

## PSYCHOLOGY 2700

# BEHAVIOR AND EVOLUTION

(Introduction to Animal Behavior)

**Fall 2011**

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?"

### Instructor:

Peter Henzi; Room C878 (Phone: 403-317-2839); [peter.henzi@uleth.ca](mailto:peter.henzi@uleth.ca)

### Lectures:

Thursday 1800-2050 PE275

### Prerequisites:

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

### Textbook:

Brian & Deborah Charlesworth. 2003. *Evolution: A Very Short Introduction*, Oxford University Press.

*\*\*Please note that **ALL** additional materials and examination results will be posted on Moodle.*

### 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:

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

# Course Sections and Topics

## A. PROCESSES THAT SHAPE BEHAVIOR

**I. Explaining behaviour:** The 'causes' of behavior at different organizational levels or timescales

**II. Evolution:** Natural selection, genes and individual fitness

**III. Sources of adaptive behaviour:** Associative learning, evolved learning biases, social learning, and culture

Midterm 1 (30%) ~ Week 17<sup>th</sup> - 21<sup>st</sup> October

## B. THE TRIALS OF LIFE

**I. Life History and Eating to Live**

Topics: Foraging, Habitat Choice, Territoriality, Diet choice, Foraging theory, Predation

**II. Problems of Social Life**

Topics: Living with others, Competition, Cooperation, Kinship, Communication

Midterm 2 (30%) ~ Week 22<sup>nd</sup> - 25<sup>th</sup> November

**III. Problems of Reproduction**

Topics: Origin of the sexes, Sexual selection and conflict, Mating strategies and systems.

Final Exam – registrar scheduled (40%)

### Experimental Research Participation:

This course is designed to provide students with an opportunity to participate in active research programs of faculty members. 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 bonus mark 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 bonus marks. These extra bonus marks 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.

### **Directions for Studies:**

After receiving an email from Psychology Sign up (the subject will say Psychology Sign Up Login Information) by **Tuesday, September 20**. This will have your user name and password [psyc2700n], once you have signed in you may change your password. Please go to <http://psychleth.sona-systems.com> and sign in. There will be timeslots allocated or information to email to get signed up in the studies. Further studies and timeslots will be added, please keep checking but remember this is on a first come basis. The last date for the studies is **December 9, 2011**.

If you are experiencing problems, please contact Leanne at [wehlage@uleth.ca](mailto:wehlage@uleth.ca)