Programme Specification for BSc (Hons) Plant Science

1.	**Awarding institution/body**	University of Worcester
2.	**Teaching institution**	University of Worcester
3.	**Programme accredited by**	N/A
4.	**Final award**	BSc Hons
5.	**Programme title**	Plant Science
6.	**Pathways available**	Single Honours only
7.	**Mode and/or site of delivery**	Face to Face delivery of theoretical and practical work with some blended learning via Blackboard. All modules delivered on the sites of the University of Worcester or in the field.
8.	**Mode of attendance**	FT & PT Field courses may require residential attendance in the UK or abroad.
9.	**UCAS Code**	C210
10.	**Subject Benchmark statement and/or professional body statement**	QAA Biosciences Benchmark Statement (2007) http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/Biosciences07.pdf
11.	**Date of Programme Specification preparation/ revision**	March 2013 IQC March 2014 ENVS2303 changed from mandatory to optional August 2014 and October 2014 (regulations)

12. Educational aims of the programme

Plant Science at Worcester is a broad-based course with options in a number of biological areas to allow students to specialise as they move through the course or to enable them to maintain a broad-based curriculum. It is very practical and offers students the opportunity to undertake an independent project in their third year, which is not offered by all Plant Science courses in the UK. The emphasis on the development of 'hands on' practical skills provides students with useful skills for their future careers. The unique Worcester science personal development planning (PDP) scheme is designed to support student personal and career development.

In particular the course aims to:-

a) provide a broad practical laboratory and/or field based Plant Science curriculum.

b) give a supportive learning environment which acknowledges and responds to the diversity of student backgrounds and experiences, and which allow students the opportunity to realise their academic potential;

c) provide students with the opportunity to study Plant Science at a depth and level appropriate to honours degree standard;

d) develop to the appropriate pathway level the knowledge, skills and aptitudes of Plant Science, within an interdisciplinary, undergraduate degree scheme;

e) enable students to work independently, analytically and critically;

f) encourage students to develop a range of subject-specific and transferable skills appropriate to graduate employment and/or postgraduate study in Plant Science.

13. Intended learning outcomes and learning, teaching and assessment methods

On successful completion of the course, students should be able to:

a) demonstrate knowledge of material and an understanding of a range of biological concepts and principles at a variety of levels (from sub-cellular to whole organisms);

b) access information from a variety of sources and show proficiency in assessing, evaluating, analysing, and synthesising the scientific information and data;

c) communicate biological information and principles in an appropriate manner, employing skills of written, oral and visual communication, numerical analysis and information technology;

d) design, execute and critically evaluate the outcomes of investigations carried out individually and in groups;

e) record data accurately, analyse and interpret those data and test hypotheses;

f) have practical skills in laboratory and/or field work, and be able to work safely and appropriately in these environments;

g) have an understanding of ethical issues related to Plant Science

h) work co-operatively with others, while demonstrating an increasing understanding of how to be an independent learner;

i) plan, carry out and present a piece of hypothesis-driven work for an independent study.

Tables mapping the learning outcomes of the course to the modules are detailed in section 1 of the Biological Sciences programme student handbook. Section 2 of this handbook shows how the Science PDP skills, based on the QAA benchmark statement, are linked to the individual modules in each course.

13.1 Learning and teaching and assessment methods

The Plant Science course aims to provide supportive, student-centred learning environments that acknowledge and respond to the diversity of student backgrounds and experiences. The structure of the course enables students to move towards increasing independence in their studies from level 4 to level 6 in line with the Framework for Higher Education Qualifications (FHEQ) and University policies for assessment and curriculum design. Level 4 modules offer students structured tutor support for their learning, whilst at level 5 this support becomes less structured, although the extent to which this occurs varies with the difficulty of the task. All level 6, modules offer students opportunities for more independent learning, although specific tutor help will always be available. Learning outcomes, and hence assessments will always be more demanding at level 6.

Students will participate in a wide range of learning experiences. Teaching, assessment and private study are interlinked in that they are all aspects of each student's personal and academic development. A list of the range of learning experiences that may be encountered on the course are given below:-

Lectures, practical sessions, practical demonstrations, seminars, student-led seminars, self-instructional workbooks, workshops, tutorials, field work, field classes, field trips, field visits, directed reading, independent study, group projects, web conferencing, self-directed study, reflective accounts of own work, group work, self-study packages, blended

learning with the blackboard VLE, laboratory investigations, class discussions, computer simulations, case studies, independent research, role-play, visiting speakers, reflective learning, interviews.

The course employs a variety of assessment methods, for more details please see section 14 of this programme specification.

13.2 Student skills

Students will be able to obtain a wide range of skills on this course, e.g. a range of subject-specific and transferable skills appropriate to graduate employment and/or postgraduate study in Biology. For details please see PDP tables and module descriptors in the student handbook.

The Biological Sciences tutors at the University of Worcester have developed a Personal Development Planning scheme based on QAA Biosciences graduate and transferable skills. It contains a number of elements which run from induction through to level 6 and is compulsory for all Biological Sciences students. It was developed with three main aims in mind: to help students to reflect on the skills that they need in order to attain the next step in their studies, to make more effective use of the opportunities provided by academic tutorials to give the necessary individual support and guidance, and to increase the students' employability. The PDP skills are based on the QAA benchmark skills and each is linked to the appropriate assessments. However, practical and fieldwork skills and attributes are also recognised in the PDP scheme in order to increase employability. For more information please see the Biological Sciences programme student handbook.

PDP Skills and Attributes for Plant Science (based on QAA benchmark skills)

Skills and Attributes	Details
1. Subject knowledge and understanding	1.1.Engage with the essential facts, major concepts, principles and theories
	1.2.Understand the broader context and appropriate multidisciplinary aspects of the subject
	1.3. Knowledge of the processes and mechanisms that have shaped the natural world
	1.4. Competence in basic experimental skills
	1.5. Understanding of information and data, set within the theoretical framework
	1.6. Critical analysis and assessment of data and information
	1.7. Familiarity of terminology, nomenclature and classification of systems
	1.8. Methods of acquiring, interpreting and analysing biological information.
	1.9. Critical understanding of the appropriate contexts for the use of methods through the study of texts, original papers, reports and data sets
	1.10. Awareness of the contribution of their subject to the development of knowledge about the diversity of life and its evolution
	1.11. Knowledge of a range of communication techniques and methodologies relevant to the particular discipline, including data analysis and the use of statistics
	1.12. Engagement with some of the current developments in the biosciences and their applications, and the philosophical and ethical issues involved
	1.13. Awareness of the contribution of biosciences to debate and controversies, and how this knowledge and understanding forms the basis for informed concern about the quality and sustainability of life
	1.14. Understanding the applicability of the biosciences to the careers to which graduates will be progressing.
2. Subject-specific skills	2.1. Recognition that much of what is taught is contested and provisional, particularly in the light of continuing scientific advances
	2.2. An appreciation of the complexity and diversity of life processes through the study of organisms, their molecular, cellular and physiological processes, their genetics and evolution, and the interrelationships between them and their environment
	2.3. The ability to read and use appropriate literature with a full and critical understanding, while addressing such questions as content, context, aims, objectives, quality of information, and its interpretation and application
	2.4. The capacity to give a clear and accurate account of a subject, marshal arguments in a mature way and engage in debate and dialogue both with specialists and non-specialists, using appropriate scientific language
	2.5. Critical and analytical skills: a recognition that statements should be tested and that evidence is subject to assessment and critical evaluation

	2.6. The ability to employ a variety of methods of study in investigating, recording and analysing material
	2.7. The ability to think independently, set tasks and solve problems.
3. Graduate and transferable skills: Intellectual skills	3.1. Recognise and apply subject-specific theories, paradigms, concepts or principles.
	3.2. Analyse, synthesise and summarise information critically, including published research or reports
	3.3. Obtain and integrate several lines of subject-specific evidence to formulate and test hypotheses
	3.4. Apply subject knowledge and understanding to address familiar and unfamiliar problems
	3.5. Recognise the moral and ethical issues of investigations and appreciate the need for ethical standards and professional codes of conduct.

Skills and Attributes	**Details**
4. Graduate and transferable skills: Practical skills	4.1. Undertake sufficient practical work to ensure competence in the basic experimental skills appropriate to the discipline under study
	4.2. Design, plan, conduct and report on investigations, which may involve primary or secondary data (e.g. from a survey database). These data may be obtained through individual or group projects
	4.3. Obtain, record, collate and analyse data using appropriate techniques in the field and/or laboratory, working individually or in a group, as is most appropriate for the discipline under study
	4.4. Undertake field and/or laboratory investigations of living systems in a responsible, safe and ethical manner
5. Graduate and transferable skills: Numeracy skills	5.1. Receive and respond to a variety of sources of information: textual, numerical, verbal, graphical
	5.2. Carry out sample selection; record and analyse data in the field and/or the laboratory; ensure validity, accuracy, calibration, precision, replicability and highlight uncertainty during collection
	5.3. Prepare, process, interpret and present data, using appropriate qualitative and quantitative techniques, statistical programmes, spreadsheets and programs for presenting data visually
	5.4. Solve problems by a variety of methods, including the use of computers
6. Graduate and transferable skills: Communication, presentation and information technology skills	6.1. Communicate about their subject appropriately to a variety of audiences using a range of formats and approaches, using appropriate scientific language
	6.2. Cite and reference work in an appropriate manner, including the avoidance of plagiarism
	6.3. Use the internet and other electronic sources critically as a means of communication and a source of information.
7. Graduate and transferable skills: Interpersonal and teamwork skills	7.1. Identify individual and collective goals and responsibilities and perform in a manner appropriate to these roles, in particular those being developed through practical, laboratory and/or field studies.
	7.2. Recognise and respect the views and opinions of other team members; negotiating skills
	7.3. Evaluate performance as an individual and a team member; evaluate the performance of others
	7.4. Develop an appreciation of the interdisciplinary nature of science and of the validity of different points of view
8. Graduate and transferable skills: Self-management and professional development skills	8.1. Develop the skills necessary for self-managed and lifelong learning (eg working independently, time management, organisational, enterprise and knowledge transfer skills)
	8.2. Identify and work towards targets for personal, academic and career development
	8.3. Develop an adaptable, flexible and effective approach to study and work.

14. Assessment Strategy

The Plant Science course aims to develop autonomous and independent learners who possess a broad range of intellectual and transferable skills. In order to achieve these aims, a range of methods is used to assess students. Assessment methods include examinations, practical tests, practical and field reports, in-class tests, presentations and poster presentations.
Students have opportunities to develop the appropriate skills necessary for the particular assessment type used before summative assessment takes place. Extensive feedback is given

on assessments and students are supported, through the Academic Tutoring Programme for the course, in reflecting and acting on this feedback in order to support their academic development.
The emphasis on formative assessment gives more opportunities to provide feedback and this takes a variety of forms, for example the level 4 30-credit modules provide regular and rapid feedback by using personal response systems.
As far as possible, the assessments have been spread throughout the modules. However, the skills and depth of understanding to be assessed take time to develop and consequently assessment deadlines do not generally occur in the first half the module. The range of assessment tasks used and their weightings, together with a calendar of submission dates, is shown in the students' handbook.

The Biological Sciences follow the University of Worcester Assessment Policy
http://www.worc.ac.uk/aqu/documments/AssessmentPolicy.pdf
All module outlines contain detailed assignment briefs and grading criteria which are, in most cases, specific for that particular assignment. Study Skills, which form part of the extended induction for level 4 students, as well as some modules, include sessions on how to make good use of this information.

15. Programme structures and requirements

Award map template for Single Honours

Course Title: BSc Plant Science	Year of entry: 2013

Level 4					
Module Code	**Module Title**	**Credits** (Number)	**Status** (Mandatory (M) or Optional (O)) **Single Hons**	**Pre-requisites** (Code of Module required)	**Co-requisites/ exclusions and other notes**
ENVS 1100	Introduction to Ecology	15	M	None	None
BIOS 1102	Introduction to Forensic Biology	15	O	None	BIOS 1220 excluded
BIOS 1201	Cell Biology	30	M	None	None
BIOS 1205	Introduction to Biological Chemistry	15	O	-	None BIOS 1212 excluded
ENVS 1011	Introduction to Environmental Science	30	M	None	None
ENVS 1012	Environmental Issues Past & Present	30	O	None	(ENVS 1004 excluded)
ENVS 1013	Classification and Species Identification	15	M	None	BIOS 1200 excluded

Single Honours Requirements at Level 4
Single Honours students must take 120 credits in total, 90 of which must be ENVS 1100, BIOS 1201, ENVS 1011 and ENVS 1013.

Single Honours students may also choose to take elective modules to the value of 30 credits from the listing of elective modules provided for undergraduate degree programmes, or take additional modules from the table above to the value of 30 credits.

Level 5					
Module Code	**Module Title**	**Credits** (Number)	**Status** (Mandatory (M) or Optional (O)) **Single Honours**	**Pre-requisites** (Code of Module required)	**Co-requisites/ exclusions and other notes**
BIOS 2003	Work Experience	15	O	BIOS 1201	BIOS 3003, ENVS 2005 & GEOG 3112 excluded
BIOS 2023	Microbiology	15	O	BIOS 1201	None
BIOS 2024	Infectious Agents and Allergens	15	O	BIOS 1201	None
BIOS 2040	Plant Biology	15	M	BIOS 1201	None
BIOS 2200	Project and Career Development	30	M	None	(BIOS 1204) & BIOS 3114 excluded
BIOS 2202	Molecular Genetics and Conservation	30	M	BIOS 1201	BIOS 2100 & BIOS 2201 excluded
ENVS 2303	Field Techniques and Identification Skills	15	O	ENVS 1100	None
ENVS 2011	Ecology – Individuals to Ecosystems	15	O	ENVS 1100	None
ENVS 2104	Ecology of Fresh Waters	15	O	ENVS 1100	None
ENVS 2006	Soils and the Environment	15	O	ENVS 1010 or ENVS 1100 or GEOG1011	GEOG 2018 excluded
GEOG 2113	Geographical Information Systems	15	O	None	GEOG 3113 excluded

Single Honours Requirements at Level 5
Single Honours students must take BIOS 2040, BIOS 2200, BIOS 2202 and ENVS 2303.
Single Honours students may also choose to take elective modules to the value of 30 credits from the listing of elective modules provided for undergraduate degree programmes, or take additional modules from the table above to the value of 30 credits.

Level 6					
Module Code	**Module Title**	**Credits** (Number)	**Status** (Mandatory (M) or Optional (O))	**Pre-requisites** (Code of Module	**Co-requisites/ exclusions and other notes**

			Single Honours	required)	
BIOS 3001/2	Independent Study	30	M	BIOS 2200	BIOS 3001 excluded if 3002 taken and vice versa BIOS 3114 excluded
BIOS 3003	Work Experience	15	O	BIOS 1201	BIOS 2003, ENVS 2005 & GEOG 3112 excluded
BIOS 3041	Plant Development & Physiology	15	M	BIOS 2040	None
ENVS 3110	Adaptations to Extreme Environments	15	M	None	None
BIOS 3053	Biological Indicators for Crime Reporting	15	O	None	None
BIOS 3109	Genomics and Bioinformatics	15	O	BIOS 2100, BIOS 2201 or BIOS 2202	None
BIOS 3111	Extension Module	15	O	None	None
BIOS 3114	Research Methods and Research Project	30	O	None	BIOS 3001 & BIOS 3002 (BIOS 2004, BIOS 3104) excluded
ENVS 3100	Residential Environmental Field Trip	15	M	ENVS 1100	None
ENVS 3102	Environmental Impact Assessment	15	O	ENVS 1011, ENVS 1100 or ENVS 2011	None
ENVS 3103	Restoration Ecology	15	M	ENVS 2011, 1102, 2103 or BIOS 2303	None
ENVS 3106	Landscape Ecology	15	O	ENVS 1011	None
ENVS 3111	Conservation Ecology of Habitats and Species	15	O	ENVS 2100	None
GEOG 3114	Applied GIS and Remote Sensing	15	O	GEOG 2113	None
GEOG 3132	Countryside Conservation & Agricultural Change	15	O	None	None

Single Honours Requirements at Level 6

Single Honours students must take BIOS 3001/2, BIOS 3041, ENVS 3110, ENVS 3100, ENVS 3103 and must take 2 from the optional modules listed above.
Direct entry students must normally substitute BIOS 3114 for BIOS 3001 or BIOS 3001/2

16. QAA and Professional Academic Standards and Quality

The course has been developed with reference to the QAA Biosciences Benchmark Statement (2007) which has been used to inform course outcomes and skills. We also follow the QAA and UW guidelines on work experience. The course operates at levels four, five and six of the Framework for Higher Education Qualifications.

17. Support for students

- Plant Science students experience a wide variety of learning and teaching methods detailed in 13.1 above and these are frequently reviewed and adapted in order to enhance the students' experience.

- An induction programme extended throughout the year in one of the 30 credit modules and in the Worcester weeks in year 1. This extended induction allows the necessary study skills to be developed at the most appropriate time for the students

- All students have an academic tutor who they see twice each semester and the requirement to do so is linked to a mandatory module. The tutorial sessions are structured to guide and support each student, on an individual basis, throughout their course and to help them to realise their potential. The academic tutors guide the students through completion of a Personal Development Plan related to the current QAA Biosciences benchmarks. All tutors have an open door policy.

- Science PDP scheme to develop student skills, to enable students to plan the most appropriate path through their course and to increase employability.

- The Disability & Dyslexia Service provides advice and support for students who have mental health difficulties, dyslexia, sensory or physical impairments and other difficulties. There is a dedicated Assistant Disability Coordinator for students with sensory impairments. Advice is also available on access to technology such as voice recognition and text-to-speech software. Much of the support provided is funded through the Disabled Students' Allowance (DSA).

- A Virtual Learning Environment (Blackboard Learning System) to provide module-specific material, documents, activities, videos.

- Detailed module outlines (module handbooks), which include planned teaching activity, attendance requirements, assessment brief, assessment criteria and reading lists.

- Student Handbook (published on an annual basis), to provide students with detailed course information.

The Biological Sciences students' handbook provides detailed information on all of the above points as well as information on modules and options available.

18. Admissions

Full time applicants apply through UCAS course code C210
Part-time applicants apply directly to the University of Worcester (UW)

Admissions procedure

Applicants are considered on the basis of their UCAS application forms. It is not currently standard practice to interview candidates but those entering via non-standard entry routes will be interviewed.
Those who accept our offer will be invited to a Visit day to experience studying at Worcester.

Admissions Policy
We welcome applications from people of all ages and backgrounds with an interest in studying Plant Science. The University aims to be accessible; it is committed to widening participation and encouraging diversity in the student population. The Institute of Science and the Environment works closely with central student support services, including the Admissions Office, the Disability and Dyslexia Service and the International Office, to support students from a variety of backgrounds. We actively encourage and welcome people from the widest range of economic and cultural backgrounds, and value the contribution of mature learners. Students entering via non-standard entry routes may be interviewed.

Entry requirements
The minimum entry requirements are 4 GCSEs (Grade C or above) including English and Maths plus a minimum of 2 and maximum of 3½ A Levels or equivalent Level 3 qualifications, with a UCAS Tariff score as stated in the University prospectus. Applicants must have studied Biology to at least AS level or equivalent, and normally applicants must have an A level pass in Biology, although applicants who have not studied science for sometime or do not have a science background will be considered. The study of other sciences such as Chemistry, Maths or Physics would be an advantage.

Students may also enter with EDEXCEL qualifications e.g. EDEXCEL (BTEC) National Certificate or Diploma in a suitable subject.

The University will also consider applications from candidates holding qualifications outside the UCAS Tariff, including those awarded by professional bodies and overseas qualifications (including the European Baccalaureate).

Recognition of Prior Learning
Details of acceptable level 3 qualifications, policy in relation to mature students or applicants with few or no formal qualifications can be found in the prospectus or on the University webpages. Information on eligibility for recognition of prior learning for the purposes of entry or advanced standing is also available from the University webpages or from the Registry Admissions Office (01905 855111).

Please see the prospectus for the current UCAS Tariff required for entry to this course.

Mature Students:
We welcome applicants who hold alternative qualifications/experience and mature students who can demonstrate the ability to benefit from the course and show their potential to complete the course successfully. Although recent preparatory study at an appropriate level (e.g. an Access to Higher Education Diploma) is recommended, students may be considered on the basis of prior evidenced professional/work experience and/or other assessment procedures, and the assessment of personal suitability. University Admissions office staff can offer information, advice and guidance on this process.

Accreditation of Prior Learning:
Students with relevant previous study at HND or degree level or extensive experience may be considered eligible for Accreditation of Prior Learning.
Entry may be possible to Year Two or Three of the course, depending upon the qualifications or experience gained. Credit can also be given for individual modules. Please contact the Registry Admissions Office for further information or guidance on 01905 855111.

Admissions/selection criteria:

Offers are made in line with the entry requirements specified above and demonstration via the application form of a strong interest in Biological Sciences. The reference is also taken into account.

19. Methods for evaluating and improving the quality and standards of teaching and learning

Mechanisms for review and evaluation of teaching, learning and assessment, the curriculum and outcome standards include:

- Student Module evaluation and feedback
- An Annual Evaluation Report completed by Programme Leader
- Periodic Review and revalidation including external scrutiny
- External Examiners' Reports
- Academic staff annual appraisal
- Staff Development Away Days and other events
- Staff research and scholarly activity
- Staff appraisal
- ISE Policy on Approval (Module Outlines and Assignment Briefs) and Moderation of Student Work

Committees with responsibility for monitoring and evaluating quality and standards:

- ISE Quality Committee
- Biological Sciences Course Management Committee
- Academic Standards and Quality Enhancement Committee
- ISE and UW Ethics Committees
- Learning, Teaching and Student Experience Committee

Mechanisms for gaining student feedback on the quality of teaching and their learning experience:

- Module feedback questionnaires
- Student Academic Representatives (StARs)
- Biological Sciences Course Management Committee
- Meetings with module tutors and academic tutor
- National Students Survey
- Induction, exit and other ad hoc surveys

20. Regulation of assessment

The course operates under the University's Undergraduate Regulatory Framework

Requirements to pass modules

- Modules are assessed using a variety of assessment activities which are detailed in the module specifications.
- The minimum pass mark is D- for each module.
- Students are required to submit all items of assessment in order to pass a module, and in some modules, a pass mark in each item of assessment may be required.

- Some modules have attendance requirements.
- Full details of the assessment requirements for a module, including the assessment criteria, are published in the module outline.

Submission of assessment items

- Students who submit course work late but within 5 days of the due date will have work marked, but the grade will be capped at D- unless an application for mitigating circumstances is accepted.
- Students who submit work later than 5 days but within 14 days of the due date will not have work marked unless they have submitted a valid claim of mitigating circumstances.
- For full details of submission regulations see Undergraduate Regulatory Framework.

Retrieval of failure

- Students are entitled to resit failed assessment items for any module that is awarded a fail grade, unless the failure was due to non-attendance.
- Reassessment items that are passed are graded at D-.
- If a student is unsuccessful in the reassessment, they have the right to retake the module (or, in some circumstances, take an alternative module).

Requirements for Progression

- Students at Level 4 may be permitted to progress to Level 5 when they have passed at least 90 credits at Level 4.
- Students at Level 5 may be permitted to progress to Level 6 when they have passed at least 90 credits at Level 5.
- A student who fails 90 credits or more due to non-submission will be required to withdraw from the University.
- Students who pass less that 90 credits but have submitted all items of assessment will be required to retake modules.

Requirements for Awards

Award	Requirement
CertHE	Passed 120 credits at Level 4 or higher
DipHE	Passed a minimum of 240 credits with at least 90 credits at Level 5 or higher
Degree (non-honours)	Passed a minimum of 300 credits with at least 90 credits at Level 5 or higher and a minimum of 60 credits at Level 6
Degree with honours	Passed a minimum of 360 credits with at least 90 credits at Level 5 or higher and a minimum of 120 credits at Level 6

Classification

The honours classification will be determined by whichever of the following two methods results in the higher classification:

Classification determined on the profile of the best grades from 60 credits attained at Level 5 and the best grades from 120 credits at Level 6. Level 5 and Level 6 grades count equally in the profile.

Classification determined on the profile of the best grades from 120 credits attained at Level 6 only.

For further information on honours degree classification, see the Undergraduate Regulatory Framework.

21. Indicators of quality and standards

External examiners have consistently stated that our standards are the equivalent of standards in other UK higher education institutions. They are particularly impressed with the level of feedback on offer to students.

The University underwent a QAA Institutional Audit in March 2011. The audit confirmed that confidence can be placed in the soundness of the institution's current and likely future management of the academic standards of its awards and the quality of the learning opportunities available to students. The audit team highlighted several aspects of good practice, including the student academic representative (StARs) initiative, the proactive approach which supports the student experience for disabled students, the comprehensiveness of the student online environment (SOLE), the wide range of opportunities afforded to students to enhance their employability, the institution's commitment to enhancement, and the inclusive approach to working with its collaborative partners.

Research Quality in the Institute of Science and the Environment

Postgraduate research in Plant Science is highly important in ISE, there are currently 10 MPhil/PhD students in the Biological Sciences subject area and we have had a further 8 PhD completions and 1 MPhil completion in Biological Sciences over the last 5 years. There are 16 staff with supervisory experience of research degrees in ISE/NPARU.

Publications from members of staff in the University are made available via a research repository called WRAP (Worcester Research and Publications). Both ISE and NPARU has a significant proportion of these publications. Most of these are in the Biological Sciences subject area and are almost all comprised of Peer reviewed publications.

National Student Survey

In the 2012 survey, the overall grade for student satisfaction for Biological Sciences at Worcester was 4.3, putting us at a creditable equal seventh out of 62 Biology courses at UK universities

Student Employability

Data collected from those who graduated from the University of Worcester in 2011 with a Biological Sciences degree showed that 57% were employed within six months of leaving the university and, of these, 50% were in graduate employment.

Student progression and Achievement

Across the courses in the Biological Sciences programme almost 98% of students progressed from year one to year two in 2011-12. Similarly just over 93% progressed from year 2 to year 3.

The number of first and upper second class honours degrees rose from 68% in 2010/2011 to just over 71% in 2011/2012.

Ten students on the Biological Sciences programme were awarded University of Worcester scholarships in 2012 for work of a high standard.

Comments from External Examiners

The following comments were received from two external examiners for the 2011/2012 academic year.

"The overwhelming impression is that students are receiving a high standard of provision, and leave the course with a meaningful qualification of which they can be

proud. I am particularly impressed by the quality of the Independent Study modules, which provide students with vital experience of the scientific method, and a taste of hands-on research. All the evidence is that the staff work enormously hard to provide interesting and viable projects, and appropriate training."

"I was impressed with the quality of teaching and learning of the modules I reviewed."

Summary of Feedback from Students
Most modules received 80% or above positive feedback for the feedback questions and many positive comments were made. Tutors have included many of their suggestions for this academic year an all module outlines indicate how feedback from the previous year has led to improvements in the module.

22. Graduate destinations, employability and links with employers

Graduate destinations
An increasing number of our students now go on to study for Masters or PhD awards and advice on following this pathway is included in our careers guidance within the Institute. There has also been an increase in those going on to a PGCE course and so into a teaching career.

Some of our students have entered employment with direct links to their degree subject, for example those in technical or research posts. Others have used their transferrable graduate skills to gain employment in seemingly unrelated areas.

Career opportunities include:

- Government Agencies (e.g. Environment Agency & English Nature)
- Non-governmental Organisations (e.g. Greenpeace & Local Wildlife Trusts)
- Local Government (e.g. Environmental Health)
- Technical Posts (e.g. Microbiological monitoring & medical technicians, water companies, hospital technicians)
- Education (e.g. teaching, lecturing & research)
- Other Graduate Professions (e.g. accountancy & management)
- Further Study: M.Sc., M.Phil or Ph.D.
- Scientific and medical sales
- Police (crime researcher)

Student employability
Careers advice is embedded in the curriculum at all three levels. In Level 4, students are introduced to the Careers Service in BIOS 1201 Cell Biology as part of the Science PDP scheme. This is followed up in BIOS 2200, with a more substantial careers session which looks at careers options and strategies. In this module one of the assignments takes the form of the submission of a CV and an interview. Careers advice is also given as a part of the university Worcester weeks at all levels of the course. Students are given the opportunity in most modules to develop work-based skills (see PDP table above) however, students also have the opportunity to take a Work Placement module at Level 5 or 6.

Links with employers

We have links with the National Pollen and Aerobiology Research unit, Worcestershire and Herefordshire Wildlife Trusts, Environmental Consultants and Birmingham Sea Life Centre, with whom Biology staff liaise to arrange Independent Studies and employment opportunities. An employee of Worcestershire Wildlife Trust (and ex- student) also sits on the University Strategic Biodiversity Management Group, chaired by a member of the Biology staff. We also have links with West Mercia Police and Hereford and Worcester County Council. These links have provided work experience opportunities, facilities for Independent Studies, and careers advice from those in the relevant fields.

Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in the module outlines and the course handbook provided to all students at the start of the course. The accuracy of the information contained in this document is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education.