian.Nguyen@carleton.ca)  
Office Hours: By appointment  
Office: CTTC 4440M

**Meeting Times:**

Lectures: Tuesday and Thursdays 10:05 - 11:25

**Mandatory Course Textbook:**

Animal Behavior: Concepts, Methods, and Applications © 2014 by Shawn E. Nordell and Thomas J. Valone, Oxford University Press. You will read, discuss, and be tested on the entire textbook. **Note: earlier editions of text are not acceptable.**

**Course Description:**

Theoretical foundation of the study of behaviour and case studies addressing the theory including team discussions of all ideas. The course addresses how behaviour functions, evolves and reflects the ecology of animals.

**Course Format:**

I realize that when this course is over, virtually none of you will use the detailed information that you will learn in this course. Therefore, one of my key objectives is to encourage you to develop general skills that you will find useful long after graduation. Almost any professional job you obtain will require you to be able to read detailed information carefully and thoroughly, work well and efficiently both alone and in a team setting, think critically, outline your arguments, reconsider your position based on new evidence, and write / speak coherently. Therefore, I have put this course together to help you develop and hone those skills.

BIOL 3802 will be run using a “Team Based Learning Approach”. THERE ARE MANDATORY READINGS FROM THE TEXT THAT YOU MUST COMPLETE PRIOR TO EACH ‘LECTURE’ PERIOD. At the start of the ‘lecture’ period you will take an individual quiz [Readiness Assessment Process (RAP quiz); typically 10 multiple choice questions]. These RAP quizzes test your ability to answer complex, thought provoking questions about the assigned reading. After your RAP quiz has been completed on a scantron form and submitted, you will join your team (your team will be pre-assigned and permanent, consisting of 5-7 individuals). You and your team will RE-TAKE the identical quiz. Teams will discuss questions and all possible answers. Your goal will be to reach a consensus about which answer is correct. All team members should be included in the discussion. You will complete and turn in ONE answer ‘scratch’ card per team. One of the great things about these ‘scratch’ cards is that your team knows immediately whether they answered a question correctly. You and your teammates will

also have the opportunity to answer again if you answered incorrectly. Teams can submit written appeals if they feel that they can defend why their answer was correct (see details below). Ensure you write down your team number on the answer form as well as on the written appeal if you submit one. I will discuss questions that multiple teams answered incorrectly in the following class.

### Course Learning Objectives:

- 1) To understand fundamental concepts in animal behaviour, including proximate (immediate, mechanistic) and ultimate (evolutionary) explanations for animal behaviour, and how the evolution of behaviour is intimately connected with the natural environment. Understanding fundamental concepts in animal behaviour will be the focus of our weekly quizzes and discussions. Throughout the course you will address hypotheses to explain behavioural phenomena.
- 2) To integrate other disciplines to answer biological questions using the scientific method. I will cover connections among related disciplines in class. In class quizzes, midterm exams, and my choice assignments, you will demonstrate proficiency with the scientific method, including the hypothesis/prediction framework.
- 3) To demonstrate a writing style appropriate for communicating scientific results to a diverse audience. This will primarily be achieved via your written appeals for specific quiz and midterm exam questions.
- 4) To demonstrate an ability to work in teams. Teamwork is growing increasingly important in the professional world and there are a host of skills that can be developed through team work including the ability to plan and manage time, refine understanding through discussion and explanation, give and receive feedback on performance, challenge assumptions, develop stronger communication skills, tackle complex problems creatively, delegate roles and responsibilities, share diverse perspectives, pool knowledge and skills, hold one another accountable (and be held accountable), develop new approaches to resolving differences, and develop your own voice and perspectives in relation to your peers.

### Grading:

Item	# Taken	# Counted	%	Total %
RAP quiz	14	12 highest	2	24
Team quiz	14	12 highest	2	24
RAP midterm	2	2	10	20
Team midterm	2	2	10	20
Dr. Bertram's Choice	4	3 highest	2	6
Participation	2	2	3	6
<b>Total</b>				<b>100</b>

**Important Dates:**

<b>Date</b>	<b>Topic</b>	<b>Chapter (pages)</b>
September 3	Course Introduction	
September 8	The Science of Animal Behaviour	1 (pg: 2)
September 10	Evolution and the Study of Animal Behaviour	2 (pg: 20)
September 15	- Dr. Bertram's Choice	
September 17	Methods for Studying Animal Behaviour	3 (pg: 38)
September 22	Behavioural Genetics	4 (pg: 56)
September 24	- Dr. Bertram's Choice	
September 29	Learning and Cognition	5 (pg: 78)
October 1	Communication	6 (pg: 112)
October 6	Foraging Behaviour	7 (pg: 142)
<b>October 8</b>	<b>Midterm 1</b>	<b>1-7 (pg: 2-169)</b>
October 13	Discussion; Peer Eval 1	
October 15	Antipredator Behavior	8 (pg: 170)
October 20	Dispersal and Migration	9 (pg: 196)
October 22	- Dr. Bertram's Choice	
October 27	Reading Week	
October 29	Reading Week	
November 3	Habitat Selection, Territoriality, Aggression	10 (pg: 226)
November 5	Mating Behaviour	11 (pg: 254)
November 10	Mating Systems	12 (pg: 286)
November 12	- Dr. Bertram's Choice	
November 17	Parental Care	13 (pg: 312)
November 19	Social Behaviour	14 (pg: 338)
<b>November 24</b>	<b>Midterm 2</b>	<b>8-14 (pg: 170-371)</b>
November 26	Discussion; Peer Eval 2	
December 1	TBD	
December 3	TBD	

**Quizzes:**

RAP quizzes will be multiple-choice style. You will complete them on scantron forms, so ALWAYS BRING a suitable pencil and eraser to class. Students arriving late to class will NOT be given extra time to complete their RAP quiz. Further, there will be no make-ups for RAP or Team quizzes. Your final grade is based on your best 12 RAP quizzes and your best 12 Team quizzes (you will take 14 of each), so you can miss up to 2 classes (2 RAP and 2 Team quizzes) without academic penalty (but your team may grow upset with you). You will be given a zero for each quiz that you do not take (both RAP and Team), regardless of the reason.

**Midterm Exams:**

RAP midterm exams will be multiple-choice style. You will complete them on scantron forms, so ALWAYS BRING a suitable pencil and eraser. You will receive a mark of zero for any missed RAP and/or Team midterm exam. There will no make-up exams for RAP or Team midterm exams, unless you have experienced extremely extenuating circumstances and you provide your instructors with persuasive official documentation within 48 hours of the exam.

Automotive failure, heavy traffic, and/or inclement weather/ driving conditions will not count as a valid excuse for missing a midterm so ensure you leave adequate time for your commute. If you petition your instructors to be excused from a missed midterm and write a deferred one in its place, you must accompany your written petition with 1) a medical certificate clearly stating that you were seen by a doctor no later than 24 hours following the date of the exam and you were medically incapable or writing the exam at the appointed time, or 2) other official documents indicating that your absence was due to extremely extenuating circumstances beyond your control. I will NOT pro-rate any midterm exams. In the unlikely event that I give a make-up midterm exam, the exam format will be different (it will not be multiple choice and will not include team work). NOTE: if I give a makeup exam, the grade you receive on it will be worth 15% of your final grade because it will count in place of BOTH your RAP and Team midterm.

**Dr. Bertram's Choice:**

There are four lecture periods during the term that I have set aside. I may lecture, I may have you read a paper in advance and we will discuss it, I may have you watch a movie. I haven't decided yet. During each of those "Dr. Bertram's Choice" lecture periods, there will be some activity, either individual or team based, that will be worth 2% of the final grade. Of these activities, 3 of 4 will be counted, for a total of 6% of the final grade.

**Academic Integrity Policy:**

Carleton University is committed to ensuring fairness and consistency in the completion of examinations, including quizzes. As part of this commitment, students are required to follow proper examinations procedures. A student who commits a violation of this policy on an examination or quiz, or obtains or produces an answer or unfair advantage by deceit, fraud, or trickery, or by an act contrary to the rules of the examination are subject to the sanction under this Policy. These rules include but are not limited to:

- Attempting to read any textbook, notebook, memorandum, other written material or mechanical or electronic device not authorized by the examiner;
- Writing an examination or part of it, or consulting any person or materials outside the confines of the examination room without permission to do so;
- Leaving answer papers exposed to view;
- Attempting to read other students' examination papers and/or speak to another student (even if the subject matter is irrelevant to the test).

**Instructional Offenses:**

Cheating on quizzes and midterms and plagiarism are serious instructional offenses and will not be tolerated. Allegations of instructional offense will be referred to the Dean of Science.

**Final Exam:**

There will be NO final exam.

**Written Appeals:**

Pretend that you are courtroom lawyers. Your job is to advocate on behalf of your team. If I have written a question on a quiz or midterm that the team believes has an incorrect answer, then the team can submit a WRITTEN appeal. Appeals must be submitted by noon the day after class has ended (i.e. by noon on Friday if class was on Thursday, or by noon on Wednesday if class was

on Tuesday). Each appeal must include an argument as well as evidence and must be written in complete sentences using proper grammar, punctuation, and spelling. For example:

Argument: We feel that A, rather than B, should be the correct answer to question 10

Evidence: According to Table 2, the critical  $r$  for 10 degrees of freedom, two-tailed test, and an alpha of 0.05 is 0.576, which is larger than the calculated  $r$  of 0.570. This would lead us to conclude that there is no significant relationship between feather brightness and mate choice.

### **Class Etiquette:**

I strongly encourage you to speak up and participate in 'lecture' and outside of formal class, albeit always in a respectful manner. Please don't forget that you are co-equals with each of your colleagues. Be respectful of the space, your instructors, your teaching assistant, and your classmates. Here are some general rules to follow:

- Arrive on time
- No electronic devices are allowed in the classroom. Turn off or do not bring laptops, cell phones, headphones, iPods, iPads, tape recorders, MP3 players, cameras, etc.
- Do not chat with your neighbours while a RAP quiz/midterm is in progress (this is a form of academic dishonesty and you will be reported to the Office of the Dean of Science).
- Civility in the classroom (towards the Professors, Teaching Assistant, and fellow students) is expected at all times

### **Academic Accommodations:**

If you require special arrangements to meet your academic obligations please submit an accommodation request using the following process(es):

Pregnancy Obligation: Write to the instructors with your request for accommodation during the first two weeks of class, or as soon as possible after the need for accommodation exists. For details visit [http://www.carleton.ca/equity/accommodation/student\\_guide.htm](http://www.carleton.ca/equity/accommodation/student_guide.htm).

Religious Obligation: Write to the instructors with your request for accommodation during the first two weeks of class, or as soon as possible after the need for accommodation exists. For details visit [http://www.carleton.ca/equity/accommodation/student\\_guide.htm](http://www.carleton.ca/equity/accommodation/student_guide.htm).

Students with Disabilities: Students requiring academic accommodations must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Registered PMC students are required to contact the PMC (tel: 613-520-6608) every term to ensure that the instructors receive your Letter of Accommodation, no later than two weeks before the first assignment is due. For more details visit the PMC website <http://carleton.ca/pmc/>

### **Rights and Responsibilities:**

The Carleton University Undergraduate Calendar details the rights and responsibilities of students registered at the University. It is the responsibility of each student to familiarize themselves with the contents of the Undergraduate Calendar. Please pay particular attention to the sections dealing with deadlines in the academic year (pages 6-8) and Student conduct (pages 61-65).

**Electronic Communications:**

General announcements about the course will be e-mailed by either instructor to the entire class; so you should check your Carleton email account daily. Information relevant to the course will be posted on CULearn. All grades will be posted as quickly as possible to CULearn. You will be responsible for keeping track of your grade to date in the course.

**Participation:**

Participation grades are based on 2 evaluations from your lecture team-members. On two separate occasions you will submit a PEER-EVALUATION form online. The forms will consist of you completing two sentences for each 'lecture' team-member:

- 1) "Something I appreciate about this person is ..."
- 2) "Something I would like to request of this person is ..."

You will also subdivide 25 points between all members of the 'lecture' team (including yourself). Please use whole numbers only (positive integers, so no partial points and no negative numbers). Note - you can assign one or more team members' scores of zero provided the total number of points you assign to all team members (yourself included) sums to 25. This is NOT the time to play nice; if a team member is not doing their fair share of the work because they are consistently unprepared, do not come to class, or refuse to speak during team discussions, let them know when writing your sentence and assign them a low point value. On the same note if a team member is doing a fantastic job then let them know and assign them a high point value. Your 'lecture' teammates will never know what points you assigned or who wrote what comments, because all peer-evaluations are strictly confidential. The Instructor or Teaching Assistant will read through each of the peer evaluations and average grades from all team members to create the participation grade. Your instructor or Teaching Assistant will also paraphrase each of the sentences that were written about you, summarize them in a paragraph about what each team appreciates about you and what each time would like to request of you.

Each of these two peer-evaluation scores from the 'lecture' component will form 25% of your overall participation grade. These peer evaluations will be due immediately following the first midterm and immediately following the second midterm. Together these three scores will be combined to create 50% of your overall participation grade.

**Tips for Working in Teams**

It is typical for some tension to develop within teams, especially given most students have spent years working independently in competitive, rather than collaborative, learning environments. Team work has unique demands that include the need for diplomacy, patience, co-operation, and tolerance of different perspectives and approaches; these are skills that take time and effort to cultivate. It is therefore important to find some commonality amongst team members (this may include common goals and expectations, work styles, semester levels, and degree programs). Share your understanding of the seminar presentation's objectives and requirements and of the objectives and requirements for the team quizzes and midterms. Try to reach consensus about the objectives of these two major components of the course. Then set ground rules for appropriate team interactions. The instructor and teaching assistant strongly encourages each group to:

- Brainstorm the characteristics of best and worst team experiences. Use the outcome of this conversation to establish more formal ground rules (code of conduct) for team interactions
- Watch for warning signs of trouble and deal with conflict proactively and quickly
- Patience and inclusive communicate to ALL team members
- Familiarize yourselves with human rights and equity policies
- Negotiate differences and accommodate unique work habits
- Make collective decisions professionally and democratically
- Ensure your course instructor and/or teaching assistant is aware of serious difficulties that arise in the group
- Create a master list of names and contact information and distribute it amongst group members.

Working Efficiently: To avoid long, unproductive meetings spent doing something collaboratively that you could do more efficiently on your own, try some of the following techniques to use team time effectively and enjoyably:

- Break large tasks down into logical chunks
- Clearly establish separate and equitable roles and responsibilities for team members for the presentation
- Check progress frequently; Check on how the process is working for everyone and be prepared to renegotiate these roles and responsibilities if necessary
- Set clear objectives for each meeting, arrive prepared, and keep to a schedule (and don't forget to start and end on time)
- Place reasonable limits on planning and brainstorming activities

Problem Members: Teams sometimes have a member who is unproductive. To encourage unproductive members to become active participants I suggest:

- Inquiring why the team member is not participating or producing. The solution will depend on the reason for their withdrawal, so begin by determining the cause.
- Encourage shy individuals to contribute by soliciting their input on a topic that you think they will know something about. They may just need an invitation and a positive experience before they become more involved in discussions.
- Disinterested learners may need some assistance in uncovering their motivation for contributing to the team dynamics.
- Check to see if the team member is stuck and needs some advice and direction in order to move forward.
- If a team member is very busy, try to accommodate the person within reason.
- Have a progress-checker. Some people simply need to be held accountable and reminded to meet deadlines or conform to expectations.
- Let your instructor or teaching assistant know what is happening if a problem has arisen and how you are going to/have been dealing with the issue.

Domineering Members: Strong leadership skills are excellent to have, but not all leadership skills are conducive to collaborative team work. Some students end up monopolizing conversations or attempting to direct and delegate all the work of the team. This can occur for several different reasons, including the fact that the domineering members are highly goal-directed, self-

confident, extroverted, or have some form of disability that is reflected in their social skills. Regardless of the possible explanation, here are some tips to help prevent an individual team member from overpowering the efforts of the larger team:

- Indicate that this is an issue of concern by addressing it in the ground rules for conducting team meetings.
- Deliberately take turns presenting ideas or updates. Limit the amount of time each person has to talk and discourage any interruption during the presentations.
- First try to discourage domination by using indirect, blanket statements regarding the nature of collaborative work, or by making humorous, but not critical, comments to the overly talkative or dictatorial team member.
- Designate a willing team member to have a private conversation with the individual who is monopolizing the team's meetings or dictating team direction.