

PSYCHOLOGY 2700

**BEHAVIOR AND EVOLUTION**

(Introduction to Animal Behavior)

Fall 2009

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**Course description:** *The objective of this course is to provide an introduction to the process of evolution by natural selection and then consider its implications for the study of the behaviour of humans and other animals. It will do so by examining the biological, social, and cultural processes responsible for shaping functionally organized behaviors in animals that are obliged to solve basic life problems such as finding food, avoiding predators, attracting mates, rearing young, and living socially. In short, it will be aimed at answering the most fundamental questions asked about the biology of animal behavior: "Why and How do they do what they do?"*

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**Teaching Assistant:** Petra McDougall; Room B836; petra.mcdougall@uleth.ca

**Lectures:** Thursday 1800-2050 PE250

**Prerequisites:** One of Biology 1020 or a 3-credit course in Psychology or Neuroscience

**Textbook:**

Dugatkin, L.A. (2004/2008). **Principles of Animal Behavior**. W.W. Norton.

*\*\*Please note that all additional materials and examination results will be posted on WebCT.*

**Coursework:**

I. Two midterm exams (30% each) and one final exam (40%) based on material from lectures, the textbook and the video series.

**Grading:** Final letter grades for the course will be determined using the following scheme:

A+	> 90	C+	67-69
A	86-89	C	64-66
A-	80-85	C-	60-63
B+	77-79	D+	56-59
B	74-76	D	50-55
B-	70-73	F	< 50

## OUTLINE OF COURSE TOPICS

Course Sections and Topics	TEXT READINGS
<b>A. PROCESSES THAT SHAPE BEHAVIOR</b>	Chs. 1-5
The 'causes' of behavior at different organizational levels or timescales	
Natural Selection	
Associative learning, evolved learning biases, social learning, and culture	
<b>Midterm 1 (30%)</b>	
<b>B. THE TRIALS OF LIFE</b>	
<i>I. Life History and Staying Alive</i>	Chs 10, 11, 13
Foraging, Habitat Choice, Territoriality,	
Diet choice, Optimal Foraging Theory, Grouping and territoriality	
Predation	
<i>II. Problems of Social Life</i>	Chs. 8 & 9
Living with others	
Competition, Cooperation, Kinship	
<b>Midterm 2 (30%)</b>	
<i>Communication</i>	Ch. 12
<i>III. Problems of Reproduction</i>	Ch. 7 & 6
Origin of the sexes, Sexual selection and conflict, Mating strategies and systems.	
<b>Final Exam – registrar scheduled (40%)</b>	December 17th

### **Experimental Research Participation:**

This course is designed to provide students with an opportunity to participate in active research programs of faculty members. Calls for volunteers to assist in these projects will be made during the semester, via announcements on WebCT. If you are asked to volunteer, and you accept, each project usually requires one hour or less of your time, but this will depend on the individual research project. In recognition for your time, and in recognition that you are learning something about the discipline of psychology, beyond what you would in the normal classroom environment, an extra credit of 1% to 2% for each study in which you participate will be added to your total grade to a maximum of [2%]. Note that there is no guarantee that all students will be able to achieve the maximum extra credit. These extra credits are added only after all grade cutoffs have been established such that students who choose not to participate are not disadvantaged. Please check with the Research Assistant for the Experiment to ensure that you have not completed this study previously or have done a similar study.