

MODULE SPECIFICATION PROFORMA

Module Title:	Survey Skills for Conservation	Level:	5	Credit Value:	20
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Module code:	ANM506	Is this a new module?	No	Code of module being replaced:	
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Cost Centre(s):	GAAN	JACS3 code:	F750
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With effect from:	September 18
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School:	Social & Life Sciences	Module Leader:	Denise Yorke
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Scheduled learning and teaching hours	50 hrs
Guided independent study	150 hrs
Placement	hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered	Core	Option
FdSc Animal Studies	✓	<input type="checkbox"/>
BSc (Hons) Wildlife and Plant Biology	✓	<input type="checkbox"/>
BSc (Hons) Animal Science	✓	<input type="checkbox"/>

Pre-requisites
None

Office use only

Initial approval: June 17

APSC approval of modification: *Enter date of approval* Version: 1

Module Aims

- 1) enable students to identify key flora and fauna
- 2) engage students with ecological data analysis, interpretation and ecological report writing
- 3) develop student's awareness of the legislative basis for ecological surveys

Intended Learning Outcomes

Key skills for employability

- KS1 Written, oral and media communication skills
- KS2 Leadership, team working and networking skills
- KS3 Opportunity, creativity and problem solving skills
- KS4 Information technology skills and digital literacy
- KS5 Information management skills
- KS6 Research skills
- KS7 Intercultural and sustainability skills
- KS8 Career management skills
- KS9 Learning to learn (managing personal and professional development, self-management)
- KS10 Numeracy

At the end of this module, students will be able to

Key Skills

		Key Skills	
1	Identify and analyse a range of flora and fauna species	KS1	KS3
		KS4	KS5
		KS6	
2	Discuss and evaluate the processes and systems involved with a range of ecological survey techniques used for surveying wildlife	KS1	KS3
		KS4	KS5
		KS6	
3	Design and justify an ecological survey	KS1	KS2
		KS3	KS4
		KS5	KS6

Transferable skills and other attributes

Writing reports, developing research skills, collection of data, data analysis, creative thinking, numeracy, planning, teamwork, communication, use of ICT

Derogations

N/A

Assessment:

Coursework:

This will include three pieces of work carried out during the module. There will be a practical identification session where students will identify and analyse a range of flora and fauna species from field signs and specimens. Students will work in groups to design and plan a scoping survey for protected species using a real life case study and they will evaluate survey techniques.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration (if exam)	Word count (or equivalent if appropriate)
1	1-3	Coursework	100		4000

Learning and Teaching Strategies:

The Survey Skills for Conservation module will equip students with the skills necessary to carry out a range of surveys for animal species. This will be achieved through lectures, demonstrations, practical sessions and study days. Students will identify and survey a range of animal species, and analyse and interpret data collected. The development of these skills will be achieved through practical field work, such as during visits to nature reserves and local woodlands. In addition, practical bat surveys using detectors and newt torching will enable students to become competent in the use of industry standard equipment and techniques. Guest speakers from the industry including North Wales Wildlife Trust and ecological consultancies will give students the opportunity to understand the practical applications of the surveys and techniques they have learned. Speakers will also present a range of case studies of current relevance and embed the importance of ethical and safe working practice.

An understanding of current wildlife legislation and survey methodology will allow students to plan surveys for animal species. This will take into consideration the ethical issues surrounding the welfare of the species and the safety issues of the surveyor.

The skills gained in this module will provide students with the underpinning theoretical knowledge and practical skills needed to work in a wide range of ecological, conservation and wildlife fields, such as ecological consultancy and wildlife reserve warden.

Syllabus outline:

- Native flora and fauna identification
- Mammals, birds, reptiles, amphibians
- Aquatic and terrestrial plants, grasses
- Physical / biological characteristics and field signs
- Burrows, latrines, scats, feeding stations, prints, tracks, hair samples, calls, activities
- Survey methodologies - frequency, duration, methods, resources, ethics, safety, timing
- Habitat evaluation/assessment for wildlife
- Plant communities
- Quadrat sampling
- Phase one habitat mapping (extended) and target notes

- Practical Survey – e.g. small mammal trapping, newt trapping, bat surveys and bat detectors, reptile tins, crayfish trapping, bird surveys, owl pellet analysis
- Survey ethics – Modern philosophers (Singer, Regan etc.), breeding season, disturbance, increased prominence of species, handling, food availability in traps & metabolic rate of species, frequency, stress, legislation, risk of transference of disease and invasive species
- Safety – site access, zoonotic disease, handling, surveyor safety

Bibliography:

Essential reading

Chinery, M. (1994) *Field guide to the wildlife of Britain and Europe*. Kingfisher

Department of the Environment (1981) *Wildlife & Countryside Act*. London : HMSO

Hill, D., Fasham, M., Tucker, P., Shewry, M. & Shaw, P. (eds) (2005) *Handbook of Biodiversity Methods: Survey, Evaluation and Monitoring*. Cambridge University Press, Cambridge.

Other indicative reading

Recommended reading:

Bright, P.W., Morris, P.A. & Mitchell-Jones, A. (2006) *Dormouse Conservation Handbook*, 2nd Edition. English Nature, Peterborough

Gent, T. & Gibson, S. (eds) (2012) *Herptofauna workers' manual*. Joint Nature Conservation Committee

Gilbert, G., Gibbons, D.W. & Evans, J. (1998) *Bird monitoring methods: a manual of techniques for key UK species*. Sandy: RSPB

Gurnell, J. & Flowerdew, J. (2006). *Live trapping Small Mammals: A Practical Guide*. Oxford: Mammal Society Booklet.

Harris, S., Cresswell, P. & Jefferies, D. (1989). *Surveying Badgers*. Mammal Society

Mitchell-Jones, A.J. & McLeish, A.P., (2012) *Bat Workers Manual*. Peterborough: Joint Nature Conservation Committee

Stace, C. (2010) *New flora of the British Isles*. Second Edition. Cambridge University Press

Journals

British Wildlife

Journal of Animal Ecology
Journal of Applied Ecology
Journal of Ecology
Journal for Nature Conservation
Journal of Wildlife Management
Oikos
The Ecologist
Wildlife Society Bulletin

Web Based Resources

<http://www.ieem.net/surveymethods.asp>

<http://www.naturalengland.org.uk/ourwork/regulation/wildlife/advice/advisoryleaflets.aspx>