PROGRAMME SPECIFICATION

Awarding body/institution	Glyndŵr University
Teaching institution	Glyndŵr University
Details of accreditation by a professional, statutory or regulatory body	none
Final award/s available	BSc, Diploma of Higher Education, Certificate of Higher Education.
Award title	Geography, Ecology and Environment.
UCAS code	F810
Relevant QAA subject benchmark statement/s	Earth Sciences, Environmental Sciences and Environmental Studies; Geography (statement intended for single honours Geography courses).
Other external and internal reference points used to inform the programme outcomes	
Mode/s of study	Full-time, Part-time
Language of study	English
Date at which the programme specification was written or revised	February 2013 Updated September 2015 Updated August 2018 – change to SCI514 at L5 – replaced by SCI525

Distinctive features of the programme

This programme has been designed to offer students three components:

- a solid foundation of knowledge in the science of the environment.
- practical skills and knowledge most useful for employment in the environmental field.
- transferable skills valued by employers.

Skill shortages identified in a 2011 Institute of Ecology and Environmental Management report and a 2010 Natur survey were headed by concerns about awareness of legislation and ecological survey skills. The first IEEM concern arises because all businesses need to be aware of environmental regulation and legislation. Many of the Quality of Life indicators that help measure the state of our society are based on environmental concepts such as sustainability and biodiversity. Our proposed modular structure includes a core theme of sustainability, and so directly addresses this skill gap.

A second central theme of the programme is ecology and conservation, with a particular focus on survey skills and subsequent analysis, so that the second skill shortage, relating to practical experience, can also be addressed.

We can therefore offer potential students a programme aimed at giving them the knowledge and practical skills most needed for employment in the environmental area. At the same time, we recognise that many graduates will seek employment in other areas, and the programme and its assessment is designed to train our students in the general skills that employers seek in graduates: competence in data analysis, the ability to synthesise and report on complex information, and the ability to work effectively in teams are examples of the skills that students will develop on the programme.

The programme is also designed to make the most of our location through a significant fieldwork component in many of the modules. We have easy access to a variety of environments: the campuses at Wrexham and Northop contain or are close to rural and urban habitats, to protected and exploited areas. Some of our local landscapes, such as the Dee estuary and Snowdonia, are of international significance, and are a central component of the programme as case studies and as venues for fieldwork.

Programme structures and requirements, levels, modules, credits and awards*

The structure of the programme is summarised in the attached diagram, which shows the modules offered at levels 4, 5 and 6.

Exit awards:

The BSc honours in Geography, Ecology and Environment will be awarded to students who have successfully completed 120 credits at level 4 from the modules shown on the diagram, 120 credits at level 5 and 120 credits at level 6. At level 6, both core and optional modules are available, as shown on the diagram.

The BSc ordinary degree will be awarded to students who choose to exit the programme having completed 120 credits at level 4,120 credits at level 5 and 60 credits from level 6.

A Diploma of Higher Education will be awarded to students who choose to exit the programme having completed 120 credits at level 4 and 120 credits at level 5.

A Certificate of Higher Education will be awarded to students who choose to exit the programme having completed 120 credits at level 4.

Modes of study:

Students can study the programme either full or part time. Full time students would register for 120 credits each year. Part time students would attend modules with the full time students, but would register for fewer credits in an academic year.

Part time students are advised about their registration before the start of each year in order to consider the coherence of their programme of study and the best fit between the module timetable and their own constraints. They are supported alongside the full-time

students by the module tutor, and would also have a personal tutor assigned to them in the induction week of their first registration. The personal tutor would be responsible for maintaining an overview of their progress through the programme: ensuring, for example, that they complete enough credits to complete the programme within the registration limits. A possible delivery schedule for a part-time student is shown:

Year 1 Semester 1	Earth Systems
Y1 S2	Sustainability and Environmental Hazards
Y2 S1	Ecology / Plant Form and Function
Y2 S2	Laboratory Chemical Analysis / Introduction to Chemistry
Y3 S1	Ecosystems
Y3 S2	Pollution / Landscape and Place
Y4 S1	Sustainability and Resource Management / GIS
Y4 S2	Research Methods: Theory and Practice / Atmospherics and Climate Change
Y5 S1	Sustainable Development
Y5 S2	Conservation Biology / Practical Conservation Management
Y6	Environmental Project

or, using the full eight-year registration period:

Year 1 Semester 1	Earth Systems
Y1 S2	Sustainability and Environmental Hazards
Y2 S1	Ecology
Y2 S2	Laboratory Chemical Analysis / Introduction to Chemistry
Y3 S1	Plant Form and Function
Y3 S2	Pollution
Y4 S1	Ecosystems / GIS
Y4 S2	Landscape and Place
Y5 S1	Sustainability and Resource Management
Y5 S2	Research Methods: Theory and Practice / Atmospherics and Climate Change
Y6 S1	Sustainable Development
Y6 S2	Conservation Biology
Y7	Practical Conservation Management
Y8	Environmental Project

There are two disadvantages for students who are taught in this way rather than with a designated part time day. They would normally have to attend on more days in a week, and most of their cohort would change each year. This is explained to part time applicants, and they balance that against their reasons for wanting to study part time, which are normally either financial or that they find the prospect of taking on 120 credits at once too daunting. In the latter case, of course, they can begin part time and then transfer to full time as they gain in confidence. We do not expect to have either sufficient part time applicants or staff resources to offer an alternative mode of delivery.

Criteria for admission to the programme

Applicants would normally be expected to have the equivalent of 240 points at ‘A’ level, with at least 80 points in Geography, Biology, Chemistry or related subjects. They would also normally be expected to have the equivalent of a C in maths at GCSE level.

Candidates with relevant experience, but who lack formal qualifications, would also be considered. An example of such experience would be work in a laboratory or in the field of biological conservation. Applicants of this nature would be interviewed to assess their suitability. The interview, along with prior assessment of the application, would attempt to map experience against the knowledge expected of an applicant with the required points criteria, and also look for evidence of willingness and ability to make progress within the subject. For example, a candidate might have completed courses in identification skills, or in practical tasks related to conservation or laboratory work.

Applicants may be able to gain exemption from level 4 or 5 modules through Accredited Prior Learning or Prior Experiential Learning. The procedure would operate under the current Glyndŵr University regulations, and depend on evidence of credits earned in appropriate subjects, or relevant experience.

International and European applicants will be considered firstly on the basis of the qualifications they have gained in their own educational system. Comparison may be based on a UK NARIC statement of equivalence. The advice of the central admissions staff is also used in order to judge equivalence. Candidates will be expected to have attained IELTS 6.0 or an equivalent recognised qualification.

Aims of the programme

The programme aims are to:

- help students better understand the world around them.
- equip students with the knowledge and skills for further study or work in the environmental sciences.
- develop students' skills for graduate-level employment.

Intended learning outcomes of the programme*

on completion of Level 4, students will be able to:

A) Knowledge and understanding.

A1 discuss the structure, complexity and inter-relatedness of Earth systems and cycles.

A2 give examples of structure, complexity and inter-relatedness of human systems.

A3 outline the role of the Earth in supporting life and the consequences of the depletion and contamination of resources.

A4 explain the development of the concept of sustainability.

B) Intellectual skills.

B1 use information to formulate and test hypotheses.

B2 recognise and use subject-specific theories, concepts and principles

B3 identify the appropriate investigative techniques for a problem within the subject area.

C) Subject skills.

C1 plan, conduct and report on investigations, including the use of secondary data.

C2 use appropriate techniques to collect, record and analyse data/information in the laboratory.

C3 undertake field and laboratory work in a responsible and safe manner.

C4 conduct and report on investigations into ecological communities.

D) Practical, professional and employability skills.

D1 demonstrate the use of ICT skills for collecting, evaluating and disseminating information.

D2 show the ability to communicate using a variety of written, verbal and graphical forms.

D3 solve numerical problems using computer and other techniques.

On completion of Level 5, students will be able to:

A) Knowledge and understanding.

A1 appraise the key environmental challenges faced today, their potential impacts and the possible approaches to dealing with these challenges.

A2 criticize examples of human responses to environmental issues.

A3 contrast examples of natural systems on the basis of energy flow and nutrient cycling.

A4 analyse examples of issues concerning the sustainability of resources.

A5 interpret examples of landscape origin and development.

B) Intellectual skills.

B1 collect and integrate evidence from a wide variety of sources.

B2 formulate and develop a research proposal in a geographical/environmental subject.

B3 analyse numerical data using a range of statistical tests.

C) Subject skills.

C1 apply appropriate techniques to collect, record and analyse vegetation data.

C2 analyse and interpret environmental samples.

C3 appraise issues of sampling and the statistical analysis of data.

D) Practical, professional and employability skills.

D1 identify individual and collective goals and responsibilities within a team and carry out agreed tasks.

D2 examine individual and team performance.

D3 derive and appraise results from complex software packages.

On completion of the BSc Geography, Ecology and Environment, students will be able to:

A) Knowledge and understanding.

A1 evaluate how systems are managed and conserved.

A2 compare and appraise examples of the legislative framework in which environmental management takes place.

A3 assess and evaluate the prospects for sustainable development.

A4 summarise and assess key environmental challenges.

B) Intellectual skills.

B1 critically analyse, synthesise and summarise information about complex environmental problems.

B2 integrate diverse sources of evidence to formulate and test hypotheses.

B3 recognise and appreciate moral and ethical issues, and the need for professional codes of conduct.

C) Subject skills.

C3 apply and evaluate the outputs from environmental models.

D) Practical, professional and employability skills.

D1 demonstrate a responsible, ethical and professional approach to work.

D2 demonstrate the ability to communicate appropriately through a variety of media to a variety of audiences.

D3 show self-management and lifelong learning skills in completion of extended tasks.

D4 demonstrate the ability to adopt a flexible approach to work and study.

On completion of the BSc (Honours) Geography, Ecology and Environment students will be able to:

A) Knowledge and understanding.

A1 evaluate how systems are managed and conserved.

A2 compare and appraise examples of the legislative framework in which environmental management takes place.

A3 assess and evaluate the prospects for sustainable development.

A4 summarise and assess key environmental challenges.

B) Intellectual skills.

B1 critically analyse, synthesise and summarise information about complex environmental problems.

B2 integrate diverse sources of evidence to formulate and test hypotheses.

B3 recognise and appreciate moral and ethical issues, and the need for professional codes of conduct.

B4 defend an investigative strategy.

C) Subject skills.

C1 select from a range of possibilities the appropriate sampling and analytical techniques.

C2 demonstrate competence in advanced field and laboratory methods.

C3 apply and evaluate the outputs from environmental models.

D) Practical, professional and employability skills.

D1 demonstrate a responsible, ethical and professional approach to work.

D2 demonstrate the ability to communicate appropriately through a variety of media to a variety of audiences.

D3 show self-management and lifelong learning skills in completion of extended tasks.

D4 demonstrate the ability to adopt a flexible approach to work and study.

CURRICULUM MATRIX demonstrating how the overall programme outcomes are achieved and where skills are developed and assessed within individual modules.

	Module Code	*Module Title*	*Core Option*	***A 1***	***A 2***	***A 3***	***A 4***	***B 1***	***B 2***	***B 3***	***C 1***	***C 2***	***C 3***	***C 4***	***D 1***	***D 2***	***D 3***		
Lev 4	SCI419	Ecology	*C*	✓		✓		✓	✓	✓	✓		✓	✓	✓	✓	✓		
	SCI418	Earth Systems	*C*	✓					✓	✓	✓		✓			✓			
	SCI436	Sustainability & Environmental Hazards	*C*	✓	✓	✓			✓	✓	✓				✓	✓			
	SCI416	Laboratory Chemical Analysis	*C*					✓	✓	✓	✓	✓	✓	✓	✓	✓			
	LND407	Plant form and function	*C*	✓					✓	✓		✓			✓	✓	✓		
	SCI414	Introduction to Chemistry	*C*					✓		✓	✓	✓			✓	✓			
	SCI505	Pollution	*C*	✓	✓	✓		✓		✓		✓			✓	✓	✓	✓	✓
	LND510	Landscape and Place	*C*		✓				✓	✓								✓	
	SCI515	G.I.S	*C*	✓				✓		✓						✓		✓	✓
	SCI508	Sustainability and Resource Management	*C*	✓	✓	✓		✓		✓					✓		✓	✓	✓
	SCI501	Ecosystems	*C*			✓				✓		✓		✓		✓			✓
	SCI525	Research Methods: Theory and Practice	*C*		✓					✓	✓	✓				✓		✓	✓
Lev 6	SCI607	Sustainable Development	*C*			✓		✓	✓	✓	✓				✓		✓	✓	
	SCI612	Atmospherics and Climate Change	*C*	✓				✓	✓						✓		✓		
	SCI602	Conservation Biology	*C*	✓	✓			✓	✓	✓				✓	✓		✓		
	SCI613	Environmental Project	*C*					✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
	AUR642	Urban Renewal	*O*		✓	✓				✓					✓				✓
	SCI604	Practical Conservation Management	*O*	✓	✓			✓	✓		✓					✓	✓	✓	✓

Learning and teaching strategy used to enable outcomes to be achieved and demonstrated

The learning outcomes summarised in the previous section require students to develop their abilities in both the theory and practice of the subject. The strategy for learning and teaching therefore addresses both aspects. For practical work, safety and competence in the lab is taught both through modules which are almost entirely practical in nature and modules which use occasional lab sessions to address particular points. Skills in field techniques are taught through field classes, which are frequent in the ecology and conservation modules, but which also occur in the context of pollution and earth sciences.

Practical classes teach knowledge and understanding as well as subject-specific practical techniques, but the learning outcomes related to knowledge and understanding are also approached through formal lectures, workshops and tutorials, and through directed online and other reading material and exercises. These in turn contribute to the learning outcomes under sections B and D, where feedback from assessment is also an important component in helping students to meet these goals.

The strategy can be illustrated by an example. The ecosystems module targets learning outcomes A3, B1, B3, C1, C3 and D3 on page 8. Lectures and online reading material are used to help the student acquire the subject knowledge needed to meet A3. This knowledge then underpins the assessment which is directed at the other learning outcomes. So preparation for the assignment involves familiarity with a vegetation analysis package and allows the student to achieve D3. Carrying out the fieldwork and analytical component of the assessment encompasses the remaining outcomes. Feedback and tutorial support on the first part of the assessment is designed to help students to improve their performance against the learning outcomes targeted by the second part.

The strategy, therefore, is to use the full range of teaching environments available to a subject of this nature, from lecture room to field trip to virtual habitat. Assessment, of course, is a key part of the strategy, and the goal here is to provide assessments where the activity and the feedback encourage the student to make their own progress towards meeting the learning outcomes.

The assessments, like the teaching environments, are varied, including lab reports, oral presentations, statistical analyses and essay-type assignments. There are two reasons for this. Firstly, a range of assessment types encourages the students to develop a wider range of graduate-level skills and improves our response to programme aim 3. Secondly, our intake is diverse in age, educational background and previous experience. Providing a range of assessment types makes it more likely that each individual will be encouraged by success in at least some aspects, and so gain the confidence to make progress in the types of work in which they may be less confident at the start.

Welsh Medium Provision

Lectures are delivered in English, but in about 40% of the modules tutorials can be offered in Welsh, and we have in the past done practical and fieldwork sessions bilingually. We also have experience of supervising dissertation projects through the medium of Welsh and supporting students who wish to do oral presentations in Welsh. It is made clear to students from the start that they are welcome to submit assignments in either language, and we are either able to translate the material ourselves or make use of the University's translation service.

Work-based learning.

Level 6 of the programme contains an optional module, Practical Conservation Management. In this module, students undertake a minimum of 60 hours of, typically, voluntary conservation work with a wildlife or other conservation organisation.

The module addresses the three programme aims described above, and learning outcomes A1, A2, A4, B1, B3, D1, D2 and D3 at level 6. The outcomes can be assessed through a reflective journal which summarises the activities undertaken within the context of the particular organisation(s) involved, and through a longer written piece which evaluates the operation of a particular management technique such as coppicing, translocation or moorland burning.

The module leader approaches organisations initially in order to find those willing to offer experience. Suitability of experience is assessed against the QAA code of practice section 9 (2007). Students are provided with a list of suitable organisations, such as county wildlife trusts, at the start of the module, and are then expected to make contact with, usually, the ones closest to them.

The actual work offered tends to vary from year to year, and so the appropriateness of the learning opportunities offered are assessed through individual tutorials at the start of the module. Students are normally encouraged to work with a range of organisations in order to improve their experience. Tutorials are also used to provide formative feedback on early journal entries to ensure that the nature of the experience is suitable, and that students are equipped to make the best use of it in terms of their interpretation of what they are doing. The choice of subject for the second assessment is also checked and developed through tutorials.

The assessment of the student is done by the module tutor, and is based on the written assignments and not visits to the workplace. The partner organisations do not take part in the assessment process.

Assessment strategy used to enable outcomes to be achieved and demonstrated

The assessment strategy for the programme is based on the following principles:

Learning, teaching and assessment should be designed together and support each other. This is illustrated in the ecosystems example shown above, where the method of assessment is woven into a variety of teaching methods and targeted at named learning outcomes.

The connection between learning and assessment should be clear to students. In early modules at level 4, the link between assessment and learning outcomes is set out explicitly and students encouraged to map their own achievement of the outcomes involved, with the aim that they should continue to look for the links in their later work. For example, in the level 4 ecology module, the link is made between the assessment on journal analysis and learning outcomes C1 and D2.

Assessment methods should both develop and assess knowledge, skills and understanding. Illustrations of this are shown in the ecosystems and practical conservation examples above, where the first components of the assessment are used to develop the next. Laboratory and field-based assessments are also examples of how assessment tasks can be used to help students practice and develop particular skills or techniques. This principle requires that the variety of learning outcomes targeted by the programme should be reflected in the range of assessment environments used. Therefore the programme makes use of a variety of formats. Written work would include reports on practicals, mathematical tasks, case study analyses and essays. Other formats are

computer-based simulation activities and specimen identification work, and group and individual oral or poster presentations are also used.

Assessments should be useful and reliable. This is approached firstly by making a clear connection in the module specification between the task and the learning outcomes, and then by reinforcing this connection in the assignment brief. Secondly, feedback sheets for each assessment reference the work produced to specific criteria and so help students check their level of achievement. This in turn increases reliability by making internal and external moderation more effective.

An overview of assignment type and date is at the end of the document.

Assessment regulations that apply to the programme

Glyndŵr University regulations for Bachelor Degrees, Diplomas, Certificates and Foundation Degrees will apply to this programme.

Requirement for raising classification:

- At least 50% of the credits at level 6 fall within the higher classification.
- All level 6 modules must have been passed at the first attempt.

The mark for the 40 credit dissertation module at level 6 must fall within the higher classification.

Programme Management

Programme team.

Dr Joss Bartlett (programme leader)
Dr Amiya Chaudhry
David Cheesbrough
Dr Ian Ratcliffe
Dr David Skydmore
Dr Jixin Yang

The programme is managed by the programme leader and by module tutors. The main programme management responsibilities of the programme leader are:

- production of the annual programme handbook
- oversight of changes to the programme.
- liaison with the external examiner
- organisation and chairing of programme board meetings
- liaising with the relevant offices with respect to student registration and results
- organising induction
- organising the staff-student consultative committee

The module tutors are responsible for:

- the planning and delivery of their modules.
- providing students with a module handbook.
- marking assignments and providing marks to the relevant office.

Quality management.

Programme board meetings are held three times a year. The board consists of the programme team noted above, and the members of related programmes which are also considered at the meetings. The programme board will allow co-ordination of this programme with the Wildlife and Plant Biology course with which some modules are shared. As well as matters raised by the programme team, the meetings consider the minutes from Staff-Student consultative committee meetings which are also held three times a year, and are attended by student representatives from each level of the programme.

Minutes from the programme boards then go forward to the relevant academic subject board, which the programme team also attend. This board is attended by staff from Chemistry and Biology, and allows further management co-ordination with the Wildlife and Plant Biology course.

The formal mechanisms used to evaluate student perception of quality are the module evaluation forms completed by students on each module, the feedback from the SSCC meetings noted above, and the NSS completed by final year students. Information from each of these is considered firstly at the programme board, and can if necessary also go before the academic subject board.

Quality is also monitored by the programme leader's annual monitoring report and by the report of the external examiner. Issues arising from the examiner's report and from the above evaluations of student perception are actioned in the annual monitoring report. This is considered by the programme team and the head of department at an annual meeting, and the report and the minutes of the meeting are forwarded to the academic quality unit.

Research and scholarship.
The proposed curriculum is underpinned by research in the various research groups within the department, as well as by individual activity by members of the programme team. We are able, for example, to make use of guest lectures on sustainability from members of the Centre for Solar Energy Research, and to offer dissertation projects related to research activity within the Centre for Water Soluble Polymers. Examples of such projects are the use of seaweed-derived polysaccharides for wastewater remediation, and the potential for waste-recovered chitin as a raw material. With projects like this, students are given a taste of activity at the forefront of the field. Project students are also able to take advantage of the resources of the Glyn O Phillips Hydrocolloids Research Centre and the Advanced Materials Research Laboratory. Publications by members of staff support the curriculum too: recent articles on local estate management and geological surveys of the Dee valley are examples of how scholarship is connected to the curriculum – in this case to support the landscape and conservation components of the programme.

Membership of professional bodies is another component of programme support. Two examples are student access to events organised by the local branch of the Royal Society of Chemistry, and practical support offered through membership of the British Bryological Society.

Particular support for learning

General facilities
Students on this programme are expected to be based for lectures at the Wrexham campus apart from:
(1) If they choose the Plant Form and Function option at level 4, they would have two sessions a week at Northop.

(2) Ecology, Ecosystems, Conservation Biology and Practical Conservation are also offered to students on the Wildlife and Plant Biology course. They could be at either site, depending on recruitment to the programmes.
A student on this programme could therefore have all their sessions at Wrexham, or up to two modules each year in Northop. The minibus shuttle would be available for students who wish to travel from Wrexham to Northop for these modules.

Support services
Students on the programme have access to central support for counselling, student services, library and IT, and careers. There is also central support for study skills such as academic writing, and the programme team has on previous programmes been able to work effectively with these support services. The central services are introduced to students during induction week. Tailored careers support is then built into the programme by timetabling sessions within modules for each of the year groups. Specialist advice on library and IT services is also included in the Research Methods: Theory and Practice module at level 5.

Programme support
At the programme level, the programme leader is responsible for keeping records of support statements for individual students produced by the central student support services. As necessary, he will communicate support requirements to module tutors.

Each student is assigned a personal tutor and has an initial meeting with that tutor during the induction period. The personal tutor is intended as the first point of contact for any issues, but the teaching team also operate an open door policy.

Skills
Every programme faces the challenge of teaching skills such as numeracy and the specific modes of communication used within the subject area. With this programme, we have chosen to operate a combination of embedded training and dedicated skills module. So, if we consider the teaching of statistical analysis, this begins by being embedded within modules. The ecology module at level 4, for example, uses vegetation sampling to examine hypothesis testing. Higher level analysis of related data occurs at level 5 in the ecosystems module, and the techniques are then available for application in the level 6 project. The same progression occurs within other modules, for example for numeracy and information retrieval. Dedicated skills sessions then occur in the level 5 Research Methods: Theory and Practice research module. In this, the activities embedded in earlier modules are brought together and directed towards the dissertation. As an example of this, the level 5 research module has a specific session on information resources for the dissertation. Using the experience they have gained from earlier practice, students are helped (usually by a member of library staff) with beginning to gather literature for their intended research project.

A further example of the approach is shown by support for the use of Moodle. This begins with initial training in induction week and is then reinforced through individual modules, where students access lecture support materials on the VLE.

Practical facilities
Students studying on the programme have access to the facilities available in two teaching labs in Wrexham. As explained above, the facilities of the research groups in the department, such as the Water Soluble Polymers group, can also be used. For example, a project we would offer would use cation chromatography and atomic absorption spectroscopy to examine wastewater remediation with biopolymers. Field trips are an important component of the programme, and full use is made of the learning opportunities provided by our location, with its proximity to such a variety of landscapes. The Wrexham campus allows easy access to a range of suitable sites, and the Northop campus is itself a resource for ecology and conservation work.

Moodle and other online resources

Electronic support for learning is mainly offered through Moodle. Access and initial training are provided during induction week and then reinforced through use in each module. All modules are supported by static Moodle resources: programme information, assessment details, lecture material (slides/notes/handouts), and some also make use of interactive aspects such as quizzes. Moodle is also an effective means of email communication with students, and is an important aspect of support in a programme where weekly sessions can change location from lecture room to lab to field site.

Electronic resources other than Moodle are also used. Simulation software is employed in some of the chemistry modules, and to support learning in ecology and conservation.

Equality and Diversity

Students with a physical disability or learning difference are encouraged to seek the advice of the University Disability Advisor. The outcome of any assessment arising from this is kept by the programme leader, as described above, and may include, for example, the provision of extra time for exams or for the submission of assignments. Where necessary, the module tutor would be responsible for the provision of material such as handouts on coloured paper or enlarged print. The availability of handouts and other support material on Moodle is also important here, since it can allow students to manipulate resources for themselves and so help us meet the requirement for anticipatory reasonable adjustments.

Anticipatory adjustment is also a necessary component when considering fieldwork. Where alternatives are available, sites have been chosen that offer the greatest potential for inclusiveness, for example in terms of access. Where this is not possible, we can anticipate inability to attend a particular session by providing an alternative experience, for example through the provision of video or simulation material.

Geography, Ecology and Environment: module framework.

Level 4

Ecology SCI419 **Joss Bartlett**	**Earth Systems SCI418** **Ian Ratcliffe**	**Sustainability & Environmental Hazards SCI436** **Amiya Chaudhry**	**Laboratory Chemical Analysis SCI416** **Amiya Chaudhry**	**Plant Form and Function LND407** **David Skydmore**	**Introduction to Chemistry SCI414** **Jixin Yang**

Level 5

Pollution SCI505 **Amiya Chaudhry**	**Landscape and Place LND510** **Ian Ratcliffe**	**GIS SCI515** **Joss Bartlett**	**Sustainability and Resource Management SCI508** **Amiya Chaudhry**	**Ecosystems SCI501** **Joss Bartlett**	**Research Methods: Theory and Practice SCI525** **Amy Rattenbury**

Level 6

Sustainable Development SCI607 **Amiya Chaudhry**	**Atmospherics and Climate Change SCI612** **Amiya Chaudhry**	**Conservation Biology SCI602** **Joss Bartlett**	**Practical Conservation Management (option) SCI604** **Joss Bartlett**	**Urban Renewal (option) AUR642** **David Cheesbrough**	**Environmental Project SCI613** **Joss Bartlett**

Assignment overview

Module	Assessment	semester:week
Level 4		
Earth Systems	Portfolio in-class test	1:8 1:12
Ecology	Coursework	1:10
Sustainability & Environmental Hazards	 Presentation Essay	 2:6 2:10
Introduction to Chemistry	Coursework Exam	2:4 2:12
Laboratory Chemical Analysis	Practical and report	2:10
Plant form and function	Case study Time-constrained exercise	2:8 2:12
Level 5		
Ecosystems	Report	1:7
Research Methods: Theory and Practice	Portfolio	2:TBC
GIS	Coursework	1:12
Landscape and Place	Portfolio	2:10
Pollution	Group project	2:8
Sustainability and Resource Management	Case study	1:9
Level 6		
Atmospherics & Climate change	Literature review Report	2:4 2:7
Conservation Biology	Coursework	2:9
Practical Conservation (option)	Diary Report	2:11 2:11
Environmental Project	Project	2:12
Sustainable Development	Report In-class test	1:7 1:11
Urban Renewal (option)	Essay	1:5
	Portfolio	1:12