

University of Plymouth

Faculty of Science and Engineering
School of Biological and Marine Sciences

Programme Specification

BSc (Hons) Biosciences 4673

September 2018

1. **BSc (Hons) Biosciences**

Final award title **BSc (HONOURS) BIOSCIENCES**

Level 4 Intermediate award title(s) **CERTIFICATE OF HIGHER EDUCATION**

Level 5 Intermediate award title(s) **DIPLOMA OF HIGHER EDUCATION**

UCAS code C790

JACS code C790

1. **Awarding Institution:** **University of Plymouth**

Teaching institution(s): **University of Plymouth**

2. **Accrediting body:** **N/A**

3. **Distinctive Features of the Programme and the Student Experience**

The B.Sc. (Hons) Biosciences degree is a level 6 only top-up programme offered as a progression route for the Foundation Degrees of various partner colleges. The programme is generic and designed to articulate with biology Foundation Degrees and to allow students transferring from these programmes to develop their studies in a variety of level 6 subjects from science communication, ecology/toxicology, microbiology, plant sciences, to animal/human health and genetics and to include a specialised research project topic.

Key features are:

- To allow students from a range of backgrounds to study in depth of up to four topic areas at Level 6
- a range of knowledge, skills and practical experience that can equip graduates for a wide variety of careers

Key features of the Biosciences level 6 programme are:

- a strong system of student support and tracking via personal tutors
- a dedicated research project module with delayed selection and catering for the needs of incoming Foundation degree students
- an emphasis on experiential learning via practical classes both in the laboratory and in the field and an Advance Skills and Concepts module to bring a choice of these skills to the students
- a strong emphasis on research-informed teaching

4. Relevant QAA Subject Benchmark Group(s)

All programmes in the School conform to the academic standards set out in the National Subject Benchmark Statement for Biosciences. The Benchmark Statement is available at:

<http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/Biosciences07.pdf>

or

<http://www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/Subject-benchmark-statement-Biosciences.aspx>

5. Programme Structure

Biosciences is offered as a single subject, leading to BSc (Hons) Biosciences. The programme is modular and is offered in both full-time and part-time modes. The full-time programme takes a minimum of one year to complete.

The complete level of study consists of 120 credits; all modules are level 6 each 20 credits, apart from the Research Project module which is 40 credits. The pass requirement for each module is 40%.

Stage 4 Level 6

Semester 1	BIOL307 Advanced Skills and Concepts	1 from the following options BIOL319 Animals and Society BIOL311 Ecotoxicology	BIOL314 Research Project
Semester 2	2 from BIOL301 Plant Biotechnology BIOL3313 Environmental Microbiology and Biotechnology BIOL310 Global Change Biology BIOL320 Animal Nutrition BIOL321 Pharmacology and Natural Products		

6. Programme Aims

We aim to deliver a programme that:

- offers a broad, relevant and contemporary curriculum, enriched by the scholarly activity of staff;
- provides plentiful opportunities for practical work and experiential learning in biological sciences;
- challenges, stimulates, enthuses and encourages students.

Through the Biosciences programme we aim to develop graduates who:

- have thorough knowledge, understanding and practical experience in biological sciences;
- are aware of the scientific process in relation to the advancement of knowledge;
- have a well developed set of key transferable skills appropriate for employment or further study;
- are critical, rational, creative thinkers, and confident, adaptable, independent learners;
- are intellectually inquisitive, equipped for life-long learning and ready to play a co-operative and responsible role in society.
- As a level 6 programme, to incorporate research information teaching at all opportunities.

7. Programme Intended Learning Outcomes

The Biosciences programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills, qualities and other attributes in the following areas:

8.1 KNOWLEDGE AND UNDERSTANDING

On completion graduates should be able to:

1. appreciate the role of the biosciences in contributing to knowledge;
2. understand the applications of biological knowledge to human and global affairs, and their ethical implications;
3. recognise the context of their chosen programme of studies within the spectrum of interrelated disciplines that comprise the biological sciences and how these disciplines are interrelated;
4. appreciate the scientific importance of current advances in knowledge in specialised areas which are enriched by staff research and scholarship;
5. understand the philosophical underpinnings of science and the importance of the progression from description and pattern seeking through to scientific advancement by hypothesis testing; and
6. appreciate the common and diverse characteristics of life and its organisation at the molecular, cellular, organism and population levels.

8.2 COGNITIVE AND INTELLECTUAL SKILLS

On completion graduates should be able to:

1. understand the contested and developing nature of knowledge and identify and evaluate alternative hypotheses and viewpoints;
2. assess the reliability and validity of evidence;
3. develop reasoned and informed arguments;
4. identify, formulate and resolve problems;
5. synthesise information from disparate sources;
6. interpret a particular case in the context of generalised or abstract concepts, and vice versa; and
7. think logically, creatively and critically, and formulate and test scientific hypotheses.

8.3 KEY AND TRANSFERABLE SKILLS

On completion graduates should be able to:

1. select and use appropriate communication and information technologies, including the Internet, word-processing, graphics, spreadsheets and specialist software packages;
2. communicate effectively through the spoken word and in a variety of written and graphical formats;
3. work independently and organise his/her own learning;
4. search for, retrieve, sift, select and order information from a variety of sources;
5. collate, analyse and interpret data in quantitative and qualitative forms;
6. participate effectively and supportively in groups, meeting obligations to others;
7. transfer skills and apply them in new contexts; and
8. reflect on his/her own learning and evaluate personal strengths and weaknesses.

EMPLOYMENT RELATED SKILLS

On completion graduates should have developed:

1. the skills necessary for self-managed and lifelong learning (e.g. working independently, time management, organisational, enterprise and knowledge transfer skills);
2. the ability to identify and work towards targets for personal, academic and career development;
3. an adaptable, flexible and effective approach to study and work;
4. communication, presentation and information technology skills; and
5. interpersonal and teamwork skills.

8.4 PRACTICAL SKILLS

On completion graduates should have developed:

1. competence in the basic experimental skills appropriate to the discipline under study;
2. the ability to design, plan, conduct and report on biological research investigations;

3. data handling skills enabling them to obtain, record, collate and analyse data using appropriate techniques;
4. the skills to conduct field and/or laboratory investigation of living systems in a responsible, safe and ethical manner; and
5. a respect for the rights of access, for example, in field work they should show sensitivity to the impact of investigations on the environment, on the organisms or subjects under investigation, and on other stakeholders.

9. Admissions Criteria, including APCL, APEL and DAS arrangements

A foundation degree, HND or other appropriate level of qualification in a biological subject. Students will be advised on appropriate module choices based on their specific foundation degree or diploma content.

10. Progression criteria for Final and Intermediate Awards

None this is a level 6 top up route only.

Level 6	<p>CORE: BIOL307 Advanced Skills & Concepts (20 credits) with a choice of four 5 credit 'podules' from six. BIOL314 Research Project (40 credits)</p>	<p>Award requirements: BSc (Hons): 120 credits at Level 6</p>
	<p>OPTIONS (ALL 20 CREDITS): SEMESTER 1 ONE FROM: BIOL BIOL311 Ecotoxicology BIOL319 Animals & Society Semester 2 Two from: BIOL301 Plant Biotechnology, BIOL321 Pharmacology and Natural Products and Bioprospecting , BIOL320 Animal Nutrition, BIOL3313 Environmental Microbiology and Biotechnology BIOL310Global Change Biology, Due to staffing and other issues options are subject to change. However, in line with the ethos of the programme, at least one module within the key topic areas of science communication, microbiology, animal, plant, human and environmental biology (ecology) will be offered.</p>	

11. Exceptions to Regulations

None

12. Transitional Arrangements

2016/17 Modules	2017/18 Modules
BIOL312 Animal Nutrition	BIOL320 Animal Nutrition
BIOL317 Natural Products and Bioprospecting	BIOL321 Pharmacology and Natural Products

13. Mapping and Appendices:

13.1 ILO's against Modules Mapping

Programme Learning Outcome	RELATED CORE MODULES
<p>On completion graduates should be able to demonstrate an understanding of:</p> <ol style="list-style-type: none"> 1. the role of the biological sciences in contributing to knowledge; 2. the applications of biological knowledge to human and global affairs, and their ethical implications; 3. the context of their chosen programme of studies within the spectrum of interrelated disciplines that comprise the biological sciences and how these disciplines are interrelated; 4. the scientific importance of current advances in knowledge in specialised areas which are enriched by staff research and scholarship; 5. the philosophical underpinnings of science and the importance of the progression from description and pattern seeking through to scientific advancement by hypothesis testing; and 6. the common and diverse characteristics of life and its organisation at the molecular, cellular, organism and population levels. 	<p>Level 6 option modules</p> <p>Level 6 modules</p> <p>Level 6 modules</p> <p>BIOL307, BIOL314</p> <p>BIOL314</p> <p>Level 6 modules</p>

13.2 Assessment against Modules Mapping

Level 6 120 Credits

Module	Subject	Credit	Semester	% Exam	% CW	% test	% practical
BIOL314	Personal Research Project	40	AY		100		
BIOL307	Advanced Skills & Concepts	20	1		50		50
Option Modules Semester 1 (choose 1 from 2)							
BIOL311	Ecotoxicology	20	1	50	50		
BIOL319	Animals and Society	20	1	50	50		
Option Modules Semester 2 (choose 2 from 5)							
BIOL301	Plant Biotechnology	20	2	50	50		
BIOL3313	Environmental Microbiology and Biotechnology	20	2	50	50		
BIOL320	Animal Nutrition	20	2	50	50		
BIOL321	Pharmacology and Natural Products	20	2	50	50		
BIOL310	Global Change Biology	20	2	50	50		

13.3 Skills against Modules Mapping

<p>Cognitive and intellectual skills</p> <p>On completion graduates should be able to:</p> <ol style="list-style-type: none"> 1. understand the contested and developing nature of knowledge and identify and evaluate alternative hypotheses and viewpoints; 2. assess the reliability and validity of evidence; 3. develop reasoned and informed arguments; 4. identify, formulate and resolve problems; 5. synthesise information from disparate sources; 6. interpret a particular case in the context of generalised or abstract concepts, and vice versa; and 7. think logically, creatively and critically, and formulate and test scientific hypotheses. 	<p>BIOL314 Research Project and Level 6 option modules</p> <p>BIOL314 Research Project and Level 6 option modules</p> <p>BIOL314 Research Project and Level 6 option modules</p> <p>BIOL314 Research Project</p> <p>BIOL3014 Research Project and Level 6 option modules</p> <p>BIOL314 and BIOL307</p>
<p>Key and transferable skills</p> <p>On completion graduates should be able to:</p> <ol style="list-style-type: none"> 1. select and use appropriate communication and information technologies, including the Internet, word-processing, graphics, spreadsheets and specialist software packages; 2. communicate effectively through the spoken word and in a variety of written and graphical formats; 3. work independently and organise his/her own learning; 4. search for, retrieve, sift, select and order information from a variety of sources; 5. collate, analyse and interpret data in quantitative and qualitative forms; 6. participate effectively and supportively in groups, meeting obligations to others; 7. transfer skills and apply them in new contexts; and 8. reflect on his/her own learning and evaluate personal strengths and weaknesses. 	<p>All Modules</p>

<p>Employment related skills</p> <p>On completion graduates should have developed the ability:</p> <ol style="list-style-type: none"> 1. The skills necessary for self-managed and lifelong learning (e.g. working independently, time management, organisational, enterprise and knowledge transfer skills) 2. The ability to identify and work towards targets for personal, academic and career development 3. An adaptable, flexible and effective approach to study and work 4. Communication, presentation and information technology skills 5. Interpersonal and teamwork skills 	<p>all modules, particularly BIOL314 Research Project and BIOL307</p>
<p>Practical skills</p> <p>On completion graduates should have developed:</p> <ol style="list-style-type: none"> 1. competence in the basic experimental skills appropriate to the discipline under study; 2. the ability to design, plan, conduct and report on biological research investigations; 3. data handling skills enabling them to obtain, record, collate and analyse data using appropriate techniques; 4. the skills to conduct field and/or laboratory investigation of living systems in a responsible, safe and ethical manner; and 5. students will show that they respect the rights of access, for example, in field work they should show sensitivity to the impact of investigations on the environment, on the organisms or subjects under investigation, and on other stakeholders. 	<p>all modules, particularly BIOL314 Research Project and BIOL307</p>