

## Programme Specification: Undergraduate

### For students starting in Academic Year 2024/25

#### 1. Course Summary

<b>Names of programme and award title(s)</b>	BSc (Hons) Biology BSc (Hons) Biology with International Year (see Annex for details) BSc (Hons) Biology with Work Placement Year (see Annex for details) BSc (Hons) Studies in Biology BSc (Hons) Studies in Biology with International Year BSc (Hons) Studies in Biology With Work Placement Year
<b>Award type</b>	Combined Honours
<b>Mode of study</b>	Full-time
<b>Framework of Higher Education Qualification (FHEQ) level of final award</b>	Level 6
<b>Normal length of the programme</b>	3 years; 4 years with the International Year between years 2 and 3
<b>Maximum period of registration</b>	The normal length as specified above plus 3 years
<b>Location of study</b>	Keele Campus
<b>Accreditation (if applicable)</b>	For students who specialise in Biology at Level 6, or combine with Biochemistry, the degree is accredited by the Royal Society of Biology (excluding "Studies in" routes). For further details see the section on Accreditation.
<b>Regulator</b>	Office for Students (OfS)
<b>Tuition Fees</b>	<p><b>UK students:</b></p> <p>Fee for 2024/25 is £9,250*</p> <p><b>International students:</b></p> <p>Fee for 2024/25 is £20,700**</p> <p>The fee for the international year abroad is calculated at 15% of the standard year fee</p> <p>The fee for the work placement year is calculated at 20% of the standard year fee</p>

**How this information might change:** Please read the important information at <http://www.keele.ac.uk/student-agreement/>. This explains how and why we may need to make changes to the information provided in this document and to help you understand how we will communicate with you if this happens.

\* These fees are regulated by Government. We reserve the right to increase fees in subsequent years of study in response to changes in government policy and/or changes to the law. If permitted by such change in policy or law, we may increase your fees by an inflationary amount or such other measure as required by government policy or the law. Please refer to the accompanying Student Terms & Conditions. Further information on fees can be found at <http://www.keele.ac.uk/studentfunding/tuitionfees/>

**\*\* We reserve the right to increase fees in subsequent years of study by an inflationary amount. Please refer to the accompanying Student Terms & Conditions for full details. Further information on fees can be found at <http://www.keele.ac.uk/studentfunding/tuitionfees/>**

## **2. What is a Combined Honours programme?**

In a combined honours Biology degree you will study two different, though complementary subjects, with both subjects appearing in your degree title as X and Y, for example Biology and Biochemistry. Across all levels you will study 60 credits of modules in each of your subjects. Alternatively, in your final year you can choose to specialise in just one subject, resulting in an X with Y degree title, for example Biology with Biochemistry. Specialising in Biology will require you to take a minimum of 105 credits of Biology modules, with the option to take a relevant module from your other subject, or to study a full 120 credits of Biology modules.

## **3. Overview of the Programme**

The Programme provides a broad and varied coverage of modern biology, with emphasis on humans and their impact on the environment. In the first year you will look at some fundamental concepts in the biological sciences such as cells, genetics, evolution and molecular biology in addition to the anatomy and physiology of humans. In the second year, the focus shifts to the adaptability of life to differing environments and the biology of pathogens, you will also learn how to design an experiment and analyse data. You can also begin to tailor your degree to your own interests, with the module options available. Students may combine Biology with Biochemistry if they also wish to have a detailed coverage of biochemical and molecular aspects of biology. Training is also provided in employability skills that will help you to reach your potential in your chosen career, whether or not this is in biology. Distinctive features of this programme are the innovative methods of assessment used in many modules, the many opportunities to broaden your life and educational experience, the community spirit generated by the campus-based living and learning environment, and the multidisciplinary research activities of the staff in the School of Life Sciences.

## **4. Aims of the programme**

The broad aims of the programme are to:

- provide you with knowledge, understanding and skills relevant to biology;
- produce skilled and motivated graduates who are suitably prepared for further study or for employment within or outside their subject;
- cultivate interest in biology, with an environmental focus, within a caring and intellectually stimulating environment;
- promote the development of a range of employability skills, for use in all areas where numeracy and an objective, scientific approach to problem-solving are valued.
- promote the development of independent research skills to enable you to undertake relevant postgraduate study

## **5. What you will learn**

The intended learning outcomes of the programme (what students should know, understand and be able to do at the end of the programme), can be described under the following headings:

- Subject knowledge and understanding
- Subject specific skills
- Intellectual skills
- Key or transferable skills (including employability skills)

In Combined Honours Biology and in Biology (Major) successful students will achieve all the Intended Learning Outcomes (ILOs) listed below. In the Biology (Minor) route they will achieve all the ILOs with the exception of those listed as being taught in level 6 modules only (I6, I7 and I8) and will achieve others taught partly at level 6 molecular aspects of biology. Training is also provided in employability skills that will help you to reach your potential in your chosen career, whether or not this is in biology.

### **Subject knowledge and understanding**

Successful students will be able to demonstrate knowledge and understanding of:

- U1 the diversity of life and its evolution from the geological past to the present
- U2 the complexity of biological processes and mechanisms of life at a range of hierarchical levels (molecular, cellular, organismal, community, ecosystem)
- U3 the influence of human activities on living systems (and the converse)

- U4 the basic experimental skills appropriate to the discipline of biology
- U5 the approaches to acquiring, interpreting, analysing biological data from a variety of sources, including the use of statistics
- U6 the contribution of research to the development of biological knowledge
- U7 the dynamic, plural and contested nature of the discipline and an awareness of the philosophical and ethical issues involved
- U8 the use of biological terminology, nomenclature and classification systems
- U9 the relevance of biology to practical problems and improving the quality and sustainability of life
- U10 the applicability of the biosciences to the careers to which graduates will be progressing

### **Subject specific skills (Practical skills)**

Successful students will be able to:

- SP1 use a range of practical techniques for the acquisition, analysis and critical evaluation of biological information
- SP2 use a range of practical laboratory and field techniques to ensure competence in basic experimental skills
- SP3 sample, record and analyse data in the field and/or laboratory in a manner that ensures validity, accuracy, calibration, precision, replicability and highlights uncertainty during collection
- SP4 formulate a hypothesis, design, plan, conduct, collate, analyse, report and evaluate on a biological investigation
- SP5 recognise philosophical, moral and ethical issues relevant to the subject, and appreciate the need for ethical standards and professional codes of conduct
- SP6 undertake field and/or laboratory investigations of living systems in a responsible, safe and ethical manner, paying due attention to standard procedures (e.g. risk assessment, health and safety regulations, animal welfare, informed consent)

### **Intellectual skills**

Successful students will be able to:

- SI1 assess the merits of contrasting theories, paradigms, concepts or principles
- SI2 think independently, set tasks and solve problems by a variety of methods
- SI3 make reasoned decisions and develop reasoned arguments
- SI4 obtain and interpret several lines of subject-specific evidence to formulate and test hypotheses
- SI5 make critical interpretations, evaluations and judgements of data and text
- SI6 analyse, synthesise and summarise information critically, including published research or reports
- SI7 apply biological understanding to familiar and unfamiliar problems, and emphasise the interdisciplinary nature of science and the validity of different points of view
- SI8 take responsibility for their own learning and reflect upon that learning

### **Key or transferable skills (including employability skills)**

Successful students will be able to:

- E1 develop an adaptable, flexible, sustainable and effective approach to study and work, including time management, creativity and intellectual integrity
- E2 acquire, analyse, synthesise, summarise and present information and ideas from a wide range of sources: textual, numerical, verbal, graphical

- E3 prepare, process, interpret and present data using appropriate qualitative and quantitative techniques, statistical programmes, spreadsheets and programs for presenting data visually
- E4 use the internet and other electronic sources critically as a means of communication and a source of information
- E5 cite and reference work in an appropriate manner, avoiding issues with plagiarism
- E6 communicate effectively to a variety of audiences by written, spoken and graphical means using appropriate techniques and scientific language
- E7 develop skills necessary for self-managed and lifelong learning, including working independently, organisational, enterprise and knowledge transfer skills
- E8 work with others to achieve an objective in a respectful manner that is accepting of the viewpoints and opinions of others and evaluates the roles and development of team members
- E9 motivate themselves and sustain that motivation over an extended period of time
- E10 identify and work towards targets for personal, academic and career development

### The Keele Graduate Attributes

The Keele Graduate Attributes are the qualities (skills, values and mindsets) which you will have the opportunity to develop during your time at Keele through both the formal curriculum and also through co- and extra-curricular activities (e.g., work experience, and engagement with the wider University community such as acting as ambassadors, volunteering, peer mentoring, student representation, membership and leadership of clubs and societies). Our Graduate Attributes consist of four themes: **academic expertise, professional skills, personal effectiveness, and social and ethical awareness**. You will have opportunities to engage actively with the range of attributes throughout your time at Keele: through your academic studies, through self-assessing your own strengths, weaknesses, and development needs, and by setting personal development goals. You will have opportunities to discuss your progress in developing graduate attributes with, for example, Academic Mentors, to prepare for your future career and lives beyond Keele.

## 6. How is the programme taught?

Diversity, flexibility and inclusivity is at the heart of our Education Strategy. Your Student Voice helps us to shape what we do and we include students and local employers in our decision-making process. The delivery of our programme will include the following types of activities:

**Laboratory practicals.** Take place in one of our labs. These give you first-hand experience in a range of scientific techniques and have been designed to ensure you develop both independent and team-based skills.

**Fieldwork.** Using our large and diverse campus environment as well as visits to other sites off-campus to enable you to develop your skills in surveying organism distributions and the identification of specimens in situ.

**Digital material:** Traditional 'lectures' are often redesigned for online consumption, giving you more flexibility to decide how, when and where to study. This can include provision of short videos, directed reading, key learning outcomes and Forms that allow you to ask questions anonymously.

**Live, campus-based seminars.** Delivered by experts in the field - including external, guest speakers - seminars are ordinarily recorded on the day so you can focus better on the discussion during the live event.

**Live, campus-based tutorials and workshops.** Often designed to support online lectures. Tutorials and workshops help promote social learning, develop a sense of community and give you an opportunity to deepen your understanding of core issues, ask questions and discuss content with other students and your tutors.

**Live, online tutorials, workshops and drop-in sessions.** Often used to host plenary sessions. These plenary sessions are optional, added value and may cover topics common to all students such as: note taking and meet your alumni at Level 4; IT and data analysis at Level 5 and writing retreats and careers at Level 6.

## 7. Teaching Staff

University life is not just about the content of your degree. It is also an opportunity to network, to speak to people working in fields that excite you. Here in Life Sciences, you will meet a diverse range of staff, all are active in research or scholarship. For information on the research interests and qualifications of staff from the School of Life Sciences, please see the School web page at: <https://www.keele.ac.uk/lifesci/people/>

Several modules on the programme also invite visiting speakers.

Our staff include world-leading researchers and experts in learning and teaching. As part of their training, all

staff complete post-graduate courses on learning and teaching. Some take this to Masters level and beyond, choosing to specialise in pedagogic research to ensure that our programmes are taught to the very highest standards.

The University will attempt to minimise changes to our core teaching teams, however, delivery of the programme depends on having a sufficient number of staff with the relevant expertise to ensure that the programme is taught to the appropriate academic standard.

Staff turnover, for example where key members of staff leave, fall ill or go on research leave, may result in changes to the programme's content. The University will endeavour to ensure that any impact on students is limited if such changes occur.

## 8. What is the structure of the Programme?

The academic year is divided into two taught semesters. Each semester will generally have twelve weeks of teaching followed by three weeks of final assessments. Details of each semester can be found using the following link: <https://www.keele.ac.uk/students/academiclife/keydates/>.

Our degree courses are organised into modules. Each module is usually a self-contained unit of study and each is usually assessed separately with the award of credits on the basis of 1 credit = 10 hours of student effort. An outline of the structure of the programme is provided in the tables below.

There are two types of module delivered as part of your programme. They are:

- Compulsory modules - a module that you are required to study on this course;
- Optional modules - these allow you some limited choice of what to study from a list of modules.

Language modules: You are able to take up to 60 credits across your degree programme as Faculty Funded additional Modern Language modules in order to graduate with the Enhanced Degree Title. [Please see [link](#) for more information on Enhanced degree titles.]

A summary of the total credit requirements per year is as follows, with a minimum of 90 subject credits (compulsory plus optional) required for each year across both of your Principal Subjects. This document has information about *Biology* modules only; please also see the document for your other subject.

For further information on the content of modules currently offered, including the list of elective modules, please visit: <https://www.keele.ac.uk/recordsandexams/modulecatalogue/>

Year	Compulsory	Optional	
		Min	Max
Level 4	60	0	0
Level 5	45	15	15
Level 6	0	60	60

In year 3 there is the option to choose to specialise in one of your subjects, taking a minimum of 105 credits in this subject rather than taking modules from both subjects. The remaining 15 credits can come from your other combined honours subject. This is called the 7 + 1 route.

Students specialising in biology have to take the core module LSC-30059 Communication Skills for Biologists

Combined honours students must take 60 credits of biology content at level 6, of which 15 credits must be ISP module. Biology and Biochemistry CH students pool their 2 x 15 credits of ISP required into the 30 credit double project **or** placement modules

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## Module Lists

### Level 4

<b>Compulsory modules</b>	<b>Module Code</b>	<b>Credits</b>	<b>Period</b>
Physiology and Anatomy	LSC-10074	30	Semester 1-2
Fundamentals of Biology	LSC-10085	30	Semester 1-2
Core Practical Skills	LSC-10087	0	Semester 1-2

LSC-10087 is a compulsory lab-based module. Students who fail this module will transfer to *Studies in Biology*. This is not accredited by the Royal Society of Biology.

### **Level 5**

<b>Compulsory modules</b>	<b>Module Code</b>	<b>Credits</b>	<b>Period</b>
Microbes, Viruses and Parasites	LSC-20073	15	Semester 1
Environmental Biology	LSC-20097	15	Semester 1
Practical Skills in Bioscience	LSC-20107	0	Semester 1-2
Research and Analytical Skills	LSC-20056	15	Semester 2

<b>Optional modules</b>	<b>Module Code</b>	<b>Credits</b>	<b>Period</b>
Human Impact on the Environment, scientific perspectives	ESC-20017	15	Semester 1
Current Topics in Biology	LSC-20074	15	Semester 1
Nutrition and Energy Balance	LSC-20052	15	Semester 2
Biodiversity Crisis	LSC-20093	15	Semester 2

### **Level 5 Module Rules**

LSC-20097: please note, this module includes a field course during the summer vacation between Levels 4 and 5

ESC-20017 is a prerequisite module for the final year module ESC-30056

LSC-20107 is a compulsory lab-based module. Students who fail this module will transfer to *Studies in Biology*. This is not accredited by the Royal Society of Biology.

### **Level 6**

<b>Optional modules</b>	<b>Module Code</b>	<b>Credits</b>	<b>Period</b>
Ecotoxicology and Risk Assessment	ESC-30056	15	Semester 1
Human Parasitology	LSC-30036	15	Semester 1
Conservation Biology	LSC-30043	15	Semester 1
Tropical Biology Field Course	LSC-30066	15	Semester 1
Insect Ecology and Pest Management	LSC-30070	15	Semester 1
Applied Life Sciences Placement - ISP	LSC-30019	15	Semester 1-2
Double Applied Life Sciences Placement - ISP	LSC-30038	30	Semester 1-2
Life Sciences Double Experimental Project (with research skills assessment)	LSC-30045	30	Semester 1-2
Life Sciences Single Experimental Project (with research skills assessment) - ISP	LSC-30048	15	Semester 1-2
Life Sciences Dissertation	LSC-30050	15	Semester 1-2
Professional Development	LSC-30090	0	Semester 1-2
Blue Economy: sustainable futures with an ocean focus	ESC-30108	15	Semester 2
Human Evolution	LSC-30030	15	Semester 2
Plant Science and Sustainability	LSC-30076	15	Semester 2

If you choose to specialise in this subject in your final year you will study the following modules:

<b>Compulsory modules</b>	<b>Module Code</b>	<b>Credits</b>	<b>Period</b>
Communication Skills for Biologists	LSC-30059	15	Semester 2

Optional modules	Module Code	Credits	Period
Ecotoxicology and Risk Assessment	ESC-30056	15	Semester 1
Human Parasitology	LSC-30036	15	Semester 1
Conservation Biology	LSC-30043	15	Semester 1
Case Studies in Biotechnology	LSC-30051	15	Semester 1
Tropical Biology Field Course	LSC-30066	15	Semester 1
Insect Ecology and Pest Management	LSC-30070	15	Semester 1
Double Applied Life Sciences Placement - ISP	LSC-30038	30	Semester 1-2
Life Sciences Double Experimental Project (with research skills assessment)	LSC-30045	30	Semester 1-2
Professional Development	LSC-30090	0	Semester 1-2
Blue Economy: sustainable futures with an ocean focus	ESC-30108	15	Semester 2
Environmental and Wildlife Forensics	FSC-30029	15	Semester 2
Human Evolution	LSC-30030	15	Semester 2
Cancer Biology	LSC-30061	15	Semester 2
Plant Science and Sustainability	LSC-30076	15	Semester 2

## Level 6 Module Rules

### Rules relevant to combined honours students (including those taking Biology AND Biochemistry)

Combined Honours students **must** take **ONE** 15 credit ISP module (LSC-30019, LSC-30048 **or** LSC-30050)

LSC-30045: only available to students studying Biology and Biochemistry or specialising in Biology.

LSC-30038 and LSC-30019: only available to students doing a work placement year. The Double Placement is only available to students studying Biology and Biochemistry with Work Placement Year or specialising in Biology with Work Placement Year. These students will not take LSC-30045 or LSC-30048.

LSC-30050: only available to combined honours students whose second subject is outside of the School of Life Sciences, These students will not take LSC-30048 or LSC-30019

### Rules relevant to students specialising in Biology in the final year:

Major route students **must** take **ONE** 30 credit ISP module (LSC-30045 **or** LSC-30038)

LSC-30038: only available to students specialising in Biology with Work Placement Year

### Rules relevant to all biology students:

- Only biology students who have studied ESC-20017 can take ESC-30056.

## Learning Outcomes

The table below sets out what students learn in the programme and the modules in which that learning takes place. Details of how learning outcomes are assessed through these modules can be found in module specifications.

## Level 4



In Year 1 (Level 4) and Year 2 (Level 5) these learning outcomes are achieved in the compulsory modules which all students are required to take. Some of these outcomes may also be achieved or reinforced in elective modules together with other outcomes not stated here. In Year 3 (Level 6) the stated outcomes are achieved by taking any of the modules offered in each semester. Core material across biology is covered in years 1 and 2, whereas students specialise in their choice of topics in year 3 and cover topics in detail.

<b>Subject Knowledge and Understanding</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
U1. the diversity of life and its evolution from the geological past to the present	Fundamentals of Biology - LSC-10085
U2. the complexity of biological processes and mechanisms of life at a range of hierarchical levels (molecular, cellular, organismal, community, ecosystem)	Fundamentals of Biology - LSC-10085
U3. the influence of human activities on living systems (and the converse)	Physiology and Anatomy - LSC-10074
U4. the basic experimental skills appropriate to the discipline of biology	Fundamentals of Biology - LSC-10085 Physiology and Anatomy - LSC-10074
U5. the approaches to acquiring, interpreting, analysing biological data from a variety of sources, including the use of statistics	Fundamentals of Biology - LSC-10085 Physiology and Anatomy - LSC-10074
U6. the contribution of research to the development of biological knowledge	Physiology and Anatomy - LSC-10074 Fundamentals of Biology - LSC-10085
U7. the dynamic, plural and contested nature of the discipline and an awareness of the philosophical and ethical issues involved	Fundamentals of Biology - LSC-10085 Physiology and Anatomy - LSC-10074
U8. the use of biological terminology, nomenclature and classification systems	Fundamentals of Biology - LSC-10085 Physiology and Anatomy - LSC-10074
U9. the relevance of biology to practical problems and improving the quality and sustainability of life	Physiology and Anatomy - LSC-10074 Fundamentals of Biology - LSC-10085

<b>Subject Specific Skills</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
SP1. use a range of practical techniques for the acquisition, analysis and critical evaluation of biological information	Core Practical Skills - LSC-10087
SP2. use a range of practical laboratory and field techniques to ensure competence in basic experimental skills	Core Practical Skills - LSC-10087
SP3. sample, record and analyse data in the field and/or laboratory in a manner that ensures validity, accuracy, calibration, precision, replicability and highlights uncertainty during collection	Core Practical Skills - LSC-10087
SP4. formulate a hypothesis, design, plan, conduct, collate, analyse, report and evaluate on a biological investigation	Core Practical Skills - LSC-10087
SP5. recognise philosophical, moral and ethical issues relevant to the subject, and appreciate the need for ethical standards and professional codes of conduct	Fundamentals of Biology - LSC-10085 Physiology and Anatomy - LSC-10074 Core Practical Skills - LSC-10087
SP6. undertake field and/or laboratory investigations of living systems in a responsible, safe and ethical manner, paying due attention to standard procedures (e.g., risk assessment, health and safety regulations, animal welfare, informed consent)	Physiology and Anatomy - LSC-10074 Fundamentals of Biology - LSC-10085 Core Practical Skills - LSC-10087

<b>Key or Transferable Skills (graduate attributes)</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
E1. develop an adaptable, flexible, sustainable and effective approach to study and work, including time management, creativity and intellectual integrity	Physiology and Anatomy - LSC-10074 Fundamentals of Biology - LSC-10085
E2. acquire, analyse, synthesise, summarise and present information and ideas from a wide range of sources: textual, numerical, verbal, graphical	Fundamentals of Biology - LSC-10085 Physiology and Anatomy - LSC-10074
E3. prepare, process, interpret and present data using appropriate qualitative and quantitative techniques, statistical programmes, spreadsheets and programs for presenting data visually	Fundamentals of Biology - LSC-10085 Physiology and Anatomy - LSC-10074
E4. use the internet and other electronic sources critically as a means of communication and a source of information	Fundamentals of Biology - LSC-10085 Physiology and Anatomy - LSC-10074
E5. cite and reference work in an appropriate manner, avoiding issues with plagiarism	Physiology and Anatomy - LSC-10074 Fundamentals of Biology - LSC-10085
E6. communicate effectively to a variety of audiences by written, spoken and graphical means using appropriate techniques and scientific language	Fundamentals of Biology - LSC-10085 Physiology and Anatomy - LSC-10074
E7. develop skills necessary for self-managed and lifelong learning, including working independently, organisational, enterprise and knowledge transfer skills	Fundamentals of Biology - LSC-10085 Physiology and Anatomy - LSC-10074
E8. work with others to achieve an objective in a respectful manner that is accepting of the viewpoints and opinions of others and evaluates the roles and development of team members	Fundamentals of Biology - LSC-10085 Physiology and Anatomy - LSC-10074
E9. motivate themselves and sustain that motivation over an extended period of time	Physiology and Anatomy - LSC-10074 Fundamentals of Biology - LSC-10085
E10. identify and work towards targets for personal, academic and career development	Physiology and Anatomy - LSC-10074 Fundamentals of Biology - LSC-10085

## **Level 5**

<b>Subject Knowledge and Understanding</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
U1. the diversity of life and its evolution from the geological past to the present	Biodiversity Crisis - LSC-20093 Microbes, Viruses and Parasites - LSC-20073 Environmental Biology - LSC-20097
U2. the complexity of biological processes and mechanisms of life at a range of hierarchical levels (molecular, cellular, organismal, community, ecosystem)	Biodiversity Crisis - LSC-20093 Environmental Biology - LSC-20097 Microbes, Viruses and Parasites - LSC-20073
U3. the influence of human activities on living systems (and the converse)	Nutrition and Energy Balance - LSC-20052 Current Topics in Biology - LSC-20074 Biodiversity Crisis - LSC-20093 Human Impact on the Environment, scientific perspectives - ESC-20017 Environmental Biology - LSC-20097 Microbes, Viruses and Parasites - LSC-20073
U4. the basic experimental skills appropriate to the discipline of biology	Human Impact on the Environment, scientific perspectives - ESC-20017 Environmental Biology - LSC-20097 Research and Analytical Skills - LSC-20056
U5. the approaches to acquiring, interpreting, analysing biological data from a variety of sources, including the use of statistics	Current Topics in Biology - LSC-20074 Microbes, Viruses and Parasites - LSC-20073 Human Impact on the Environment, scientific perspectives - ESC-20017 Biodiversity Crisis - LSC-20093 Research and Analytical Skills - LSC-20056 Nutrition and Energy Balance - LSC-20052 Environmental Biology - LSC-20097
U6. the contribution of research to the development of biological knowledge	Biodiversity Crisis - LSC-20093 Current Topics in Biology - LSC-20074 Nutrition and Energy Balance - LSC-20052 Microbes, Viruses and Parasites - LSC-20073 Research and Analytical Skills - LSC-20056 Human Impact on the Environment, scientific perspectives - ESC-20017 Environmental Biology - LSC-20097 Especially LSC-20074 - Current Topics in Biology
U7. the dynamic, plural and contested nature of the discipline and an awareness of the philosophical and ethical issues involved	Biodiversity Crisis - LSC-20093 Human Impact on the Environment, scientific perspectives - ESC-20017 Research and Analytical Skills - LSC-20056 Nutrition and Energy Balance - LSC-20052 Microbes, Viruses and Parasites - LSC-20073 Current Topics in Biology - LSC-20074 Environmental Biology - LSC-20097 Especially LSC-20074 - Current Topics in Biology
U8. the use of biological terminology, nomenclature and classification systems	Microbes, Viruses and Parasites - LSC-20073 Environmental Biology - LSC-20097
U9. the relevance of biology to practical problems and improving the quality and sustainability of life	Human Impact on the Environment, scientific perspectives - ESC-20017 Microbes, Viruses and Parasites - LSC-20073 Current Topics in Biology - LSC-20074 Environmental Biology - LSC-20097 Nutrition and Energy Balance - LSC-20052 Biodiversity Crisis - LSC-20093

<b>Subject Specific Skills</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
SP1. use a range of practical techniques for the acquisition, analysis and critical evaluation of biological information	Research and Analytical Skills - LSC-20056 Environmental Biology - LSC-20097 Practical Skills in Bioscience - LSC-20107
SP2. use a range of practical laboratory and field techniques to ensure competence in basic experimental skills	Environmental Biology - LSC-20097 Practical Skills in Bioscience - LSC-20107 Research and Analytical Skills - LSC-20056
SP3. sample, record and analyse data in the field and/or laboratory in a manner that ensures validity, accuracy, calibration, precision, replicability and highlights uncertainty during collection	Research and Analytical Skills - LSC-20056 Environmental Biology - LSC-20097 Practical Skills in Bioscience - LSC-20107
SP4. formulate a hypothesis, design, plan, conduct, collate, analyse, report and evaluate on a biological investigation	Research and Analytical Skills - LSC-20056 Environmental Biology - LSC-20097 Practical Skills in Bioscience - LSC-20107
SP5. recognise philosophical, moral and ethical issues relevant to the subject, and appreciate the need for ethical standards and professional codes of conduct	Nutrition and Energy Balance - LSC-20052 Practical Skills in Bioscience - LSC-20107 Environmental Biology - LSC-20097 Biodiversity Crisis - LSC-20093 Microbes, Viruses and Parasites - LSC-20073 Human Impact on the Environment, scientific perspectives - ESC-20017 Research and Analytical Skills - LSC-20056 Current Topics in Biology - LSC-20074 All modules
SP6. undertake field and/or laboratory investigations of living systems in a responsible, safe and ethical manner, paying due attention to standard procedures (e.g., risk assessment, health and safety regulations, animal welfare, informed consent)	Environmental Biology - LSC-20097 Practical Skills in Bioscience - LSC-20107

<b>Intellectual skills</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
SI1. assess the merits of contrasting theories, paradigms, concepts or principles	Microbes, Viruses and Parasites - LSC-20073 Nutrition and Energy Balance - LSC-20052 Human Impact on the Environment, scientific perspectives - ESC-20017 Current Topics in Biology - LSC-20074 Biodiversity Crisis - LSC-20093
SI2. think independently, set tasks and solve problems by a variety of methods	Biodiversity Crisis - LSC-20093 Nutrition and Energy Balance - LSC-20052 Human Impact on the Environment, scientific perspectives - ESC-20017 Microbes, Viruses and Parasites - LSC-20073 Research and Analytical Skills - LSC-20056 Environmental Biology - LSC-20097 Current Topics in Biology - LSC-20074
SI3. make reasoned decisions and develop reasoned arguments	Human Impact on the Environment, scientific perspectives - ESC-20017 Current Topics in Biology - LSC-20074 Biodiversity Crisis - LSC-20093 Nutrition and Energy Balance - LSC-20052 Microbes, Viruses and Parasites - LSC-20073 Environmental Biology - LSC-20097 Research and Analytical Skills - LSC-20056

<b>Intellectual skills</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
SI4. obtain and interpret several lines of subject-specific evidence to formulate and test hypotheses	Research and Analytical Skills - LSC-20056 Human Impact on the Environment, scientific perspectives - ESC-20017 Environmental Biology - LSC-20097
SI5. make critical interpretations, evaluations and judgements of data and text	Current Topics in Biology - LSC-20074 Microbes, Viruses and Parasites - LSC-20073 Human Impact on the Environment, scientific perspectives - ESC-20017 Research and Analytical Skills - LSC-20056 Nutrition and Energy Balance - LSC-20052 Environmental Biology - LSC-20097
SI6. analyse, synthesise and summarise information critically, including published research or reports	Current Topics in Biology - LSC-20074 Human Impact on the Environment, scientific perspectives - ESC-20017 Research and Analytical Skills - LSC-20056 Nutrition and Energy Balance - LSC-20052 Environmental Biology - LSC-20097 Biodiversity Crisis - LSC-20093 Microbes, Viruses and Parasites - LSC-20073
SI7. apply biological understanding to familiar and unfamiliar problems, and emphasise the interdisciplinary nature of science and the validity of different points of view	Biodiversity Crisis - LSC-20093 Nutrition and Energy Balance - LSC-20052 Research and Analytical Skills - LSC-20056 Human Impact on the Environment, scientific perspectives - ESC-20017 Microbes, Viruses and Parasites - LSC-20073 Current Topics in Biology - LSC-20074 Environmental Biology - LSC-20097
SI8. take responsibility for their own learning and reflect upon that learning	Nutrition and Energy Balance - LSC-20052 Research and Analytical Skills - LSC-20056 Biodiversity Crisis - LSC-20093 Environmental Biology - LSC-20097 Microbes, Viruses and Parasites - LSC-20073 Current Topics in Biology - LSC-20074 Human Impact on the Environment, scientific perspectives - ESC-20017

<b>Key or Transferable Skills (graduate attributes)</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
E1. develop an adaptable, flexible, sustainable and effective approach to study and work, including time management, creativity and intellectual integrity	Biodiversity Crisis - LSC-20093 Nutrition and Energy Balance - LSC-20052 Research and Analytical Skills - LSC-20056 Environmental Biology - LSC-20097 Microbes, Viruses and Parasites - LSC-20073 Current Topics in Biology - LSC-20074 Human Impact on the Environment, scientific perspectives - ESC-20017
E2. acquire, analyse, synthesise, summarise and present information and ideas from a wide range of sources: textual, numerical, verbal, graphical	Nutrition and Energy Balance - LSC-20052 Research and Analytical Skills - LSC-20056 Biodiversity Crisis - LSC-20093 Environmental Biology - LSC-20097 Microbes, Viruses and Parasites - LSC-20073 Current Topics in Biology - LSC-20074 Human Impact on the Environment, scientific perspectives - ESC-20017

<b>Key or Transferable Skills (graduate attributes)</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
E3. prepare, process, interpret and present data using appropriate qualitative and quantitative techniques, statistical programmes, spreadsheets and programs for presenting data visually	Biodiversity Crisis - LSC-20093 Environmental Biology - LSC-20097 Nutrition and Energy Balance - LSC-20052 Current Topics in Biology - LSC-20074 Human Impact on the Environment, scientific perspectives - ESC-20017 Microbes, Viruses and Parasites - LSC-20073 Research and Analytical Skills - LSC-20056
E4. use the internet and other electronic sources critically as a means of communication and a source of information	Biodiversity Crisis - LSC-20093 Environmental Biology - LSC-20097 Nutrition and Energy Balance - LSC-20052 Current Topics in Biology - LSC-20074 Human Impact on the Environment, scientific perspectives - ESC-20017 Microbes, Viruses and Parasites - LSC-20073 Research and Analytical Skills - LSC-20056
E5. cite and reference work in an appropriate manner, avoiding issues with plagiarism	Biodiversity Crisis - LSC-20093 Environmental Biology - LSC-20097 Nutrition and Energy Balance - LSC-20052 Current Topics in Biology - LSC-20074 Human Impact on the Environment, scientific perspectives - ESC-20017 Microbes, Viruses and Parasites - LSC-20073 Research and Analytical Skills - LSC-20056
E6. communicate effectively to a variety of audiences by written, spoken and graphical means using appropriate techniques and scientific language	Biodiversity Crisis - LSC-20093 Environmental Biology - LSC-20097 Nutrition and Energy Balance - LSC-20052 Current Topics in Biology - LSC-20074 Human Impact on the Environment, scientific perspectives - ESC-20017 Microbes, Viruses and Parasites - LSC-20073 Research and Analytical Skills - LSC-20056
E7. develop skills necessary for self-managed and lifelong learning, including working independently, organisational, enterprise and knowledge transfer skills	Biodiversity Crisis - LSC-20093 Environmental Biology - LSC-20097 Nutrition and Energy Balance - LSC-20052 Current Topics in Biology - LSC-20074 Human Impact on the Environment, scientific perspectives - ESC-20017 Microbes, Viruses and Parasites - LSC-20073 Research and Analytical Skills - LSC-20056
E8. work with others to achieve an objective in a respectful manner that is accepting of the viewpoints and opinions of others and evaluates the roles and development of team members	Biodiversity Crisis - LSC-20093 Environmental Biology - LSC-20097 Nutrition and Energy Balance - LSC-20052 Current Topics in Biology - LSC-20074 Human Impact on the Environment, scientific perspectives - ESC-20017 Microbes, Viruses and Parasites - LSC-20073 Research and Analytical Skills - LSC-20056
E9. motivate themselves and sustain that motivation over an extended period of time	Nutrition and Energy Balance - LSC-20052 Research and Analytical Skills - LSC-20056 Biodiversity Crisis - LSC-20093 Environmental Biology - LSC-20097 Microbes, Viruses and Parasites - LSC-20073 Current Topics in Biology - LSC-20074 Human Impact on the Environment, scientific perspectives - ESC-20017

<b>Key or Transferable Skills (graduate attributes)</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
E10. identify and work towards targets for personal, academic and career development	Biodiversity Crisis - LSC-20093 Environmental Biology - LSC-20097 Nutrition and Energy Balance - LSC-20052 Current Topics in Biology - LSC-20074 Human Impact on the Environment, scientific perspectives - ESC-20017 Microbes, Viruses and Parasites - LSC-20073 Research and Analytical Skills - LSC-20056

## **Level 6**

<b>Subject Knowledge and Understanding</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
U1. the diversity of life and its evolution from the geological past to the present	All modules
U2. the complexity of biological processes and mechanisms of life at a range of hierarchical levels (molecular, cellular, organismal, community, ecosystem)	All modules
U3. the influence of human activities on living systems (and the converse)	All modules, particularly Conservation Biology
U4. the basic experimental skills appropriate to the discipline of biology	All modules, especially Life Sciences Research Projects
U5. the approaches to acquiring, interpreting, analysing biological data from a variety of sources, including the use of statistics	All modules, particularly Research Projects and Conservation Biology
U6. the contribution of research to the development of biological knowledge	All modules
U7. the dynamic, plural and contested nature of the discipline and an awareness of the philosophical and ethical issues involved	All modules
U8. the use of biological terminology, nomenclature and classification systems	All modules
U9. the relevance of biology to practical problems and improving the quality and sustainability of life	All modules



<b>Subject Specific Skills</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
SP1. use a range of practical techniques for the acquisition, analysis and critical evaluation of biological information	All modules particularly Conservation Biology, Applied Insect Ecology, Research Projects Applied Life Sciences Placements
SP2. use a range of practical laboratory and field techniques to ensure competence in basic experimental skills	All modules with practical sessions, and the Life Sciences Research Projects or Applied Life Sciences Placements
SP3. sample, record and analyse data in the field and/or laboratory in a manner that ensures validity, accuracy, calibration, precision, replicability and highlights uncertainty during collection	All modules with practical sessions, particularly research projects and placements
SP4. formulate a hypothesis, design, plan, conduct, collate, analyse, report and evaluate on a biological investigation	All modules with practical sessions, Also the Life Sciences Research Projects or Applied Life Sciences Placements
SP5. recognise philosophical, moral and ethical issues relevant to the subject, and appreciate the need for ethical standards and professional codes of conduct	Human Evolution, Communication Skills for Biologists, Conservation Biology, Life Sciences Research Projects, Applied Life Sciences Placements
SP6. undertake field and/or laboratory investigations of living systems in a responsible, safe and ethical manner, paying due attention to standard procedures (e.g., risk assessment, health and safety regulations, animal welfare, informed consent)	All modules with practical sessions including Conservation Biology, Life Sciences Research Projects and Applied Life Sciences Placements

<b>Intellectual skills</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
SI1. assess the merits of contrasting theories, paradigms, concepts or principles	All modules
SI2. think independently, set tasks and solve problems by a variety of methods	All modules with practical sessions, Research Projects and Applied Life Sciences Placements
SI3. make reasoned decisions and develop reasoned arguments	All modules
SI4. obtain and interpret several lines of subject-specific evidence to formulate and test hypotheses	All modules, particularly Life Sciences Research Projects and Applied Life Sciences Placements
SI5. make critical interpretations, evaluations and judgements of data and text	Experimental Project, and level 6 taught modules
SI6. analyse, synthesise and summarise information critically, including published research or reports	Sciences Experimental Projects, Placements, Life Sciences Dissertation and level 6 taught modules
SI7. apply biological understanding to familiar and unfamiliar problems, and emphasise the interdisciplinary nature of science and the validity of different points of view	All modules
SI8. take responsibility for their own learning and reflect upon that learning	Life Sciences Dissertation and Life Sciences Experimental Projects, Communication Skills for Biologists

<b>Key or Transferable Skills (graduate attributes)</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
E1. develop an adaptable, flexible, sustainable and effective approach to study and work, including time management, creativity and intellectual integrity	All modules, particularly the Life Sciences Research Projects and Applied Life Sciences Placements
E2. acquire, analyse, synthesise, summarise and present information and ideas from a wide range of sources: textual, numerical, verbal, graphical	All modules
E3. prepare, process, interpret and present data using appropriate qualitative and quantitative techniques, statistical programmes, spreadsheets and programs for presenting data visually	All modules with practical sessions, Life Sciences Research Projects and Applied Life Sciences Placements
E4. use the internet and other electronic sources critically as a means of communication and a source of information	All modules, particularly Life Sciences Research Projects and Applied Life Sciences Placements, Communication Skills for Biologists
E5. cite and reference work in an appropriate manner, avoiding issues with plagiarism	All modules
E6. communicate effectively to a variety of audiences by written, spoken and graphical means using appropriate techniques and scientific language	All modules, particularly Life Sciences Research Projects and Applied Life Sciences Placements Communication Skills for Biologists
E7. develop skills necessary for self-managed and lifelong learning, including working independently, organisational, enterprise and knowledge transfer skills	All modules
E8. work with others to achieve an objective in a respectful manner that is accepting of the viewpoints and opinions of others and evaluates the roles and development of team members	All modules, particularly Communication Skills for Biologists
E9. motivate themselves and sustain that motivation over an extended period of time	All modules, particularly Life Sciences Research Projects and Applied Life Sciences Placements
E10. identify and work towards targets for personal, academic and career development	All modules

## 9. Final and intermediate awards

Credits required for each level of academic award are as follows:

<b>Honours Degree</b>	360 credits	<p>You will require at least 120 credits at levels 4, 5 and 6</p> <p>You must accumulate a minimum of 135 credits in each Principal Subject (270 credits in total), with at least 45 credits at each level of study (Levels 4, 5 and 6) in each of two Principal Subjects (90 credits per year). Your degree title will be 'subject X and subject Y'.</p> <p>If you choose to study one Principal subject in your final year of study a minimum of 90 credits in that subject is required. Your degree title will be 'subject X with subject Y'.</p>
<b>Diploma in Higher Education</b>	240 credits	You will require at least 120 credits at level 4 or higher and at least 120 credits at level 5 or higher
<b>Certificate in Higher Education</b>	120 credits	You will require at least 120 credits at level 4 or higher

**International Year option:** in addition to the above students must pass a module covering the international year in order to graduate with a named degree including the 'international year' wording. Students who do not complete, or fail the international year, will be transferred to the three-year version of the programme.

**Work Placement Year option:** in addition to the above students must pass a non-credit bearing module covering the work placement year in order to graduate with a named degree including the 'work placement year' wording. Students who do not complete, or fail the work placement year, will be transferred to the three-year version of the programme.

## 10. How is the Programme Assessed?

Our assessment strategy is designed to be authentic and diverse so that you can develop key skills that meet academic, professional body and employer expectations. Module managers will provide appropriate guidance for each assessment and the marking criteria that will be used to assess your work.

Our assessment strategy will help you to develop and evidence your ability to:

**Provide evidence-based solutions to current scientific problems.** Most often this is assessed through a range of essays, portfolios and literature reviews.

**Critically appraise information on current issues.** Critical writing is important for scientists and in the modern workplace. The ability to read scientific information and explore the limitations of its application in a particular argument or viewpoint is a vital graduate intellectual skill.

**Present scientific findings.** Often these are lab or fieldwork reports or experimental projects that test your ability to pose scientific hypotheses, design experiments, understand methodologies, present findings, analyse data and situate your work in the current literature.

**Communicate effectively with a range of audiences.** These can include scientific posters, patient information leaflets, wikis, blogs or oral presentations.

**Work professionally.** Your final year, independent research project will give you an opportunity to demonstrate a range of professional skills such as leadership, innovation, time keeping, communication and the ability to work safely and ethically.

**Work effectively in a team.** Most often this is assessed through team fieldwork and group presentations but can also include written work such as scientific posters or public information leaflets.

**Solve problems in a time-limited fashion.** Often in the work environment we are asked to solve problems in a relatively short amount of time. Our online tests and end-of-semester, online, open-book examinations will help you to evidence these skills.

We aim to provide constructive feedback within 3 weeks of submission for all assessed work. This is often phrased in terms of strengths, weaknesses and ways to improve to help you focus on key areas that can improve the quality of your work in the future.

## 11. Contact Time and Expected Workload

This contact time measure is intended to provide you with an indication of the type of activity you are likely to undertake during this programme. The data is compiled based on module choices and learning patterns of students on similar programmes in previous years. Every effort is made to ensure this data is a realistic representation of what you are likely to experience, but changes to programmes, teaching methods and assessment methods mean this data is representative and not specific.

Undergraduate courses at Keele contain an element of module choice; therefore, individual students will experience a different mix of contact time and assessment types dependent upon their own individual choice of modules. The figures below are an example of activities that a student may expect on your chosen course by year stage of study. Contact time includes scheduled activities such as: lecture, seminar, tutorial, project supervision, demonstration, practical classes and labs, supervised time in labs/workshop, fieldwork and external visits. The figures are based on 1,200 hours of student effort each year for full-time students.

### Activity

	<b>Scheduled learning and teaching activities</b>	<b>Guided independent Study</b>	<b>Placements</b>
<b>Year 1 (Level 4)</b>	38.3%	61.7%	0%
<b>Year 2 (Level 5)</b>	33.2%	66.3%	0.4%
<b>Year 3 (Level 6)</b>	30.3%	69.7%	0%

## 12. Accreditation

The programme for all students who specialise in Biology at level 6 or combine with Biochemistry is accredited by the Royal Society of Biology.

Students should note that to be awarded Royal Society of Biology accreditation they must achieve a minimum standard of 40% in the Life Sciences Double Experimental Project (with research skills assessment), or equivalent placement module. Students that condone this module may still be eligible for the award Studies in Biology.

Students must also successfully complete the two zero-credit practical modules LSC-10087 Core Skills in Biosciences and LSC-20107 Practical Skills in Biosciences in order to be awarded Royal Society of Biology accreditation.

## 13. University Regulations

The University Regulations form the framework for learning, teaching and assessment and other aspects of the student experience. Further information about the University Regulations can be found at: <http://www.keele.ac.uk/student-agreement/>

If this programme has any exemptions, variations or additions to the University Regulations these will be detailed in an Annex at the end of this document titled 'Programme-specific regulations'.

A student who has completed a semester abroad will not normally be eligible to transfer onto the International Year option.

Where a programme has an "International Year" option and a "Placement Year" option, students may elect to follow either the International Year or Placement Year, but not both.

## 14. What are the typical admission requirements for the Programme?

See the relevant course page on the website for the admission requirements relevant to this programme: <https://www.keele.ac.uk/study/>

Applicants who are not currently undertaking any formal study or who have been out of formal education for more than 3 years and are not qualified to A-level or BTEC standard may be offered entry to the University's Foundation Year Programme.

Applicants for whom English is not a first language must provide evidence of a recognised qualification in English language. The minimum score for entry to the Programme is Academic IELTS 6.0 or equivalent.

### English for Academic Purposes

Please note: All new international students entering the university will provide a sample of Academic English during their registration Using this sample, the Language Centre may allocate you to an English language module which will become compulsory. This will replace any GCP modules. *NB:* students can take an EAP module only with the approval of the English Language Programme Director and are not able to take any other Language modules in the same academic year.

English Language Modules at Level 4:

- Business - ENL-90003 Academic English for Business Students (Part 1); ENL-90004 Academic English for Business Students (2)

- Science - ENL-90013 Academic English for Science Students
- General - ENL-90006 English for Academic Purposes 2; ENL-90001 English for Academic Purposes 3; ENL-90002 English for Academic Purposes 4

English Language Modules at Level 5:

- Business - ENL-90003 Academic English for Business Students (Part 1); ENL-90004 Academic English for Business Students (2)
- Science - ENL-90013 Academic English for Science Students
- General - ENL-90006 English for Academic Purposes 2; ENL-90001 English for Academic Purposes 3; ENL-90002 English for Academic Purposes 4

English Language Modules at Level 6:

- Business - ENL-90003 Academic English for Business Students (Part 1); ENL-90004 Academic English for Business Students (2); ENL-90005 Advanced Business English Communication
- Science - ENL-90013 Academic English for Science Students
- General - ENL-90006 English for Academic Purposes 2; ENL-90001 English for Academic Purposes 3; ENL-90002 English for Academic Purposes 4

**Recognition of Prior Learning (RPL)** is considered on a case-by-case basis and those interested should contact the Programme Director. The University's guidelines on this can be found here: <https://www.keele.ac.uk/qa/programmesandmodules/recognitionofpriorlearning/>

## 15. How are students supported on the programme?

The School of Life Sciences operates an open door policy. This means that you can contact any of our staff via email or Teams to request a meeting or discuss any problem that you may be experiencing. In addition to the open door policy, you can also contact the following people across Life Sciences for help and support:

- Programme Director or Director of Education for programme-, discipline- or School-related issues
- Module Manager for module-related issues
- Demonstrators for help during labs and fieldwork
- Academic Mentors for academic help and guidance
- Student Experience and Support Officers (SESO), for more personal or pastoral help 24
- Early Resolution Officer to help advocate for you, for example, if you would like to raise a complaint
- Student Voice are a group of students from your programme that can advocate for you to the School

Student Services also offer a comprehensive range of specialist services that help you at any time from enrolment to graduation. The following link will provide more information: <https://www.keele.ac.uk/students/student-services/>

## 16. Learning Resources

You will be taught in modern, dedicated teaching laboratories (some of which were opened by Sir David Attenborough himself!). We also make extensive use of our large and diverse campus environment for fieldwork in addition to fieldwork visits off-campus.

You will have access to an extensive collection of books and journals both at our library here on campus and the health library situated at the University Hospital of North Staffordshire. You will also have access to a comprehensive range of eBooks, journals and published papers all available online.

We make extensive use of our virtual Keele Learning Environment (KLE) and Microsoft Teams to host a wide range of learning resources such as lectures and guidance materials and to facilitate live debates such as online discussions or Q&As.

## 17. Other Learning Opportunities

We are committed to offering a rich and diverse student experience that goes far beyond your degree. Most years, we are able to offer a range of different opportunities to enrich your student experience. These can include:

- **Tropical Biology Field Course.** You could apply for our School tropical field that takes place in Malaysia. These are an exceptional chance to hone your fieldwork skills in tropical habitats and also provide fantastic international experience.
- **Operation Wallacea.** This is a private company that supports a wide range of student projects with a particular focus on biodiversity and climate research. More information can be found at: <https://www.opwall.com>
- **Study abroad.** You could apply to spend one semester at Level 5 studying in one of our international partner universities. This not only gives you valuable international experience, but can also allow you to

study a complimentary subject in greater detail.

- **International year.** Is similar to study abroad, but here you choose to take an additional year in between Levels 5 and 6 studying in one of our international partner universities. This will not affect your eligibility for an RSB accredited degree. More information can be found at: <http://www.keele.ac.uk/studyabroad/partneruniversities/>
- **Work placements.** You could apply to a range of national and international employers for an work placement. These take place in between Level 5 and 6 and usually last 9-12 months. They provide excellent work experience and an opportunity to collect data for your Level 6 independent research student project.
- **Secondments.** These are shorter industrial placements that usually take place over the summer in between Level 5 and 6 and usually last between 2-8 weeks. They can be based locally in one of our research labs here at Keele, nationally or internationally. For example, often some our students will travel to Malaysia to work with our partner Universiti Sains Malaysia.

Note: the opportunities described above are limited and dependent on external providers. We may not be able to offer them every year and there will be additional costs if you do successfully secure a place. We discuss all of these options in more detail across Level 4 and Level 5 so you can make an informed decision.

## 18. Additional Costs

### Biology Programme Costs

Any compulsory residential field courses would be subsidised by the School of Life Sciences and you pay no fees to attend. You would be required to cover your own transport costs to and from the location of the field course and maintenance costs during any compulsory residential field course (for example food, appropriate clothing, etc.).

Learning opportunities as outlined *Other Learning Opportunities* above may be available and may incur additional costs.

Activity	Estimated cost
Field courses - compulsory	£0.00
Field courses - optional hosted at USM Malaysia	£1,200
Equipment Waterproof clothing for field work	£75
Travel to field courses and to any placement abroad or in the UK	Unable to Estimate
Other additional costs	none anticipated
<b>Total estimated additional costs</b>	<b>£1,275</b>

These costs have been forecast by the University as accurately as possible but may be subject to change as a result of factors outside of our control (for example, increase in costs for external services). Forecast costs are reviewed on an annual basis to ensure they remain representative. Where additional costs are in direct control of the University we will ensure increases do not exceed 5%.

As to be expected there will be additional costs for inter-library loans and potential overdue library fines, print and graduation. We do not anticipate any further costs for this programme.

## 19. Quality management and enhancement

The quality and standards of learning in this programme are subject to a continuous process of monitoring, review and enhancement.

- The School Education Committee is responsible for reviewing and monitoring quality management and enhancement procedures and activities across the School.
- Individual modules and the programme as a whole are reviewed and enhanced every year in the annual programme review which takes place at the end of the academic year.
- The programmes are run in accordance with the University's Quality Assurance procedures and are subject to periodic reviews under the Revalidation process.

Student evaluation of, and feedback on, the quality of learning on every module takes place every year using a variety of different methods:

- The results of student evaluations of all modules are reported to module leaders and reviewed by the Programme Committee as part of annual programme review.
- Findings related to the programme from the annual National Student Survey (NSS), and from regular

surveys of the student experience conducted by the University, are subjected to careful analysis and a planned response at programme and School level.

- Feedback received from representatives of students in all three years of the programme is considered and acted on at regular meetings of the Student Staff Voice Committee.

The University appoints senior members of academic staff from other universities to act as external examiners on all programmes. They are responsible for:

- Approving examination questions
- Confirming all marks which contribute to a student's degree
- Reviewing and giving advice on the structure and content of the programme and assessment procedures

Information about current external examiner(s) can be found here:

<http://www.keele.ac.uk/qa/externalexaminers/currentexternalexaminers/>

## 20. The principles of programme design

The programme described in this document has been drawn up with reference to, and in accordance with the guidance set out in, the following documents:

a. UK Quality Code for Higher Education, Quality Assurance Agency for Higher Education:

<http://www.qaa.ac.uk/quality-code>

b. QAA Subject Benchmark Statement: Bioscience: [https://www.qaa.ac.uk/docs/qaa/sbs/sbs-biosciences-23.pdf?sfvrsn=b570a881\\_6](https://www.qaa.ac.uk/docs/qaa/sbs/sbs-biosciences-23.pdf?sfvrsn=b570a881_6)

c. Keele University Regulations and Guidance for Students and Staff: <http://www.keele.ac.uk/regulations>

d. [RSB Accreditation Handbook](#)

## 21. Annex - International Year

### Combined Honours Biology with International Year

Please note: in order to be eligible to take the International Year option your other subject must also offer this option. Please refer to the information published in the course document for your other subject.

<b>International Year Programme</b>
<p>At Level 5 you can apply to transfer onto our International Year pathway. If successful, you will have an additional year of study at one of our international partner Universities once you have completed Level 5 here at Keele.</p> <p>Students who successfully complete both the second year (Level 5) and the International Year will be permitted to progress to Level 6. Students who fail to satisfy the examiners in respect of the International Year will normally revert to the standard programme and progress to Level 6 on that basis. The failure will be recorded on the student's final transcript.</p> <p>Study at Level 4, Level 5 and Level 6 will be as per the main body of this document. The additional detail contained in this annex will pertain solely to students registered for the International Year option.</p>
<b>International Year Programme Aims</b>
<p>In addition to the programme aims for Biology we also aim to:</p> <ol style="list-style-type: none"><li>1. Enhance your personal development give you an insight into the international dimension of biological study</li><li>2. Give you an experience of a different culture, academically, professionally and socially</li></ol>
<b>Entry Requirements for the International Year</b>

Students may apply to the 4-year programme during Level 5. Admission to the International Year is subject to successful application, interview and references from appropriate staff.

The criteria to be applied are:

- Academic Performance (an average of 55% across all modules in Semester 1 at Level 5 is normally required. Places on the International Year are then conditional on achieving an average mark of 55% across all Level 5 modules. Students with up to 15 credits of re-assessment who meet the 55% requirement may progress to the International Year. Where no Semester 1 marks have been awarded performance in 1st year marks and ongoing 2nd year assessments are taken into account)
- General Aptitude (to be demonstrated by application for study abroad, interview during the 2nd semester of year 2 (Level 5), and by recommendation of the student's Academic Mentor, 1st and 2nd year tutors and programme director)

Students may not register for both an International Year and a Placement Year.

### **Student Support**

We have a dedicated Study Abroad tutor within Life Sciences that will stay in touch with you throughout your International Year, effectively acting as an additional Academic Mentor. There is also support available from Keele's Global Opportunities Team (<https://www.keele.ac.uk/study/studyabroad/>)

### **Learning Outcomes**

In addition to the learning outcomes for *Biology*, students who graduate with *Biology with International Year* will be able to:

1. Describe, discuss and reflect upon the cultural and international differences and similarities of different learning environments
2. Discuss the benefits and challenges of global citizenship and internationalisation
3. Explain how their perspective on their academic discipline has been influenced by locating it within an international setting.
4. Use independent research skills to identify relevant information resources on a range of subjects related, or complementary, to *Biology*.
5. Demonstrate the use of critical thinking skills, augmented by creativity and curiosity, in discussing the application of their International Year studies to *Biology*.

Please note that students on Combined Honours programmes with International Year must meet the subject-specific learning outcomes for BOTH their principal subjects.

These learning outcomes will all be assessed by the submission of a satisfactory individual learning agreement, the successful completion of assessments at the partner institution and the submission of the reflective portfolio element of the international year module.

### **Regulations**

Students registered for the International Year are subject to the programme-specific regulations (if any) and the University regulations. In addition, during the International Year, the following regulations will apply:

Students undertaking the International Year must complete 120 credits, which must comprise at least 40% in the student's discipline area.

This may impact on your choice of modules to study, for example you will have to choose certain modules to ensure you have the discipline specific credits required.

Students are barred from studying any module with significant overlap to the Level 6 modules they will study on their return. Significant overlap with Level 5 modules previously studied should also be avoided.

### **Additional costs for the International Year**



Tuition fees for students on the International Year will be charged at 15% of the annual tuition fees for that year of study, as set out in Section 1. The International Year can be included in your Student Finance allocation, to find out more about your personal eligibility see: [www.gov.uk](http://www.gov.uk)

Students will have to bear the costs of travelling to and from their destination university, accommodation, food and personal costs. Depending on the destination they are studying at additional costs may include visas, study permits, residence permits, and compulsory health checks. Students should expect the total costs of studying abroad be greater than if they study in the UK, information is made available from the Global Education Team throughout the process, as costs will vary depending on destination.

Students who meet external eligibility criteria may be eligible for grants as part of this programme. Students studying outside of this programme may be eligible income dependent bursaries at Keele.

Students travel on a comprehensive Keele University insurance plan, for which there are currently no additional charges. Some Governments and/or universities require additional compulsory health coverage plans; costs for this will be advised during the application process.

## 22. Annex - Work Placement Year

### Biology with Work Placement Year

#### Work Placement Year summary

At Level 4 or 5 you can apply to transfer onto our Work Placement Year pathway.

Students registered for this programme may either be admitted for or apply to transfer during their studies to the 'with Work Placement Year' option (NB: for Combined Honours students the rules relating to the work placement year in the subject where the placement is organised are to be followed). Students accepted onto this programme will have an extra year of study (the Work Placement Year) with a relevant placement provider after they have completed Year 2 (Level 5) at Keele.

Students who successfully complete both the second year (Level 5) and the Work Placement Year will be permitted to progress to Level 6. Students who fail to satisfactorily complete the Work Placement Year will normally revert to the 3-year programme and progress to Level 6 on that basis. The failure will be recorded on the student's final transcript.

Study at Level 4, Level 5 and Level 6 will be as per the main body of this document. The additional detail contained in this annex will pertain solely to students registered for the Work Placement Year option.

#### Work Placement Year Programme Aims

In addition to the programme aims for Biology, we also aim to provide experience of working in a subject-related laboratory or work place within an industrial, academic or public institution either in the UK or abroad.

#### Entry Requirements for the Work Placement Year

Admission to the Work Placement Year is subject to successful application, interview and references from appropriate staff. Students have the opportunity to apply directly for the 4-year 'with work placement year' degree programme, or to transfer onto the 4-year programme at the end of Year-1 and in Year-2 at the end of Semester 1. Students who are initially registered for the 4-year degree programme may transfer onto the 3-year degree programme at any point in time, prior to undertaking the year-long work placement. Students who fail to pass the work placement year, and those who fail to meet the minimum requirements of the work placement year module, (\* or equivalent, work placement), will be automatically transferred onto the 3-year degree programme.

\* We recommend where possible students undertake a placement of between 9 - 12 months on a full-time basis to maximize academic and personal growth. However, the Faculty of Natural Sciences Work / Professional Placement Year mandates a minimum of 24 weeks in duration, ideally on a full-time basis, but no less than 21 hours per week. This enables those undertaking an unpaid placement to work on a part-time basis alongside their placement.

The criteria to be applied are:

- A good University attendance record and be in 'good academic standing'.
- Academic Performance (an average of 50% across all modules in Semester 1 at Level 5 is normally required. Places on the Work Placement Year are then conditional on achieving an average mark of 50% across all Level 5 modules. Students with up to 15 credits of re-assessment who meet the 50% requirement may progress to the Work Placement Year. Where no Semester 1 marks have been awarded performance in 1st year marks and ongoing 2nd year assessments are taken into account)
- General Aptitude (to be demonstrated by application(s) to relevant placement providers with prior agreement from the Programme Lead, interview during the 2nd semester of year 2 (Level 5), and by recommendation of the student's Academic Mentor, 1st and 2nd year tutors and Programme Lead)
- Students undertaking work placements will be expected to complete a Health and Safety checklist prior to commencing their work experience and will be required to satisfy the Health and Safety regulations of the company or organisation at which they are based.
- (*International students only*) Due to visa requirements, it is not possible for international students who require a Tier 4 Visa to apply for direct entry onto the 4-year with Work Placement Year degree programme. Students wishing to transfer onto this programme should discuss this with student support, the academic tutor for the work placement year, and the Programme Lead. Students should be aware that there are visa implications for this transfer, and it is the student's responsibility to complete any and all necessary processes to be eligible for this programme. There may be additional costs, including applying for a new Visa from outside of the UK for international students associated with a transfer to the work placement programme.

Students may not register for both an International Year and a Work Placement Year.

### **Student Support**

We have a dedicated Industrial Placement tutor within Life Sciences that can act as a point of contact for you before, during or after your placement year. You will also be assigned a Placement Supervisor. This will be an academic member of the School who will maintain regular contact with you throughout your placement and will become your project supervisor at Level 6. The School Director of Education will also act as a whistle-blower. This means that you can contact them in strict confidence at any point during your placement if you have any concerns about your placement provider or overall experience.

### **Learning Outcomes**

In addition to the learning outcomes for Biology, students who graduate with Biology with Placement Year will be able to:

Demonstrate an ability to successfully work within their placement institution and to learn practical skills and develop their science base within the scope of their work project.

These learning outcomes will be assessed through successful completion of Work Placement module LSC-30038.

### **Regulations**

In addition to the regulations for Biology, the following additional regulations apply:

- Compliance with any contractual obligations expected by the placement provider
- Complete a minimum of 24 weeks in duration, ideally on a full-time basis, but no less than 21 hours per week, on placement
- Successful completion of Work Placement module LSC-30038
- The placement student will also sign up an agreement outlining his/her responsibilities in relation to the requirements of each organisation.

You are expected to behave professionally at all times on placement. This means conforming to the work practices of your placement provider and remembering that you are a representative of Keele University.

### **Additional costs for the Work Placement Year**

Tuition fees for students on the Work Placement Year will be charged at 20% of the annual tuition fees for that year of study, as set out in Section 1. The Work Placement Year can be included in your Student Finance allocation; to find out more about your personal eligibility see: [www.gov.uk](http://www.gov.uk)

Students will have to bear the costs of travelling to and from their placement provider, accommodation, food and personal costs. Depending on the placement provider additional costs may include parking permits, travel and transport, suitable clothing, DBS checks, and compulsory health checks.

A small stipend may be available to students from the placement provider during the placement but this will need to be explored on a placement-by-placement basis as some organisations, such as charities, may not have any extra money available. Students should budget with the assumption that their placement will be unpaid.

Eligibility for student finance will depend on the type of placement and whether it is paid or not. If it is paid, this is likely to affect student finance eligibility, however if it is voluntary and therefore unpaid, should not affect student finance eligibility. Students are required to confirm eligibility with their student finance provider.

International students who require a Tier 4 visa should check with the Immigration Compliance team prior to commencing any type of paid placement to ensure that they are not contravening their visa requirements.

## **23. Annex - Programme-specific regulations**

### **Programme Regulations: Biology (Combined Honours)**

<b>Final Award and Award Titles</b>	BSc (Hons) Biology BSc (Hons) Biology with International Year BSc (Hons) Biology with Work Placement Year BSc (Hons) Studies in Biology BSc (Hons) Studies in Biology with International Year BSc (Hons) Studies in Biology With Work Placement Year
<b>Intermediate Award(s)</b>	Diploma in Higher Education Certificate in Higher Education
<b>Last modified</b>	November 2022
<b>Programme Specification</b>	<a href="https://www.keele.ac.uk/qa/programmespecifications">https://www.keele.ac.uk/qa/programmespecifications</a>

The University's Academic Regulations which can be found on the Keele University website (<https://www.keele.ac.uk/regulations/>)[1] apply to and regulate the programme, other than in instances where the specific programme regulations listed below over-ride them. These programme regulations list:

- *Exemptions* which are characterised by the omission of the relevant regulation.
- *Variations* which are characterised by the replacement of part of the regulation with alternative wording.
- *Additional Requirements* which set out what additional rules that apply to students in relation to this programme.

The following **exemptions, variations** and **additional requirements** to the University regulations have been checked by Academic Services and have been approved by the Faculty Education Committee.

## A) EXEMPTIONS

The clause(s) listed below describe where an exemption from the University's Academic Regulations exists:

For the whole duration of their studies, students on this Programme are exempt from the following regulations:

- **No exemptions apply.**

## B) VARIATIONS

The clause(s) listed below describe where a variation from the University's Academic Regulations exists:

**No variations apply**

### Additional Requirements

The programme requirements listed below are in addition to the University's Academic Regulations:

#### Additional requirement 1: Royal Society of Biology Accreditation

1.1 Students must achieve a pass standard in the Life Sciences Double Experimental Project with research skills assessment (or, subject to agreement, Double Applied Life Sciences Placement) to attain an accredited degree. For students who do not fulfil the conditions of this regulation, the degree award will be '*Studies in Biology*'; the degree will not be accredited by the Royal Society of Biology.

#### Additional requirement 2: Fieldwork

2.1 Students who display serious misconduct on any field courses (for example LSC-20097 Environmental Biology) will be asked to leave and attend the next field course as a re-assessment at their own expense. Serious misconduct involves wilful damage to property, injury to persons, improper use of safety equipment and/or failure to attend commitments.

2.2 Students that do not attend the field course will be required to cover the cost of attending the field course the following year. These costs can be waived if non-attendance is beyond the student's control and evidence of valid exceptional circumstances is submitted.

#### Additional requirement 3: Study Abroad and Field Course

3.1 A student who has completed a semester abroad will not normally be eligible to transfer onto the International Year option.

3.2 Students taking the final year module LSC-30066: Tropical Biology Field Course will undertake field work in Malaysia between level 5 and 6. Students must achieve the following criteria to be eligible to attend:

- **Academic Performance:** an average of 55% across all modules in Semester 1 at Level 5 is normally required. Places on the course are then conditional on achieving an average mark of 55% across all Level 5 modules. You will still be eligible to apply if you have up to 15 credits of re-assessment, but still meet the 55% requirement. Where no Semester 1 marks have been awarded, performance at Level 4 and ongoing

Level 5 assessments are considered.

- **General Aptitude:** demonstrated through interview during Level 5, semester 2 and by recommendation of your academic mentor, year tutors and/or programme director.

At least one male and one female academic member of staff from the School of Life Sciences will accompany you on the field course to offer support.

There are additional costs associated with the tropical field course that change each year. These will be discussed at Level 5 before you need to decide to apply.

[1] References to University Regulations in this document apply to the content of the University's Regulatory Framework as set out on the University website here <https://www.keele.ac.uk/regulations/>.

## Version History

### This document

**Date Approved:** 14 June 2024

### Previous documents

Version No	Year	Owner	Date Approved	Summary of and rationale for changes
1	2023/24	DAVID HULSE	08 February 2023	
1	2022/23	DAVID HULSE	13 May 2022	
1	2021/22	DAVID HULSE	08 February 2021	
1	2020/21	DAVID HULSE	01 April 2020	
1	2019/20	EDWARD MCCAULEY	17 September 2019	