

Biology 4701 - Animal Behaviour Course Outline

Includes the grad course BIOL 6351 Behavioural Ecology and Sociobiology

2011 winter term

Lectures – Mondays, Wednesdays & Fridays 10:00-10:50h in Rm. SN 2105

Laboratories – Slot 61, Mondays 14:00-17:00h, Rm. TBA (no lab on January 10).

Web page (updated regularly): <http://www.mun.ca/serg/animbehav.html>

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Office hours: Mondays, Wednesdays & Fridays 13:00-14:00 (walk in), otherwise by appointment.

Textbook: Alcock, J. 2005. *Animal Behavior*. 9th Edition. Sinauer Associates, Sunderland, Massachusetts, 564 pp. (very useful - AVAILABLE IN BOOKSTORE)

Grading:

Mid-term test 20%

Term paper (one short journal paper review) 20%

Laboratory quizzes (almost weekly) 6% and team seminar presentations 19%

Final Exam 35%

Syllabus and approximate lecture schedule (winter 2010)

Aim: an introduction to animal behaviour (approximately follows order and content of Alcock's chapters) with frequent reference to topics of current interest in evolutionary ecology, with applications to wildlife conservation and human welfare

January 7 Welcome, check class list and resolve waitlist, review course outline

NO LAB January 10

January 10 Introduction, organization of the **new** 4701, definition of behaviour, evolution of behaviour, hypothesis testing, morals and ethics

January 12 Proximate and ultimate causes/explanations of behaviour

January 14 Development of behaviour, nature versus nurture, individual variation

January 17 Learning

January 19 Neural mechanisms of behavioural control

January 21 Neural and hormonal organization of behaviour

January 21 Circadian mechanisms: daily and seasonal schedules

January 24 Surviving I: antipredator behaviour

January 26 Surviving II: risk managing behaviour

January 28 Foraging behaviour I: optimal foraging theory

January 31 Foraging behaviour II tradeoffs, cooperation and competition, game theory

February 2 Foraging behaviour III: foraging – variation across all animals

February 4 Migration and movement

February 7 Habitat selection

February 9 Territoriality

February 11 Communication terminology, signals, sensory exploitation, mind-reading, manipulation and deception

February 14 Communication III: variation across all animals

February 16 Communication terminology, signals, sensory exploitation, mind-reading, manipulation and deception

February 18 Mid-term test

February 21 no lecture – winter semester break

February 23 no lecture – winter semester break

February 25 (guest - Holly Caravan) altruism, inclusive fitness, eusociality

February 28 (guest– Tom Chapman) Reproduction I: Sex roles and sexual conflict

March 2 Reproductive behaviour II: Sexual selection & intra-sexual competition for mates

March 4 Reproductive behaviour III: Sexual selection and mate choice - mechanisms

March 7 Reproductive behaviour IV: copulation – variation across all animals

March 9 Reproductive behaviour IV: copulation – variation across all animals

March 11 Mating systems I: Monogamy

March 14 Mating systems II: Polygyny

March 16 Mating systems III: polyandry, promiscuity, homosexuality

March 18 Parental care I: sex differences in parental care, parent-offspring conflict

March 21 Parental care II: brood parasitism, parental favoritism

March 23 Social behaviour – group living, coloniality

March 25 Human behaviour I: the adaptationist approach to human behaviour and the 'sociobiological controversy'

March 28 Human behaviour II: xenophobia, aggression, violence and war

March 30 Human behaviour III: human sexual behaviour – mate choice, coercive sex (rape), porn, variation in sexual behaviour

April 1 Human behaviour IV: altruism again, parental care, applications of evolutionary psychology, magic and superstition (religions)

April 4 Course summary, question period

FINAL EXAM (probably in SN2064), date and time to be announced

Laboratory sessions

Aim: discuss major topics in animal behaviour and review current scientific advances in behaviour study

*Format: group presentations on important scientific papers, each week's lab (except the first) begins with a **mini-quiz** on the previous week's subject matter*

Approximate schedule:

January 10 NO LAB

January 17 Behavioural co-evolution

January 24 Adaptation and Behaviour

January 31 Optimality modeling

February 7 Communication

February 14 Mate choice

February 21 no lab – winter semester break

February 28 Mating systems

March 7 Parental care, or not

March 14 Human Behaviour I

March 21 Human Behaviour II

March 28 Human Behaviour III

April 4 no lab