



EC301 August 2:1

Animal Behaviour: Mechanisms and Evolution

Instructor

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Department: Centre for Ecological Sciences

Course Time: Tues, Thurs 11 a.m. - 12:30 p.m

Lecture venue: CES classroom

Detailed Course Page:

Announcements

Brief description of the course

This course provides an introduction to the science of animal behaviour, ranging from historical studies, physiological basis of behaviour as well as the ecology and evolution of different kinds of behaviours. The course consists of both lectures and practicals and is suitable for early PhD, MAsers' level and advanced undergraduate students.

Prerequisites

Training in basic biology at undergraduate level

Syllabus

History, classical ethology; Neuroethology: sensory processing and neural maps; learning and memory; hormones and behavior; ontogeny of behaviour; sensory ecology; sociobiology; behavioral genetics; optimality approaches and evolutionary models to understand strategies for foraging, competition, group living, sexual selection and mate choice, parental care and family conflicts, predator-prey interactions; theoretical, integrative and computational approaches to studying animal behaviour.

Course outcomes

Students gain an understanding of the history of animal behaviour research, physiological basis of behaviour, ecology and evolution of behaviour, as well as are exposed to different approaches to studying the subject. The practical component gives them hands-on training in designing and analysing behavioural experiments, as well as presenting these results.

Grading policy

30% for project, 30% for assignments, 40% for exam

Assignments

Resources

Alcock, J., Animal Behaviour - An Evolutionary Approach (Sixth Edition), Sinauer Associates, 1998., Camhi, J.M., Neuroethology, Sinauer Associates, 1984., Dugatkin, L.A., Principles of Animal Behaviour (2nd Edition), W.W. Norton and Company, 2009., Davies, N.B., Krebs, J.R. and Stuart, A. W. An Introduction to Behavioural Ecology. (Fourth Edition), Wiley-Blackwell, 2012.