


Programme Specification for Biology – BSc, BSc (Hons) and Integrated Masters

This document applies to Academic Year 2018/19

1.	Awarding institution/body	University of Worcester
2.	Teaching institution	University of Worcester
3.	Programme accredited by	 <p style="text-align: right;">for BSc (Hons) single honours</p>
4.	Final award	B.Sc. Hons (single, major, minor and joint honours) and MBIol (single honours pathway only)
5.	Programme title	Biology
6.	Pathways available	Single*, Major, Joint, Minor honours
7.	Mode and/or site of delivery	Face to Face delivery of theoretical and practical work with some blended learning via Blackboard. There is an element of independent research. All modules delivered on the sites of the University of Worcester or in the field by UW staff.
8.	Mode of attendance	FT & PT. Field courses may require residential attendance in the UK or abroad.
9.	UCAS Codes	C 100 (BSc Biology), C1C1 (MBiol Integrated Masters Biology)
10.	Subject Benchmark statement and/or professional body statement	QAA Biosciences Benchmark Statement (2007)
11.	Date of Programme Specification preparation/ revision	<p>March 2013/ revised IQC September 2013 title change to BIOS1200; Amendment for Joint Hons April 2014</p> <p>January 2014 BIOS2202; Chair’s Action IQC June 2014 addition of ENVS2100; amended August 2014 and October 2014 (regulations)</p> <p>March 2015 inclusion of BIOS3113 as an optional module.</p> <p>July 2015 clarifying instructions for Joint Hons at Level 5/updating GEOG codes.</p> <p>July 15 update of title for BIOS2301</p> <p>Dec 15 additional text added to Award Map (Level 6) regarding Joint Students</p> <p>June 16 – Introduction of BIOS3117</p> <p>June 16 – pre-req change for BIOS1010</p> <p>Nov 16 – update to Joint Honours text – (Level 6)</p> <p>Updates from Jan 17 IQC all to be implemented from September 2017:</p> <p>Removal of BIOS2301 and BIOS1211. Addition of SUST1001 and BIOS1203.</p> <p>March 17: General update to template in addition to incorporating Integrated Masters</p> <p>August 2017 - AQU amendments</p> <p>January 2018 – title change to ENVS3100, BIOS2010, BIOS3110 and BIOS3012 pre-reqs updated</p> <p>August 2018 – AQU amendments, regulations and updates throughout.</p> <p>October 19 - update to Independent Study title to be implemented Sept 20.</p>

12. Educational aims of the programme

Biology 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 Biology 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 Biology 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 Biology at a depth and level appropriate to honours degree standard;
- d) develop to the appropriate pathway level the knowledge, skills and aptitudes of Biological Sciences, 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 Biology.

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

On successful completion of the named award students will be able to:-	Module** Code(s)	Award
1) 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);	BIOS 2201/2 BIOS 2040 BIOS 3041	Honours and Non-Honours
2) access information from a variety of sources and show proficiency in assessing, evaluating, analysing, and synthesising the scientific information and data;	BIOS 2040 BIOS 2201/2 BIOS 3041	Honours and Non-Honours
3) communicate biological information and principles in an appropriate manner, employing skills of written, oral and visual communication, numerical analysis and information technology;	BIOS 2040 BIOS 3041	Honours and Non-Honours
4) design ,execute and critically evaluate the outcomes of investigations carried out individually and in groups; (Single & Major Honours Students only, some joint honours students may have the opportunity to demonstrate this depending on the modules selected)	BIOS 2200 BIOS 2201/2 BIOS 3041	Honours and Non-Honours
5) gain and apply practical skills in laboratory and/or field work, and be able to work safely and appropriately in these environments;	BIOS 2201/2 BIOS 2040 BIOS 3041	Honours and Non-Honours

6) record data accurately, analyse and interpret those data and test hypotheses;	BIOS 2201/2 BIOS 3041	Honours and Non- Honours
7) develop an understanding of ethical issues related to Biology;	BIOS 2200	Honours and Non- Honours
8) work co-operatively with others, while demonstrating an increasing understanding of how to be an independent learner;	BIOS 2040 BIOS 3041	Honours and Non- Honours
9) plan, carry out and present a piece of hypothesis-driven work for a research project. (Single & Major Honours Students only, some joint honours students may have the opportunity to demonstrate this should they select a research project in the subject)	BIOS 3002*	Honours
In addition to the above, students who successfully the Masters final year of the course, will be able to:-		
10) Creatively seek Biological solutions to Biological problems in Research, Business and Industry,	BIOS 4001 BIOS 4002, BIOS 4004	Masters
11) Work in a team gaining the ability to operate and collaborate with others in order to solve Biological problems of a practical nature and to provide appropriate solutions	BIOS4002	Masters
12) Comply with established research accreditation systems	BIOS 4002	Masters
13) Acquire and develop knowledge at the cutting edge of Biology	BIOS 4001 BIOS 4002 BIOS 4004	Masters
14) Extrapolate Biological theories from complete and incomplete data sets	BIOS 4001 BIOS 4004	Masters
15) Use and Critically evaluate a range of Biological techniques and data for a range of experiments.	BIOS 4001 BIOS 4002 BIOS 4003	Masters
16) Exercise initiative, take personal responsibility and practice self-direction	BIOS 4002 BIOS 4004	Masters
17) Comply with existing, and design new and appropriate, risk assessments and health and safety procedures.	BIOS 4001 BIOS 4004	Masters
18) Develop innovative and problem-solving capabilities: the ability to apply transferable skills to the execution of an individual research project involving the definition, analysis and resolution of complex research problems.	BIOS4004	Masters

* BIOS 3002 also address Learning Outcomes 1 to 8 from above.

** The table above lists mandatory modules, all of the learning outcomes 1 to 8 are also addressed across the optional modules at level 6.

The Biology student handbook shows how the Science PDP skills, based on the Biology QAA benchmark statement, are linked to the individual modules in the course. Key and Transferable skills mainly expressed through the Science PDP scheme.

Practical skills for employment are also addressed through the Biosciences skills passport where students on all levels of the course will have the practical skills they gain recorded.

Learning outcomes and combined subject degrees (joint, major and minor pathways):

- **Joint Pathway**

Students following a joint pathway will have met the majority of the learning outcomes for the subject, although the range of knowledge and discipline specific understanding in terms of options or specialisms will be more restricted than for a single or major Honours student.

- **Major Pathway**

Students following a major pathway will have met the learning outcomes for the subject but will have focused their studies in relation to subject options or specialisms.

- **Minor Pathway**

Students following a minor pathway will have met some of the learning outcomes for the subject (as indicated by the modules studied), and will have focused the development of their knowledge, understanding and subject specific skills in particular aspects of the discipline.

13.1 Learning and teaching and assessment methods

The Biology 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 7 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 and 7, 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 and 7.

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. Independent research and group work play a particularly prominent role in the integrated masters award.

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

13.2 Student skills

Practical skills for employment are addressed through the Biosciences skills passport.

Students will also 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 Biology (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	<p>4.1. Undertake sufficient practical work to ensure competence in the basic experimental skills appropriate to the discipline under study</p> <p>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</p> <p>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</p> <p>4.4. Undertake field and/or laboratory investigations of living systems in a responsible, safe and ethical manner</p>
5. Graduate and transferable skills: Numeracy skills	<p>5.1. Receive and respond to a variety of sources of information: textual, numerical, verbal, graphical</p> <p>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</p> <p>5.3. Prepare, process, interpret and present data, using appropriate qualitative and quantitative techniques, statistical programmes, spreadsheets and programs for presenting data visually</p> <p>5.4. Solve problems by a variety of methods, including the use of computers</p>
6. Graduate and transferable skills: Communication, presentation and information technology skills	<p>6.1. Communicate about their subject appropriately to a variety of audiences using a range of formats and approaches, using appropriate scientific language</p> <p>6.2. Cite and reference work in an appropriate manner, including the avoidance of plagiarism</p> <p>6.3. Use the internet and other electronic sources critically as a means of communication and a source of information.</p>
7. Graduate and transferable skills: Interpersonal and teamwork skills	<p>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.</p> <p>7.2. Recognise and respect the views and opinions of other team members; negotiating skills</p> <p>7.3. Evaluate performance as an individual and a team member; evaluate the performance of others</p> <p>7.4. Develop an appreciation of the interdisciplinary nature of science and of the validity of different points of view</p>
8. Graduate and transferable skills: Self-management and professional development skills	<p>8.1. Develop the skills necessary for self-managed and lifelong learning (eg working independently, time management, organisational, enterprise and knowledge transfer skills)</p> <p>8.2. Identify and work towards targets for personal, academic and career development</p> <p>8.3. Develop an adaptable, flexible and effective approach to study and work.</p>

14. Assessment Strategy

The Biology 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 [University's Assessment Policy](#) is an important point of reference and provides specific guidance on course assessment strategies.

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, Major, Joint and Minor Honours

Course Title: BSc/MBiol Biology

Level 4						
Module Code	Module Title	Credits (Number)	Status (Mandatory (M), Designated (D) or Optional (O))		Pre-requisites (Code of Module required)	Co-requisites/ exclusions and other notes
			Single Hons	Joint Hons		
BIOS 1009	Introduction to Nutrition in Humans	15	O	-	None	None
BIOS 1010	Introduction to Human Anatomy & Physiology	15	O	-	None	None
ENVS 1100	Introduction to Ecology	15	M	M	None	None
BIOS 1102	Introduction to Forensic Biology	15	O	-	None	BIOS 1220 excluded
BIOS 1200	Animal Diversity	30	D	-	None	(BIOS 1202) excluded
BIOS 1201	Cell Biology	30	M	M	None	None
BIOS 1210	Comparative Animal Physiology	15	M	M	None	None
BIOS 1203	Health and Disease	30	O	-	None	BIOS1211
BIOS 1205	Introduction to Biological Chemistry	15	O	-	None	None BIOS 1212 excluded
ENVS 1102	Basis of Biological Surveying	15	O	-	None	None
ARCH 1105	Human Origins	15	O	-	None	None
SUST1001	An Introduction to Sustainability	30	O	-	None	None
LANGxxxx	Optional modules offered by the Language Centre	15/30	O	-	--	-

Single Honours Requirements at Level 4

Single Honours students must take 120 credits in total, to include all mandatory modules, ENVS 1100, BIOS 1200, BIOS 1201 and BIOS 1210, and optional modules - which can include up to 15/30 credits drawn from a range of Language Centre modules in: Academic English for native and non-native speakers of English; Modern Foreign Languages; and Teaching English as a Foreign Language (TEFL). Details of the available Language Centre modules can be found on the Language Centre website: <http://www.worcester.ac.uk/your-home/language-centre-module-options.html>. Designated modules must be taken by Single Honours students at Level 4 but do not have to be passed in order to progress to Level 5.

Joint Honours Requirements at Level 4

Joint Honours students must take ENVS 1100, BIOS 1201 and BIOS 1210.

Level 5								
Module Code	Module Title	Credits (Number)	Status (Mandatory (M) or Optional (O))				Pre-requisites (Code of Module required)	Co-requisites/ exclusions and other notes*
			SH	Maj	JH	Min		
BIOS 2003	Work Experience	15	O	O	O	O	BIOS 1201	BIOS 3003, ENVS 2005 GEOG 3112 excluded
BIOS 2010	Animal Behaviour	15	O	-	-	-	None	None
BIOS 2023	Microbiology	15	O	O	O	O	BIOS 1201	None
BIOS 2024	Infectious Agents And Allergens	15	O	O	O	-	BIOS 1201	None
BIOS 2040	Plant Biology	15	M	M	M	O	BIOS 1201	None
BIOS 2103	Animal Senses and Survival	15	O	O	O	-	ENVS 1100 or BIOS 1200	None
BIOS 2104	Human Genetics	15	O	O	O	-	BIOS 1201	None
BIOS 2105	Medical Forensic Science	15	O	O	O	-	BIOS 1010 or BIOS1102 or BIOS1203 or BIOS1211	None
BIOS 2106	Human Systems Physiology	30	O	-	-	-	BIOS 1201 & either 1010 or 1211	None
BIOS 2107	Integrated Human Metabolism	15	O	-	O	O	BIOS 1201	None
BIOS 2200	Project & Career Development	30	M	M	-	-	None	BIOS 3114 (BIOS 2004) excluded
BIOS 2201*	Molecular & Cellular Biology	30	M*	M*	M*	M*	BIOS 1201	BIOS 2100, 2202 excluded
BIOS 2202*	Molecular Genetics and Conservation	30	M*	M*	M*	M*	BIOS 1201	BIOS2100, BIOS2201 excluded
BIOS 2302	Invertebrate Biology	15	O	O	-	O	BIOS 1200 or 1210	None
ENVS 2100	Population and Community Ecology	15	O	O	O	O	ENVS1100	ENVS2011 excluded
ENVS 2104	Ecology of Fresh Waters	15	O	-	O	-	ENVS 1100	None
ENVS 2006	Soils and the Environment	15	O	-	-	-	ENVS 1010 or ENVS 1100 or GEOG1110	GEOG 2018 excluded
ENVS 2303	Field Techniques and Identification Skills	15	O	-	-	-	ENVS 1100	None
LANGxxxx	Optional modules offered by the Language Centre	15/30	O	-	-	-	-	-

***Single, Major, Joint and Minor Honours students will need to choose either BIOS2201 or BIOS2202**

Single Honours Requirements at Level 5

Single Honours students must take 120 credits in total, to include all mandatory modules, BIOS 2040, BIOS 2200 and BIOS 2201 OR BIOS2202 , and optional modules - which can include up to 15/30 credits drawn from a range of Language Centre modules in: Academic English for native and non-native speakers of English; Modern Foreign Languages; and Teaching English as a Foreign Language (TEFL). Details of the available Language Centre modules can be found on the Language Centre website: <http://www.worcester.ac.uk/your-home/language-centre-module-options.html>.

Joint, Major and Minor Honours Requirements at Level 5

Students following Joint Honours pathways can adjust their studies at level 5 to take more modules in one subject or can maintain an equally balanced programme of modules in each subject. The precise award title (Joint Hons or Major/Minor Hons) depends on the total number of credit achieved in each subject at levels 5 and 6 - for further information see table at the end of this document. Students should choose their optional modules carefully to take account of pre-requisites for intended modules at level 6.

Major Pathway Requirements at Level 5

Major Pathway students must take at least 75 credits and no more than 90 credits from the table above to include BIOS 2040, BIOS 2200, BIOS 2201 or BIOS2202.

Joint Pathway Requirements at Level 5

Joint pathway students must take at least 45 credits and no more than 75 credits from the table above to include BIOS 2201 or BIOS2202 and BIOS 2040.

Joint students whose second subject is Ecology or Environmental Science should take BIOS2200 or ENVS2010 Research Practice and Professional Development depending on whether their Research Project will be in the biological or environmental area.

Joint students whose second subject is not a science (e.g. psychology, sports) MUST NOT take BIOS2200 as you will take either BIOS3114 Research Methods and Research Proposal or a Research Project in your second subject in year 3.

Minor Pathway Requirements at Level 5

Minor Pathway students must take at least 30 credits and no more than 60 credits from the table above to include BIOS 2201 or BIOS2202.

Level 6								
Module Code	Module Title	Credits (Number)	Status (Mandatory (M) or Optional (O))				Pre-requisites (Code of Module required)	Co-requisites/ exclusions and other notes*
			SH	Maj	JH	Min		
BIOS 3002	Research Project	30	M	M	-	-	BIOS 2200	BIOS 3114 excluded (Direct Entry students only)
BIOS 3003	Work Experience	15	O	O	O	O	BIOS 1201	BIOS 2003, ENVS 2005 GEOG 3112 excluded
BIOS 3010	Mammalian Reproduction	15	O	O	O	O	BIOS 1200 or BIOS1010	None
BIOS 3012	Animal Movement	15	O	O	O	O	None	None
BIOS 3041	Plant Development & Physiology	15	M	M	O	O	BIOS 2040	None
BIOS 3052	Forensic DNA Analysis	15	O	O	O	O	BIOS 2100 or BIOS 2201	None
BIOS 3053	Biological Indicators for Crime Reporting	15	O	O	O	O	None	None
BIOS 3106	Pharmacology	15	O	O	O	O	None	None
BIOS 3109	Genomics and Bioinformatics	15	O	O	O	O	BIOS 2100, BIOS 2201 or BIOS 2202	None
BIOS 3110	Animal Welfare and Ethics	15	O	O	O	-	None	(BIOS 2102 excluded)
BIOS 3111	Extension Module	15	O	O	-	-	None	None
BIOS 3112	Parasitology	15	O	O	O	O	BIOS 2201 or 2202 or 2100	None
BIOS 3113	The Biochemistry of Cancer	15	O	O	O	O	BIOS2201	None
BIOS 3114	Research Methods and Research Project	30	O	O	O	-	None	BIOS 3002 (BIOS 2004, BIOS 3104)
BIOS 3117	International Biology Field Trip	15	O	O	O	O	BIOS1200, ENVS1100	None
ENVS 3100	Mediterranean Environments Field Course	15	O	O	O	-	ENVS 1100	None
ENVS 3107	Zoo-based conservation	15	O	O	O	-	None	None

Single Honours Requirements at Level 6

Single Honours students must take 120 credits from the table above to include BIOS 3002, BIOS 3041, two modules from BIOS 3010, BIOS 3012 and BIOS 3106, and three further modules from the table above to the value of 45 credits.

Direct entry students must normally substitute BIOS 3114 for BIOS 3002. Note that BIOS 3114 is only open to single and major honours students who are direct entry students.

Joint, Major and Minor Honours Requirements at Level 6

Students following pathways in two subjects can adjust their studies at level 6 to take more modules in one subject or can maintain an equally balanced programme of modules in each subject. The precise award title (Joint Hons or Major/Minor Hons) depends on the total number of credit achieved in each subject at levels 5 and 6 - for further information see table at the end of this document.

Major Pathway Requirements at Level 6

Major Pathway students must take either 75 or 90 credits from the table above to include BIOS 3002, BIOS 3041, and two modules from BIOS 3010, BIOS 3012 and BIOS 3106. .

Direct entry students must normally substitute BIOS 3114 for BIOS 3002.

Joint Pathway Requirements at Level 6

Joint pathway students must take 45, 60 or 75 credits (to make at least 105 credits over levels 5 and 6 in the subject, and no more than 135 credits over levels 5 and 6 in the subject), from the table above.

Joint students whose second subject is Ecology or Environmental Science should take BIOS3002 or ENVE3002 or ENSC3002

Joint students whose second subject is not a science (e.g. psychology, sports) should take BIOS3114 Research Methods and Research Proposal if wanting to study a biological topic OR take their Research Project in their second subject or take JOIN3002 where a Research Project covers both joint subjects.

Minor Pathway Requirements at Level 6

Minor pathway students must take either 30 or 45 credits from the table above.

Credit requirements for awards involving two subjects

In determining whether an award derived from two subjects is Joint Honours (subject 1 **and** subject 2) or Major/Minor Honours (subject 1 **with** subject 2) credits taken in each subject at levels 5 and 6 will count as follows:

Subject 1	Subject 2	Award
120	120	Joint Hons
135	105	Joint Hons
150	90	Major/minor Hons
165	75	Major/minor Hons
180	60	Major/minor Hons

Level 7					
Module Code	Module Title	Credits (Number)	Status (Mandatory (M) or Optional (O))	Pre-requisites (Code of Module required)	Co-requisites/ exclusions and other notes*
BIOS 4001	Research Methods for Integrated Masters	30	M	BIOS 3002	Modules excluded AIAA4006, MBIO4001, MBIO4002
BIOS 4002	Applied and Commercial Research	30	M	BIOS 3002	
BIOS 4004	Integrated Masters Dissertation in Biology	60	M	BIOS 3002	Co –requisite BIOS4001

Integrated Masters Requirements at Level 7

Integrated Masters students must take all 120 credits from the table above.

(See Section 14.5 in the [TCRE](#) for details).

16. QAA and Professional Academic Standards and Quality

The course has been developed with reference to the QAA Biosciences Benchmark Statement (2007) which have 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, six and seven of the Framework for Higher Education Qualifications.

17. Support for students

- Biology 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. 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).

<http://www.worcester.ac.uk/student-services/index.htm>

<http://www.worcester.ac.uk/student-services/disability-and-dyslexia.htm>

- 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.
- A skills passport is provided for students to record practical skills they gain on the course.

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 C100 for BSc (Hons) Biology or UCAS course code C1C1 MBIol Integrated Masters in Biology.

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 Biology. 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 normal minimum entry requirement for undergraduate degree courses is the possession of 4 GCSEs (Grade C/4 or above) and a minimum of 2 A Levels (or equivalent Level 3 qualifications).

The current UCAS Tariff requirements for entry to this course are published in the prospectus and on the UW website <https://www.worc.ac.uk/journey/a-z-of-courses.html>

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 some time or do not have a science background will be considered. The study of other sciences such as Chemistry, Physics, Maths or Statistics 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).

See [Admissions Policy](#) for other acceptable qualifications.

International Students may apply for BSc (Hons) Biology through the University of Worcester International College (UWIC) programme. Students who successfully complete UWIC Stage 1 will progress to UWIC Stage 2 Integrated Level 4 Programme which involves completing 120 credits of University of Worcester modules as set out in the Award Map in Section 15, plus a year-long study skills programme with UWIC. Students will be required to successfully complete the UWIC study skills programme in addition to meeting the University requirements for progression to Level 5.

Disclosure and Barring Service (DBS) requirements

A satisfactory DBS may be required if a placement/WBL experience is a required element of the course.

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).

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 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 Course Representatives
- Biological Sciences Course Management Committee
- Meetings with module tutors and academic tutor
- National Student Survey
- Induction, exit and other ad hoc surveys

20. Regulation of assessment

The course operates under the University's Taught Courses 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.
- 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 Taught Courses Regulatory Framework.

Retrieval of failure

- Students are entitled to resit failed assessment items for any module that is awarded a fail grade.
- Reassessment items that are passed are capped 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); the module grade for a re-taken module is capped at D-.
- A student will be notified of the reassessment opportunities in the results notification issued via the secure student portal (SOLE). It is the student's responsibility to be aware of and comply with any reassessments.

Requirements for Progression

- Students at Level 4 will be permitted to progress to Level 5 when they have passed at least 90 credits at Level 4.
- Students at Level 5 will be permitted to progress to Level 6 when they have passed at least 210 credits including at least 90 credits at Level 5.
- Students at Level 6 will be permitted to progress to Level 7 when they have passed at least 240 credits at Levels 4 and 5 and at least 90 credits at Level 6
- A student who fails 90 credits or more due to non-submission will be required to withdraw from the University.
- For students following the UWIC pathway see Section 18 above.

Requirements for Awards

Award	Requirement
CertHE	In order to be eligible for the exit award of Certificate in Higher Education in the named subject/area of study, a student must have passed at least 120 credits in total including the mandatory modules for level 4 of the award as specified on the award map.
DipHE	In order to be eligible for the exit award of Diploma in Higher Education in the named subject/area of study, a student must have passed at least 240 credits in total including the mandatory modules for level 4 and level 5 of the award as specified on the award map.
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, including the mandatory modules for Level 5 and Level 6 of the award (not the Research Project module) as specified on the award map.
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, as specified on the award map.
Integrated Masters	Passed a minimum of 480 credits with at least 90 credits at Level 5 or higher and a minimum of 120 credits at each of Level 6 and Level 7, including a dissertation or other substantial piece of independent work, as set out in the award map.

Classification for BSc (Hons) Biology

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.

Classification for MBIol Integrated Masters in Biology

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 6 and the best grades from 120 credits at Level 7. Level 6 and Level 7 grades count equally in the profile.

Classification determined on the profile of the best grades from 120 credits attained at Level 7 only.

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.

Accreditation by the Royal Society of Biology:

The Biology, Animal Biology and Human Biology Honours degree courses were accredited by the Royal Society of Biology in 2016 following an independent and rigorous assessment. Accredited degree programmes contain a solid academic foundation in biological knowledge and key skills, and prepare graduates to address the needs of employers.

The accreditation criteria require evidence that graduates from accredited programmes meet defined sets of learning outcomes, including subject knowledge, technical ability and transferable skills.

Research Quality in the Institute of Science and the Environment

Postgraduate research in Biology 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 Biology over the last 5 years. There are 16 staff with supervisory experience of research degrees in ISE.

Publications from members of staff in the University are made available via a research repository called WRAP (Worcester Research and Publications). ISE 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

The pleasing NSS results are reflected in the 2016 Guardian League tables with Biosciences at the University of Worcester in 45th position out of the 101 listed universities. High scores (91.5 and 96.8) were awarded for 'satisfaction with course' and 'satisfaction with teaching'.

Student Employability

Employment data indicate that, of the 2015/2016 graduates, 43 students (72%) responded to our employment survey. Of these 58% indicated they were employed and a pleasing 35% were

engaged in further study. One student (2%) was unemployed and 5% indicated other, unspecified, activities. Of those employed, 48% had entered graduate employment. It is also notable that a number of students electing to pursue postgraduate study are successful at achieving suitable PhD opportunities.

Student progression and Achievement

Across the courses in the Biological Sciences programme 96% of students progressed from year one to year two in 2015-16 while 94% progressed from year 2 to year 3.

73% of the 2015/16 Biology graduates obtained a 1 or 2:1 honours degree classification

Comments from External Examiners

The following comments were received from two External Examiners for the 2015/2016 academic year:

“I continue to be impressed with the programme academic standards“

“The curriculum is current, and staff appear to be very up-to-date in their respective fields. Current publications are used to enhance student learning”.

“Excellent feedback sheets for student assessment must involve a substantial workload for staff but are a gold standard, which is to be admired and encouraged.”

Summary of Feedback from Students

The vast majority modules received at least 80% positive feedback for the module evaluation questions and many positive comments were made. Tutors have included many of their suggestions for this academic year and 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.

Careers of recent graduates include:

- Clinical research assistant
- Research technician
- Field engineer
- Research analyst
- Clinical trials data manager
- Scientific adviser
- Wildlife Trust Reserves officer
- Education (e.g. teaching, lecturing)
- Further Study: M.Sc., M.Phil or Ph.D.

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 a job application, submission of a CV and an interview. 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. Students will also record their practical skills in the Biological Science Skills Passport as a record to show prospective employers.

Links with employers

We have links with Worcestershire and Herefordshire Wildlife Trusts 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 associated course documentation e.g. course handbooks, module outlines and module specifications.