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Title: ANIMAL FIELD SKILLS  
 Status: Definitive  
 Code: **5016NATSCI** (120884)  
 Version Start Date: 01-08-2016

Owning School/Faculty: Natural Sciences & Psychology  
 Teaching School/Faculty: Natural Sciences & Psychology

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**Academic Level:** FHEQ5      **Credit Value:** 24      **Total Delivered Hours:** 81

**Total Learning Hours:** 240      **Private Study:** 159

### Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	12
Off Site	69

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	UK FW	UK Field Report	50	
Report	RES FW	Overseas Field Report	50	

### Aims

*To demonstrate theoretical and practical aspects of animal ecology fieldwork methods in different habitats, with particular emphasis on animal census, behavioural ecology, and relationship with habitat characteristics at different scales.*

## **Learning Outcomes**

After completing the module the student should be able to:

- 1 Identify survey and census methods that are most appropriate for specific taxonomic groups and management scenarios, and identify the main factors that will affect their reliability.
- 2 Execute field sampling programmes appropriate to different taxonomic groups and habitats.
- 3 Critically analyse, interpret and discuss data from field sampling programmes with reference to factors such as human impacts, environmental management and environmental variation.

## **Learning Outcomes of Assessments**

The assessment item list is assessed via the learning outcomes listed:

UK Field Report	1	2	3
Overseas Field Report	1	2	3

## **Outline Syllabus**

*What are surveys and why do we need them? The need for survey data in wildlife management and animal ecology.*

*Sampling Theory: What is a sample? Transects, sampling stations, random sampling, stratified random sampling, grid sampling. Sampling accuracy and bias. Fitting statistical models to animal abundance data. The effect of sample size and number of replicates on estimates.*

*Direct census methods, estimates of density and population size: eg. animal trapping and marking methods: pitfall trapping, sweep netting, vacuum sampling, ringing, paint marking, radioactive tracers, radio telemetry, mark-release-recapture.*

*Bird Surveys: Bird atlases, bird population monitoring schemes including case study of the Common Bird Census (CBC) and Breeding Bird Survey (BBS). Line transects and point counts for birds.*

*Factors affecting microgeographic distributions: microhabitat selection in small animals.*

*Indirect census methods: tracks and signs, pellet counts, camera traps,*

*Habitat information: eg. Habitat structure in relation to climatic, edaphic, topographic and management factors, large scale habitat mapping.*

## **Learning Activities**

Lectures, field investigation of a UK site, one week residential field course abroad, which includes execution and presentation of a two day research project.

## References

Course Material Book

Author Davis, D. E

Publishing Year 1982

Title Handbook of Census Methods for Terrestrial vertebrates

Subtitle

Edition First

Publisher CRC Press, Inc

ISBN0-8493-2970-1

Course Material Book

Author Southwood, T.R.E. & Henderson, P.A.

Publishing Year 2000

Title Ecological Methods.

Subtitle

Edition 3rd.

Publisher Blackwell Science.

ISBN 0632054778

Course Material Book

Author Sutherland, W.J.

Publishing Year 2006

Title Ecological Census Techniques: A handbook.

Subtitle

Edition

Publisher

ISBN

Course Material Book

Author Wheater, C.P., Bell, J.R. and Cook, P.A.

Publishing Year 2011

Title Practical Field Ecology - a project guide.

Subtitle

Edition Second Edition

Publisher Cambridge University Press

ISBN 978-0-470-69429-9

## **Notes**

This module examines different standardized methods used for animal censuses and surveys. Field experience is provided. Different sampling techniques are dealt with in some depth during lectures and during fieldwork abroad, with the aim of explaining the quantitative framework on which they are based in addition to providing practical experience of their execution in the field.