Psychology 4R03-Special Topics in Animal Behaviour

Time: Wednesday 19:00-22:00
January 9 - April 10 2002

Location: Psychology Dept Room 204

Instructor: Dr. Sigal Balshine
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Email - sigal@mcmaster.ca
Office Hours - Wednesday 9:30-11:30
or by appointment
Web page: www.science.mcmaster.ca/Psychology/psych4R03

Course description and objectives: In this new 4th year seminar course we will explore in detail a number of current topics in animal behaviour. The topics that will be covered include: foraging behaviour, mate choice and competition, mating behaviour, sperm competition, parenting behaviour, parent-offspring conflict and cooperation and conflict in social groups. Both theoretical issues and empirical examples will be discussed. A focus will be placed on how new genetic, physiological, and mathematical modeling techniques have influenced the modern study of behaviour. This is an advanced discussion-based course drawing on foundations presented in Psych 2TT3, 3S03, 3T03, and 3F03. An evolutionary perspective will be emphasized and used to explore aspects how animal behaviour influences individual survival and reproduction. You will be provided with ample opportunities to read primary sources, contribute to class discussion, work in small groups, make presentations, and improve critical thinking and verbal communication skills. By the end of the course you ought to have gained an appreciation for how the research areas covered have evolved over time.

Grades:
Your final grade will be based on three in-class group presentations (worth 60%); and a final major individual written paper 6-10 pages (40%). The in-class presentations will consist of reviewing, summarizing and synthesizing literature on a chosen topic. The written report is due at 7:00 p.m. on the due date.
Breakdown of marks

Focus group presentations (1 and 3) = 10% each  
Home group presentations (2 and 4) = 20% each  
Final Written Report = 40%  
**Total** = 100%

**Note.** Extensions will not be offered. Late written reports will not be accepted. If you miss a presentation for valid reasons then the missed presentation marks will be reassigned to the remainder of the presentation marks. A second missed presentation will receive a zero. If class assignments conflict with a personal religious observance, please notify the course instructor at least four weeks in advance.

It is your responsibility to ensure that you have met all prerequisites listed in the McMaster calendar for this course. If you lack any prerequisites for this course, the Department may cancel your registration at any time.


**Course Organization**
The organization of the course is as follows. The class will be divided into groups of four or five. New groups will be chosen for each presentation; so you will be required to work with a new set of students every few weeks.

Oral presentations should communicate the topics reviewed but also need to engage the viewers' attention without compromising the viewers' understanding when space and time are limited. Group members must participate equally in the presentations. Presentations will be graded by other students in the class and by the instructor as well. The final grade for presentations will represent a combination of these marks from the instructor and students.

**Topic development discussions**
During the third class, we will hear discussions from groups of students on related papers on foraging theory. You should provide your group members a summary of your paper by week two and you will be given time in class to organize how you may best engage the class in a discussion on your topic. I have often assigned a classic and current paper on the same theme. You
might choose to summarize the papers, discuss the weaknesses and strengths and comment on how methods have changed over time if at all.

**Focus group presentations**  
The class will be divided into focus and home groups. Each focus group will be given around four papers to read on a particular topic with a particular focus. For example, in the first half of the course we will first concentrate our focus and home groups on topics related to sexual selection. One focus group will be responsible for reading theoretical papers; another group will be given the responsibility to read papers that provide the first empirical tests of theory. A third group will be in charge of reading papers which summarize recent advances and current trends in sexual selection research and so on. Each focus group will be given 15 minutes to present the findings of their area plus five minutes of questions from the class. A summary of the studies results, interpretations, methodologies used and strengths and weakness should be provided. Each member of the focus group is expected to participate in the oral presentation.

Each member of a focus group will belong to a different home group. You will be expected to be the expert on the focus area of research for the members of your home group.

**Home group presentations:**  
In class, each home group will receive from the instructor a topic or question to research, discuss and present to the class. The information required to answer the issues raised will come (in part) from each focus group's research area. Two full classes have been put aside to make these presentations. Each group will receive 30 minutes for their presentation and a ten-minute question and discussion period will follow each presentation. Each member of the home group is expected to participate in the oral presentation.

**Final Written Report**  
Each person will be required to submit a written scientific paper based on one of his or her home groups’ topics. The papers for each member of the group will only be similar with respect to the general area. The papers will vary among group members as people vary in their interpretations of the findings, their criticisms of the areas, in suggestions for future development on the topic and in their selection of additional relevant literature. The written report should introduce the question, topic or area of study, summarize the state of knowledge to date using ample examples from the literature, and include a
discuss future directions for the area. Please be concise as possible; no more than ten double spaced pages of text is permitted (not including references).

**Assignments and Evaluation:** Final grades will be based on marks from presentations and the final report. There will be no final exam in this course.

**Special Topics in Animal Behaviour (PSYCH 4R03)**

Lecture 1. January 9 \hspace{20pt} Introduction and a historical perspective

Lecture 2. January 16 \hspace{20pt} Foraging behaviour I  
\hspace{20pt} (Guest lecturer: Dr. David Earn)

Lecture 3. January 23 \hspace{20pt} Foraging behaviour II  
\hspace{20pt} (Guest lecturer: Dr. Martin Daly)

Lecture 4. January 30 \hspace{20pt} Sexual selection I  
\hspace{20pt} (Guest lecturer: Dr. Jeff Galef)

Lecture 5. February 6 \hspace{20pt} Sexual selection II  
\hspace{20pt} (Guest lecturer: Dr. Nick Goodwin)

Lecture 6. February 13 \hspace{20pt} Sperm competition

Reading week February 20

Lecture 7. February 27 \hspace{20pt} Mating systems and behaviour

Lecture 8. March 6  \hspace{20pt} Parental care I

Lecture 9. March 13 \hspace{20pt} Parental care II

Lecture 10 March 20 \hspace{20pt} Parent-offspring conflict  
\hspace{20pt} (Guest lecturer: Dr. Nick Goodwin)

Lecture 11 March 27 \hspace{20pt} Cooperation in social groups I  
\hspace{20pt} (Guest lecturer: Dr. Jim Quinn)

Lecture 12 April 3 \hspace{20pt} Cooperation in social groups II  
\hspace{20pt} (Guest lecturer: Dr. Katherine Sloman)

Lecture 13 April 10 \hspace{20pt} Final Project Presentations

**Schedule:**
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<td>Jan 16</td>
<td>Foraging Theory 1</td>
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