

## **Psych 3420 3.0M EVOLUTIONARY PSYCHOLOGY – Winter 2013**

**Course Director** - Irwin Silverman <isilv@yorku.ca>

**Graduate Teaching Assistant** – Joshua Smith <hominoid@yorku.ca>

**Text** - Buss, D.M. (2012) *Evolutionary Psychology: The New Science of the Mind* (4<sup>nd</sup> Ed.). Boston: Allyn & Bacon.

**Procedures** - Class sessions will consist of lectures, followed by films or tutorials. Tutorials will be conducted by the TA and will mainly deal with students' questions about the text and lectures. Students are advised to read the chapters indicated in advance of the tutorials and prepare questions if any of the material is problematic. Students may also meet with the TA about individual problems. To make an appointment, contact him in class or by email.

**Exams and grades** - Two exams will be given, which will be non-overlapping in course material. Both will be multiple choice types, based on text and lectures. Exam scores will be weighted equally in the final grade. The last date to drop the course without receiving a grade is March 15.

**Missed exams** – Students missing exams should contact the TA in timely manner, and must provide acceptable reasons and appropriate documentation to qualify for a make-up. The times and places for make-up exams will be listed on both the course website and MOODLE and announced in class.

### **Lecture schedule**

**Jan 8** - Introduction to the course. Definition and origins of evolutionary psychology.

**Jan 15** - Overview of Darwinian theory. Evolutionary psychology compared to traditional psychological approaches. (*Video: Human Quest, Part I*)

**Jan 22** - Mechanisms of natural selection: Sources of genetic variation; directional vs. stabilizing selection; punctuated equilibrium. (*Video: Human Quest, Part II*)

**Jan 29** - Levels of selection: Individual, group, kin, gene. (*Tutorial - ch. 1, 2, 3*)

**Feb 5** - Genetic variance in human individual differences: Behaviour genetics. (*Video: Twins*)

**Feb 12** - The role of natural selection in complex social behaviours: Socio-ecology. (*Tutorial -ch. 4, 5, 6*)

**Feb 19** – Readings week

**Feb 26** - Midterm Exam – lectures Jan 15 to Feb 12; text chapters 1-6.

**Mar 5** - Heredity and environment: An interactionist view. (*Video: Monkey Island*)

**Mar 12** - Filial attachment: Imprinting. (*Tutorial – ch. 7- 9*)

**Mar 19** - Parent-offspring attachment: Bonding. (*Video: Why Sex?*)

**Mar 26** - Mating behaviour: Why sex? Why two sexes? Reproductive strategies.  
(*Video: The Stossel Report*)

**Apr 2** - Cognitive processes: Theory of domain specificity. (*Tutorial - ch.10 -13*)

The final exam will be scheduled in the University exam period and will cover lectures from Mar 5 to Apr 2 and text chapters 7 to13.

## **LECTURE OUTLINES**

### **Jan 15**

Introduction to the theory of evolution by natural selection: Darwin's voyage and the inception of the theory. Principles of the theory. The theory applied to psychology.

Proximate and ultimate levels of causation. Traditional psychology's exclusion of ultimate causation. Psychologists' rationales for the proximate approach and the evolutionists' counter-arguments.

### **Jan 22**

Darwin's Dilemma: Could natural selection account for the diversity of life? Mendel's discovery and the synthesis of evolutionary and genetic theory.

Sources of variation in inheritance: Mutation, sex, and gene crossover.

How species evolve: The Red Queen theory; the theory of punctuated equilibrium. Evidence for a universal human nature

### **Jan 29**

Why theories require exceptions: Altruism as the major exception to the concept of individual selection.

Group selection: Contributions of V. Wynne Edwards. Kin selection and gene selection.

### **Feb 5**

Animal studies: Selective breeding and inbreeding experiments. Counterpart human studies: Co-twin methods.

The concept and measurement of heritability. Heritability estimates for cognitive and personality variables. Limitations of heritability measures.

## **Feb 12**

Definitions: ecology, socio-ecology, ecological niche.

Crook's classic study of socio-ecology in weaverbirds: The role of food source and predation in determining solitary vs. gregarious life-styles.

The socio-ecology of mating and parenting styles: Origins of monogamy, polygyny, hypergamy, reproductive competition and sexual dimorphisms in animals and humans

## **Mar 5**

The myth of the nature-nurture dichotomy. An interactionist model: examples in animal and human behaviour.

Contrasting the interactionist and behaviouristic models: An interactionist approach to dog training.

## **Mar 12**

Social imprinting described: Lorenz and Tinbergen's early research. Imprinting in primates: Harlow's studies. Imprinting in humans: Research on effects of non-imprinting.

Theories of the processes underlying imprinting: Moltz's "low fear" model.

## **Mar 19**

Distinguishing imprinting from bonding: Evidence for bonding in separation and adoption studies with animals; hormones and bonding; adaptive function of bonding.

Bonding in the human case: clinical, descriptive and experimental studies. Possible implications of bonding for adoption procedures.

## **Mar 26**

Why sex? Genetic diversity; elimination of pathogens. Incest taboos: Why and how they develop.

Why two sexes? Disruptive selection at the gamete level.

Evolution of human mating strategies: The role of loss of oestrus.

## **Apr 2**

Domain specificity: Application to the Wason task.

Evolutionary theories of sex related differences in spatial behaviours: Gaulin and Fitzgerald's mating strategy model; Silverman and Eals' hunter-gatherer theory.