



CORPORATE AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Basic Data					
Module Title	Field Skills				
Module Code	USSK5B-30-1	Level	1	Version	1
Owning Faculty	Health and Applied Sciences	Field	Biological, Biomedical and Analytical Sciences		
Contributes towards	BSc Wildlife Ecology and Conservation Science BSc Environmental Science				
UWE Credit Rating	30	ECTS Credit Rating	15	Module Type	standard
Pre-requisites	none		Co- requisites	none	
Excluded Combinations	none		Module Entry requirements	If offered as CPD or stand alone	
Valid From	September 2013		Valid to	September 2019	

CAP Approval Date	19 th June 2013
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Part 2: Learning and Teaching	
Learning Outcomes	<p>On successful completion of this module students will be able to:</p> <ul style="list-style-type: none"> • undertake and understand the principles of a range of field survey techniques and record scientific data in the field (assessed in Component B 1, A); • describe, for the field studies considered, the range of factors which affect the environment; (assessed in Component B1); • present, analyse and interpret field data using appropriate mathematical, statistical and communication skills (assessed in Component B1 & A); • use appropriate software to display and analyse scientific information, draw graphs, use formulae, functions and appropriate formatting (assessed in Component B2 & A); • understand the need for developing key graduate skills in addition to subject based proficiency; (assessed in Component B2); • use resources that will support their research, problem solving and study skills throughout their undergraduate course (assessed in Component B2).
Syllabus Outline	<p>This is a skills based module and aims to support and enhance the development of both subject-based and generic key skills. Specifically this module will introduce the following;</p> <p>Field skills</p>

	<p>Principles of fieldwork, sampling methodologies and monitoring. Investigation of a range of environmental issues in a local and regional context. Activities may include: field monitoring of air, soil or water quality; investigating the impacts of human activities (e.g. industry, tourism) on urban and rural environments through site visits and surveys; investigations into the factors that affect the distribution of living organisms.</p> <p>Study skills</p> <p>Transition to university, expectations, requirements and support. Introduction to study skills and generic graduate, skills. Proficiency and careers within the environmental sector. The evaluation of skills and planning personal development. Introduction to independent learning and being a self manager. Activities may include: academic reading; literature and information searching; scientific writing; referencing & plagiarism; use of appropriate software; presentation skills; time management; understanding and using feedback; formative assessment and feedback from staff and peers; revision techniques and exam preparation; self evaluation and reflection; planning ahead.</p> <p>Analytical skills</p> <p>Modelling scientific systems:</p> <p>Scientific equations and formulae. Linear relationships and regression. Exponential and logarithmic functions. Equations of growth and decay. Probability and frequency. Use of normal distribution, Z-scores, confidence intervals. Use of appropriate software to display scientific information: formatting, graphs, use of formulae and functions, absolute and relative addressing. Descriptive statistics.</p> <p>Data analysis:</p> <p>Introduction to hypothesis testing. Testing of hypotheses and making decisions, for example the use of t-tests and Chi-squared test. Appreciation of variability in scientific data and experimental uncertainty. Examining linear relationships and rates of change. Examining Binomial and Poisson distributions. Recording, analysing and interpreting scientific data using IT software such as Excel & Minitab.</p> <p>Students will study topics comparable to the material covered in the European Computer Driving Licence - Level 1 (Essentials). UWE is a test centre for ECDL and the Faculty TEL manager has confirmed that students on this programme will be accommodated. This qualification underpins the ECDL – Level 2 (Extra) which students will progress on to at level 2.</p> <p>Full details of the programme are available from: http://imp.uwe.ac.uk/imp_public/displayentry.asp?URN=5770&rp=listEntry.asp&pid=21</p>
Contact Hours	<p>The contact hours (116) are distributed as follows:</p> <p>24 lectorials @ 2 hours/lectorial = 48 hours 24 workshops @ 1 hours/lecture = 24 hours 12 tutor groups @ 1 hour /session = 12 hours Residential field course @ 8 hours/day = 32 hours</p>
Teaching and Learning Methods	<p>This is a module about developing skills and so a variety of teaching and learning approaches will be employed that includes field work, laboratory work, computer practical tutorials, A large part of this module covers the development of problem solving numeric skills and data analysis skills. Technology enhanced learning is therefore essential to support the teaching of these skills. The module will be delivered using a mixture of whole group (lectorials) and small tutorial group sessions. Students will be allocated to a Study Skills Tutor group where a member of staff will facilitate personal, group and peer assisted learning of key skills. This will encompass the</p>

university wide Personal Tutor scheme. The module includes a residential fieldtrip of 3-5 days duration where emphasis will be placed on the understanding the theory behind fieldwork and developing practical hands on skills in field techniques. Team-working skills will be promoted through group work. Expert opinion will be accessed via site visits (e.g. to industrial sites, managed sites, information resources). Support material such as DVDs, relevant texts, internet and electronic resources, will be available for use both in formal and informal sessions.

Support for student learning in Analytical skills will be given through weekly lectorials/tutorials which will be integrated with the online self-assessment tests and online video support to ensure focussed help can be given to those students who need help in the particular areas. This introduces students to the concept of using technology to enhance learning (TEL). Students will develop IT and data analysis skills through computer-based workshops. This will be re-enforced by the need of students to complete the European Computer Driving Licence (ECDL) Part 1. Resources for Analytical Skills also include direct tutorial material, and references to published material, software, internet and intranet resources. Where possible, the statistical topics are presented and tested in the context of environmental issues.


Student learning will be supported through the University's E-Learning Environment, Blackboard.

Scheduled learning includes lectorials, tutorials, practical computer classes and workshops; fieldwork; external visits.

Independent learning includes hours engaged with essential reading, case study preparation, assignment preparation and completion etc. These sessions constitute an average time per level as indicated in the table below.

Key Information Sets Information

Key Information Sets (KIS) are produced at programme level for all programmes that this module contributes to, which is a requirement set by HESA/HEFCE. KIS are comparable sets of standardised information about undergraduate courses allowing prospective students to compare and contrast between programmes they are

Key Information Set - Module data				
<i>Number of credits for this module</i>				30
Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours
300	116	184		300
				

The table below indicates as a percentage the total assessment of the module which constitutes a -

Written Exam: Unseen written exam,
Coursework: Written report and portfolio

Total assessment of the module:	
Written exam assessment percentage	40%
Coursework assessment percentage	60%
100%	

<p>Reading Strategy</p>	<p>All students will be encouraged to make full use of the print and electronic resources available to them through membership of the University. These include a range of electronic journals and a wide variety of resources available through web sites and information gateways. The University Library's web pages provide access to subject relevant resources and services, and to the library catalogue. Many resources can be accessed remotely. Students will be presented with opportunities within the curriculum to develop their information retrieval and evaluation skills in order to identify such resources effectively.</p> <p>Any essential reading will be indicated clearly, along with the method for accessing it, e.g. students may be expected to purchase a set text, be given or sold a print study pack or be referred to texts that are available electronically, etc. This guidance will be available either in the module handbook, via the module information on Blackboard or through any other vehicle deemed appropriate by the module/programme leaders.</p> <p>If further reading is expected, this will be indicated clearly. If specific texts are listed, a clear indication will be given regarding how to access them and, if appropriate, students will be given guidance on how to identify relevant sources for themselves, e.g. through use of bibliographical databases.</p> <p>A detailed reading list will be made available through relevant channels, e.g. module handbooks, Blackboard, etc.</p>
<p>Indicative Reading List</p>	<p>The most recent editions of</p> <p>Cann, A. Maths from Scratch for Biologists, John Wiley.</p> <p>Cottrell, S. Skills for success, Palgrave Macmillan, Basingstoke.</p> <p>Cottrell, S. The Study Skills Handbook, Palgrave Macmillan, Basingstoke.</p> <p>Croft, A. & Davison, R. Foundation Maths, 4th Ed, Longman.</p> <p>Currell, G. A. Essential Mathematics and Statistics for Science, John Wiley & Son. Students will use a dedicated website associated with this text, which gives access to additional learning resources including video feedback.</p> <p>Dytham, C. Choosing and Using Statistics, Blackwell, Oxford.</p> <p>Goudie, A. Human Impact on the Natural Environment, Blackwell, Oxford.</p> <p>Henderson, P.A. Practical Methods in Ecology, Blackwell, Oxford.</p> <p>Neale, P. Study Skills for Geography, Earth and Environmental Science Students, Hodder Education Publication.</p> <p>Weyers, J., Reed, R & Jones, A. Practical Skills in Biology. Prentice Hall.</p>

Part 3: Assessment

Assessment Strategy	<p>The Assessment Strategy has been designed to support and enhance the development of both subject-based and generic key skills, whilst ensuring that the modules Learning Outcomes are attained. The focus is on assessments that link directly to employability skills as described below.</p> <p>The coursework comprises 2 elements. The first is a Field Report which is based on the residential field course. This report requires the detailed recording of a range of environmental variables whilst in the field, followed by analysis and interpretation of these data. This report includes critical review of the methodology used and discussion on how the environment is affected by natural and anthropogenic factors. The recording and analysis of field data a vital skill for environmental students. Furthermore, students need to know not just how to undertake a particular field survey but to be aware of the limitations and appropriateness of each test. Consequently this assessment addresses both these points and so can be described as an assessment for learning and employability. To further enhance learning, by putting the material into context, the recorded field values are further explored in the data analysis workshops. The second element is a portfolio. Students will be given instruction on the content of this portfolio which will contain examples of both study skills and subject skills such as: evidence of referencing; examples of poster presentation; ECDL level 1 certificate; statistical analysis of field data; interpretation and discussion of field data; a skills evaluation; reflection on coursework feedback; reflection and action plan. When possible the portfolio will be generated online using appropriate technology and systems supported by UWE.</p> <p>The controlled component is an open book exam. The exam will be 3 hours duration to allow students to undertake a suitable range of activities such as: identify organisms from images; undertake calculations; process and manipulate data; draw and display data in graphs and other forms; discuss various field techniques; analyse example field data. This will test a range of the learning outcomes. The exam format is utilised as it replicates the world of work where samples and data need to be analysed and interpreted correctly within a short deadline.</p> <p>Formative feedback is available to students throughout the module through group discussions particularly in tutor group sessions. Group review of field posters also provides formative feedback from peers. Students are provided with formative feed-forward for their exam through a revision and exam preparation session prior to the exam and through support materials supplied through Blackboard.</p>

Identify final assessment component and element		
% weighting between components A and B (Standard modules only)	A: 40%	B: 60%
First Sit		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. Open book Written Exam (3 hours)	100%	
2.		
Component B	Element weighting	

Description of each element	(as % of component)
1. Field report	50%
2. Portfolio	50%

Resit (further attendance at taught classes is not required)

Component A (controlled conditions) Description of each element	Element weighting (as % of component)
1. Open book Written exam (3 hours)	100%
2	

Component B Description of each element	Element weighting (as % of component)
1. Field Report	50%
2. Portfolio	50%

If a student is permitted an **EXCEPTIONAL RETAKE** of the module the assessment will be that indicated by the Module Description at the time that retake commences.