

Biology 4701 - Animal Behaviour Course Outline

Includes the grad course BIOL 6351 Behavioural Ecology and Sociobiology

2012 winter term

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

Laboratories – Slot 61, Mondays 14:00-17:00h, Rm. **C4002**.

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 (optional): Alcock, J. 2005. *Animal Behavior*. 9th Edition. Sinauer Associates, Sunderland, Massachusetts, 564 pp.

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 6 Welcome, check class list and resolve waitlist, review course outline

NO LAB January 9

January 9 Introduction, organization of the **new** 4701, definition of behaviour, evolution of behaviour, hypothesis testing, morals and ethics

January 11 Proximate and ultimate causes/explanations of behaviour

January 13 Development of behaviour, nature versus nurture, individual variation

January 16 Learning

January 18 Neural mechanisms of behavioural control

January 20 Neural and hormonal organization of behaviour

January 23 Circadian mechanisms: daily and seasonal schedules

January 25 Surviving I: antipredator behaviour

January 27 Surviving II: risk managing behaviour

January 30 Foraging behaviour I: optimal foraging theory

February 1 Foraging behaviour II tradeoffs, cooperation and competition, game theory

February 3 Foraging behaviour III: foraging – variation across all animals

February 6 Migration and movement

February 8 Habitat selection

February 10 Territoriality

February 13 Mid-term test

February 15 Communication terminology, signals, sensory exploitation, mind-reading, manipulation and deception

February 17 Communication III: variation across all animals
February 20 no lecture – winter semester break
February 22 no lecture – winter semester break
February 24 Communication terminology, signals, sensory exploitation, mind-reading, manipulation and deception
February 27 Reproduction I: Sex roles and sexual conflict
February 29 Reproductive behaviour II: Sexual selection & intra-sexual competition for mates
March 2 Reproductive behaviour III: Sexual selection and mate choice - mechanisms
March 5 Reproductive behaviour IV: copulation – variation across all animals
March 7 Reproductive behaviour IV: copulation – variation across all animals
March 9 Mating systems I: Monogamy
March 12 Mating systems II: Polygyny
March 14 Mating systems III: polyandry, promiscuity, homosexuality
March 16 Parental care I: sex differences in parental care, parent-offspring conflict
March 19 Parental care II: brood parasitism, parental favoritism
March 21 Social behaviour – group living, coloniality
March 23 Human behaviour I: the adaptationist approach to human behaviour and the ‘sociobiological controversy’
March 26 Human behaviour II: xenophobia, aggression, violence and war
March 28 Human behaviour III: human sexual behaviour – mate choice, coercive sex (rape), porn, variation in sexual behaviour
March 30 Human behaviour IV: altruism again, parental care, applications of evolutionary psychology, mysticism, magic and superstition (religions)
April 2 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: 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 9 NO LAB

January 16 Behavioural co-evolution

January 23 Adaptation and Behaviour

January 30 Optimality modeling

February 6 Communication

February 13 Mate choice

February 20 no lab – winter semester break

February 27 Mating systems

March 5 Parental care, or not

March 12 Human Behaviour I

March 19 Human Behaviour II

March 26 Human Behaviour III

April 2 no lab