Programme Specification: Undergraduate

For students starting in Academic Year 2017/2018

1. Course Summary

Names of programme(s) and award title(s)	BSc (Hons) Human Biology BSc (Hons) Human Biology with International Year (see Annex A for details) BSc (Hons) Human Biology with Work Placement Year BSc (Hons) Studies in Human Biology BSc Hons Studies in Human Biology with International Year BSc Hons Studies in Human Biology with Work Placement Year
Award type	Dual Honours/Major/Minor *NB:* all students who study a science Principal subject are candidates for the degree of Bachelor of Science (with Honours) (BSc Hons) irrespective of their second Principal subject.
Mode of study	Full time
Framework of Higher Education Qualification (FHEQ) level of final award	Level 6
Duration	3 years 4 years with either the Applied Life Sciences Placement or the International Year option
Location of study	Keele University – main campus
Accreditation (if applicable)	The Major route and Human biology Combined with Biochemistry route are accredited by the Royal Society of Biology - see section 12 for further information
Regulator	Office for Students (OfS)
Tuition Fees	**UK/EU students:** Fee for 2017/18 is £9,250* **International students:** Fee for 2017/18 is £14,150** *(if combined with a non-laboratory-based Principal Subject)* *or* £15,250** *(if combined with a laboratory-based Principal Subject)*

** 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/*

	The fee for the placement year is calculated at 20% of the standard year fee The fee for the international year abroad is calculated at 15% of the standard year fee
Additional Costs	Refer to section 18

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.*

2. What is a Dual Honours programme?

Dual Honours degrees are degrees that are taken in two different subjects, resulting in an *X and Y* degree title, for example *Human Biology and Psychology.* If you are taking a Dual Honours programme, these will be the two subjects you applied for. These are referred to as your Principal Subjects.

In a Dual Honours degree you must take at least 120 credits in each Principal Subject, accrued over all three levels of study, with at least 30 credits in Year 1 (Level 4) and at least 45 credits in each of Years 2 and 3 (Levels 5 and 6) in each of two Principal Subjects. The remaining available credits can be filled with modules from these subjects or other subjects entirely.

What is a Major/Minor programme?

Major/Minor degrees are degrees that are taken in two different subjects, much like a Dual Honours degree, except that you will specialise in the Major subject. In a Major/Minor degree you will need at least 225 credits in your Major subject over your three years of study with at least two modules (30 credits) taken each year in your Major Subject, although some Principal Subjects will require you to take more than this and this will be stated in the relevant programme specification. You will also need 90 credits in your Minor subject with a minimum of 30 credits (two modules) taken in Year 1 (Level 4) and 45 credits (three modules) taken in Year 2 (Level 5).

Students taking the Minor Route in Human Biology might not necessarily be able to demonstrate that they have achieved all of the Programme's learning outcomes.

3. Overview of the Programme

This programme is for students who prefer to specialise on topics that are related to Human systems. Human Biology involves the study of the human body and how it is adapted to its environment. This course is designed to equip students with a broadly based understanding of the human body in health and disease. Students will learn about the physiology of the major systems of the body, about the impact of nutrition and environment on health, about the human impacts on our environment and about human development and evolution. A number of modules at levels 5 and 6 address issues that relate to our ever changing lifestyles and have a global perspective, including nutrition, advances in scientific research and technologies and parasitology that have improved our understanding of health and disease.

The multidisciplinary approach to Human Biology is supported by input to the programme from staff with diverse expertise in wide ranging aspects of Human Biology including Medical School staff and research and clinical staff at Keele University, University Hospitals of North Midlands and the Guy Hilton Research Centre (affiliated to Keele University and NHS - a world-leading centre for translational research), physiotherapists, geographers and conservation biologists. This approach has been received enthusiastically by the students especially since this approach provides a context and a broader perspective on the student's academic learning.

Student experience over the three years include practical classes that provide first-hand experience of biology, genetics, human physiology , anatomy, evolution and conservation will equip the student to follow career paths in science, health or industry among others, depending on where their strengths and interests lie. There are a

number of opportunities available to students to get work experience and broaden their horizons and build their career prospects, during their studies; including study abroad and placement options. Graduates from this programme have followed diverse careers including postgraduate study, PGCE teacher training, occupational therapy, research assistant and medicine.

4. Aims of the Programme

The broad aims of the programme are to:

- provide you with knowledge, understanding and skills relevant to human biology;
- produce skilled and motivated graduates who are suitably prepared for further study or for employment within or outside their field;
- cultivate interest in human biology, 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.

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)

Subject knowledge and understanding

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

- U1: the biology of the human body including the mechanisms of life at molecular, cellular and physiological levels and also at the global community level, and its evolution from the geological past to the present, using a multidisciplinary approach
- U2: the essential facts, major concepts, principles and theories associated with the human body with particular emphasis on understanding human health and disease and the relationship between the human body and the environment
- U3: the basic experimental skills appropriate to the discipline under study that address areas of anatomy, physiology, immunology and genetics
- U4: the approaches to acquiring, interpreting, analysing biological data from a variety of sources, including the use of statistics
- U5: the contribution of research to the development of biological knowledge
- U6: the dynamic, plural and contested nature of the discipline and an awareness of the philosophical and ethical issues involved
- U7: the use of biological terminology, nomenclature and classification systems
- U8: the relevance of biology to practical problems and improving the quality and sustainability of life
- U9: the applicability of the biosciences to the careers to which graduates will be progressing
- U10: be aware of current developments in biochemistry and molecular biology including areas of ethical or public concern
- U11: be able to demonstrate and ability to mine, manipulate and interpret data from small molecule and macromolecular databases

Subject specific skills

Successful students will be able to:

- S1: appreciate the complexity and diversity of life processes through the study of the human body

through their molecular, cellular, and physiological processes, their genetics and evolution, and the interrelationships between them and the environment
- S2: read and use appropriate literature with a full and critical understanding
- S3: use a range of laboratory techniques to ensure competence in experimental skills
- S4: give a clear and accurate account of a subject and engage in debate and dialogue both with specialists and non-specialists, using appropriate scientific language
- S5: to think independently, plan tasks and solve problems
- S6: formulate a hypothesis and design and employ a variety of methods of study in investigating the hypothesis, acquire and collate scientific data and information and then analyse and report the outcome of the investigations
- S7: recognise philosophical, moral and ethical issues relevant to the subject, and appreciate the need for ethical standards and professional codes of conduct
- S8: develop an appreciation of the interdisciplinary nature of science and of the validity of different points of view

Intellectual skills

Successful students will be able to:

- I1: recognise and apply subject-specific theories, paradigms, concepts or principles
- I2: analyse, synthesise and evaluate information critically, including published research or reports
- I3: obtain and integrate several lines of subject-specific evidence to formulate and test hypotheses
- I4: apply subject knowledge and understanding to address familiar and unfamiliar problems
- I5: recognise the moral and ethical issues of investigations and appreciate the need for ethical standards and professional codes of conduct
- I6: take responsibility for their learning and reflect upon that learning
- I7: construct grammatically correct documents in an appropriate academic style using and referencing relevant ideas and evidence
- I8: understand the importance of academic and research integrity

Key or transferable skills (including employability skills)

Successful students will be able to:

- E1: develop and sustain effective approaches to learning and study, including time management, flexibility, creativity and intellectual integrity
- E2: communicate about their subject appropriately to a variety of audiences using a range of formats and approaches, using appropriate scientific language, citing and referencing research critically avoiding issues such as plagiarism
- E3: develop interpersonal skills necessary to work in a team, identifying individual and collective goals and responsibilities and perform accordingly, recognise and respect the views and opinions of other team members; evaluate the performance of others and develop an appreciation of the interdisciplinary nature of science and of the validity of different points of view
- E4: develop an adaptable, flexible, sustainable and effective approach to study and work, including time management, creativity and intellectual integrity
- E5: develop the skills necessary for self-managed and lifelong learning (e.g. working independently, time management, organisational, enterprise and knowledge transfer skills)
- E6: cite and reference work in an appropriate manner, ensuring academic integrity and the avoidance of plagiarism whether intentional or not
- E7: work with others to identify and achieve collaborative goals and responsibilities and perform in a respectful manner that is accepting of the viewpoints and opinions of others and evaluates the roles and development of team members
- E8: identify and work towards targets for personal, academic and career development

Keele Graduate attributes

Engagement with this programme will enable you to develop your intellectual, personal and professional capabilities. At Keele, we call these our ten Graduate Attributes and they include independent thinking, synthesizing information, creative problem solving, communicating clearly, and appreciating the social, environmental and global implications of your studies and activities. Our educational programme and learning environment is designed to help you to become a well-rounded graduate who is capable of making a positive and valued contribution in a complex and rapidly changing world, whichever spheres of life you engage in after your studies are completed.

Further information about the Keele Graduate Attributes can be found here: http://www.keele.ac.uk/journey/

6. How is the Programme taught?

Learning and teaching methods used on the programme vary according to the subject matter and level of the module. They include the following:

- **Traditional lectures** where the lecturer provides students with a framework for reading and independent study. Some lecture classes may feature guest speakers from a clinical or research-based area.
- **Interactive learning** in large classes where students have the opportunity to work together in smaller groups, interact with the lecturer and reflect on their own learning.
- **Practicals** in laboratories are particularly important and involve the study of processes relevant to human biology and provide training in a wide range of research techniques.
- **Tutorials and seminars** in small groups of students where key issues can be discussed in more depth. Students are expected to play a full part and, occasionally, to lead these discussions. Some tutorials and seminars consist largely of student presentations and some are based on scientific papers studied in advance.
- **Independent study** based on directed reading from text books, research papers and research reviews.
- **Web-based learning** using the University's virtual learning environment (KLE). The KLE is used to give students easy access to a wide range of resources and research tools, and as a platform for online discussions and quizzes.
- For those who choose to take the **dissertation or non-experimental project** module in Human Biology in their final year, the opportunity to undertake a piece of independent study supervised and supported by a member of staff.
- For those who choose to take the **experimental project** module in Human Biology in their final year, the opportunity to undertake a piece of independent experimental research supervised and supported by a member of staff.

Apart from these formal activities, students are also provided with regular opportunities to talk through particular areas of difficulty, and any special learning needs they may have, with their Personal Tutors or module lecturers on a one-to-one basis.

These learning and teaching methods enable students to achieve the learning outcomes of the programme in a variety of ways. For example:

- Lectures and independent study allow students to gain knowledge and understanding of human biology and its component subjects such as physiology and genetics
- Seminars, tutorials and online discussions provide opportunities for students to ask questions about the subject, and to present their own ideas to members of staff and other students using an appropriate medium of communication
- Interactive lectures, seminars, tutorials and web-based activities encourage students to reflect on their own learning and take responsibility for its development by addressing areas of difficulty, perhaps by discussing them with their fellow students or by getting additional help from a member of staff
- Laboratory practicals allow students insight into the practical aspect of Human Biology and a range of relevant scientific techniques
- Undertaking an experimental project with the support of an experienced researcher allows students to

formulate relevant research questions and devise, carry out and analyse experiments to answer them

7. Teaching Staff

The teaching staff are mainly from the School of Life Sciences. Teaching staff from the School of Health and Rehabilitation, School of Physical and Geographical Sciences, School of Medicine, Guy Hilton Research Centre and the University Hospital of North Midlands also contribute to the Programme. Most staff are active in research. Of the academic staff currently in the School, a number have recognised or accredited teaching qualifications and a number are Fellows of the Higher Education Academy (HEA).

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 runs from September to June and is divided into two semesters. The number of weeks of teaching will vary from course to course, but you can generally expect to attend scheduled teaching sessions between the end of September and mid-December, and from mid-January to the end of April.

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 four types of module delivered as part of this programme. They are:

- Compulsory core module – a module that you are required to study on this course;
- Optional core module – these allow you some limited choice of what to study from a list of modules;
- Programme approved elective module – subject-related modules that count towards the number of subject credits required by your degree;
- Free-standing elective module – a free choice of modules that count towards the overall credit requirement but not the number of subject-related credits.

Dual Honours
All dual honours pathways must include a minimum of 45 subject related credits (from either compulsory or optional or programme approved electives) in Year 2 (Level 5) and Year 3 (Level 6).

All students must take four Human Biology modules at Levels 4, 5 and 6, as indicated in the tables below. Many modules are shared with students on other courses, such as Biology, Neuroscience, Biomedical Science, Biochemistry, Physiotherapy or Environment and Sustainability. There is also the option of studying abroad for either one of the two semesters or for one whole year (International Year) between Level 5 and Level 6 (see Annex A). At Level 6, students take four modules in Human Biology, one of which must be one of the compulsory independent study project (ISP) modules: Experimental Project, Non-Experimental Project, Dissertation and Applied Life Sciences Placement.

Dual Honours Combining Human Biology and Biochemistry

Level 6 students have the option of taking a Life Sciences double experimental project (with research skills assessment) (30 credit) instead of a single-module experimental project (15 credit) in both subjects. This allows the student to maintain a Dual Honours Route and do a Double Experimental project. From September 2017, Level 6 students must do a 30 credit ISP which will be either a Life Sciences Double Experimental Project (with research skills assessment) or a Double Applied Life Sciences Placement.

Major Route Human Biology
To achieve a major award (the 'Major Route') in Human Biology students must accumulate at least 225 credits in Human Biology across all three levels and to achieve a minor award (the 'Minor Route') in Human Biology they must accumulate at least 90 credits in Biology across all three years, with at least 45 credits at level 5.

All students must take four compulsory core Human Biology modules at Level 4, two from each semester. At Level 5, students take four Human Biology modules, two from each semester, including two compulsory core modules. There is also the option of studying abroad for either one of the two semesters or for one whole year (International Year) between Level 5 and Level 6 (see Annex A).

At Level 6, the Human Biology modules must include a 30 credit Life Sciences Double Experimental Project (with research skills assessment) or 30 credit Applied Life Sciences Placement (from 2017).

The major route through the programme is designed to educate students to the level of **Bachelor of Science With Honours in Human Biology Accredited by the Royal Society of Biology**. Consequently the expectation is that students will complete the full programme of study obtaining 360 credits, **which must include a 30 credit ISP (experimental project or placement)**. If students are unable to achieve 120 credits within the BSc (Hons) level 6, particularly if they are unable to achieve a pass mark in the 30 ISP, their degree title will not include the words "Accredited by the Royal Society of Biology.

Minor Route Human Biology
All students must take four compulsory core modules Human Biology modules at Level 4, two from each semester. At Level 5, students take four Human Biology modules, two from each semester, including two compulsory core modules. There is also the option of studying abroad for one of the two semesters. At Level 6, students either do not study any modules in Human Biology and eight modules in their other subject or one module in Human Biology and seven modules in their other subject. These modules may not include any of the 15-credit independent study project (ISP) modules: Experimental Project, Non-Experimental Project, Dissertation or Applied Life Sciences Placement.

Year 1 (Level 4)

Compulsory Core modules	**Credits**	**Optional Core / Programme Approved Elective modules**	**Credits**
Introduction to Human Physiology	15	None	
Cell and Molecular Biology	15		
Genetics and Evolution	15		
Human Physiology and Pathology	15		

Year 2 (Level 5)

Compulsory Core modules	**Credits**	**Optional Core / Programme Approved Elective modules**	**Credits**
Human Genetics	15	Neurodevelopment	15
Research and Analytical Skills	15	Human Impacts on the Environment, scientific perspectives	15
		Molecular, Cellular and Structural Immunology	15
		Microbes, Viruses and Parasites	15
		Nutrition and Energy Balance	15
		Health and the Environment	15
		Learning and Memory	15
		Life Sciences Study Abroad[1]	15

[1]These modules are taken only by students opting to Study Abroad in semester 1.

Year 3 (Level 6)

Optional Core modules *NB: one of the following modules must be taken:*	**Credits**	**Optional Core / Programme Approved Elective modules**	**Credits**
Life Sciences Double Experimental Project (with research skills assessment) – ISP (Double)	30	Behavioural Neuroscience	15
Life Sciences Single Experimental Project (with research skills assessment) – ISP (single)	15	Human Parasitology	15
Life Sciences Non-experimental Project - ISP (single)	15	Conservation Biology[2]	15
Life Sciences Dissertation – ISP (single)	15	Advances in Medicine	15
Applied Life Sciences Placement – ISP (single)	15	Neurobiological Basis of Brain Disease	15
Double Applied Life Sciences Placement – ISP (Double)	30	Human Evolution	15
		Biology of Disease	15
		Clinical Pathology	15
		Regeneration & Repair in the Nervous System	15
		Special Senses	15
		Applied Regenerative Medicine	15
		Communication Skills for Biologists	15

[2]Prerequisite: Human Impacts on the Environment, scientific perspectives. Note: All option module combinations are subject to timetabling.

For further information on the content of modules currently offered please visit: www.keele.ac.uk/recordsandexams/az

Learning Outcomes

Subject Knowledge and Understanding		
Learning Outcome *Successful students will be able to demonstrate knowledge & understanding of:*	**Module in which this is delivered**	**Principal forms of assessment (of the Level Outcome) used**
U1: the biology of the human body including the mechanisms of life at molecular, cellular and physiological levels and also at the global community level, and its evolution from the geological past to the present, using a multidisciplinary approach	All modules	All assessments
U2: the essential facts, major concepts, principles and theories associated with the human body with particular emphasis on understanding human health and disease and the relationship between the human body and the environment	All modules	All assessments

U3: the basic experimental skills appropriate to the discipline under study that address areas of anatomy, physiology, immunology and genetics	All modules	All assessments
U4: the approaches to acquiring, interpreting, analysing biological data from a variety of sources, including the use of statistics	All modules	All assessments
U5: the contribution of research to the development of biological knowledge	All modules	All assessments
U6: the dynamic, plural and contested nature of the discipline and an awareness of the philosophical and ethical issues involved	All modules	All assessments
U7: the use of biological terminology, nomenclature and classification systems	All modules	All assessments
U8: the relevance of biology to practical problems and improving the quality and sustainability of life	All modules	All assessments
U9: the applicability of the biosciences to the careers to which graduates will be progressing	All modules	All assessments
U10: be aware of current developments in biochemistry and molecular biology including areas of ethical or public concern	All modules	All assessments
U11: be able to demonstrate and ability to mine, manipulate and interpret data from small molecule and macromolecular databases.	All modules	All assessments

Subject Specific Skills		
Learning Outcome *Successful students will be able to:*	**Module in which this is delivered**	**Principal forms of assessment (of the Level Outcome) used**
S1: Appreciate the complexity and diversity of life processes through the study of the human body through their molecular, cellular, and physiological processes, their genetics and evolution, and the interrelationships between them and the environment	All modules	Laboratory reports, laboratory performance, data analysis exercises, project reports, dissertations, examinations
S2: read and use appropriate literature with a full and critical	All modules	Laboratory reports, laboratory performance, data analysis exercises, project reports,

understanding		dissertations, examinations
S3: use a range of laboratory techniques to ensure competence in experimental skills	All modules especially those with practical sessions and 3rd year experimental projects with research skills assessment	Laboratory reports, laboratory performance, data analysis exercises, project reports, dissertations
S4: give a clear and accurate account of a subject and engage in debate and dialogue both with specialists and non-specialists, using appropriate scientific language	All modules	Essays, project reports, dissertations, examinations
S5: to think independently, plan tasks and solve problems	All modules especially those with practical sessions and 3rd year projects	Laboratory reports, laboratory performance, data analysis exercises, project reports, dissertations
S6: formulate a hypothesis and design and employ a variety of methods of study in investigating the hypothesis, acquire and collate scientific data and information and then analyse and report the outcome of the investigations	All modules especially those with practical sessions and 3rd year Independent study modules, Projects	Laboratory reports, project reports, Dissertations
S7: recognise philosophical, moral and ethical issues relevant to the subject, and appreciate the need for ethical standards and professional codes of conduct	All modules	Essays, project reports, dissertations, examinations
S8: develop an appreciation of the interdisciplinary nature of science and of the validity of different points of view	All modules	Essays, project reports, dissertations, examinations

Intellectual Skills		
Learning Outcome *Successful students will be able to:*	**Module in which this is delivered**	**Principal forms of assessment (of the Level Outcome) used**
I1: recognise and apply subject-specific theories, paradigms, concepts or principles	All modules, particularly in 2nd and 3rd Year modules	Essays, reports, examinations, project reports, dissertations
I2: analyse, synthesise and evaluate information critically, including published research or reports	All modules especially those with practical sessions and 3rd year Independent study modules, Projects	Laboratory reports, project reports, dissertations
I3: obtain and integrate several lines of subject-specific evidence to formulate and test hypotheses	All modules especially those with practical sessions and 3rd year Independent study modules, Projects	Laboratory reports, essays, project reports, dissertations

I4: apply subject knowledge and understanding to address familiar and unfamiliar problems	All modules especially those with practical sessions and 3rd year Independent study modules, Projects	Laboratory reports, data analysis exercises, essays, dissertations, project reports
I5: recognise the moral and ethical issues of investigations and appreciate the need for ethical standards and professional codes of conduct	All modules	Essays, data analysis exercises, project reports, dissertations
I6: take responsibility for their learning and reflect upon that learning	Experimental Project, Dissertation and level 3 taught modules	Essays, dissertations, laboratory reports, project reports,

Key or Transferable Skills (including employability skills)		
Learning Outcome *Successful students will be able to:*	**Module in which this is delivered**	**Principal forms of assessment (of the Level Outcome) used**
E1: develop and sustain effective approaches to learning and study, including time management, flexibility, creativity and intellectual integrity	All modules	Essays, dissertations, experimental projects, laboratory performance and reports
E2: communicate about their subject appropriately to a variety of audiences using a range of formats and approaches, using appropriate scientific language, citing and referencing research critically avoiding issues such as plagiarism	All modules, particularly 2nd and 3rd Year modules	Essays, dissertations, experimental projects, laboratory performance and reports, oral and poster presentations
E3: develop interpersonal skills necessary to work in a team, identifying individual and collective goals and responsibilities and perform accordingly, recognise and respect the views and opinions of other team members; evaluate the performance of others and develop an appreciation of the interdisciplinary nature of science and of the validity of different points of view	All modules especially those with tutorials, practical sessions and 3rd year Independent study modules, Projects	Essays, dissertations, experimental projects, laboratory performance and reports, oral and poster presentations, examinations
E4: develop an adaptable, flexible, sustainable and effective approach to study and work, including time management, creativity and intellectual integrity	All modules especially 3rd year Independent study modules, Projects	Essays, dissertations, experimental projects, laboratory performance and reports, oral and poster presentations, examinations
E5: develop the skills necessary for self-managed and lifelong learning (e.g. working independently, time management, organisational,	All modules especially 3rd year Independent study modules, Projects	Essays, dissertations, experimental projects, laboratory performance and reports, oral and poster presentations, examinations

enterprise and knowledge transfer skills)		
E6: identify and work towards targets for personal, academic and career development	All modules especially 3rd year	Essays, dissertations, experimental projects, laboratory performance and reports, oral and poster presentations, examinations

9. Final and intermediate awards

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

Honours Degree	360 credits	You will require at least 120 credits at levels 4, 5 and 6 The number of Human Biology credits a student requires depends on whether Human Biology is taken as a Dual, Major or Minor subject. **Dual Honours:** You will require at least 120 credits in both Human Biology and your other principal study (out of 360 credits overall), with at least 30 credits in year 1 (level 4) and 45 credits in years 2 and 3 (levels 5 and 6) in each of your two Principal subjects. **Major Route**: You will require at least 225 credits in Human Biology and at least 90 credits in their other Minor subject over the course of the degree. Students taking Human Biology as a Major subject must obtain at least 30 credits in Human Biology at each of level of study. **Minor Route:** You will require at least 90 credits in Human Biology and at least 225 credits in your other Major subject over the course of the degree. Students taking Human Biology as a Minor subject must obtain at least 30 credits in Human Biology in Year 1 (level 4) and 45 credits in Human Biology in Year 2 (level 5).
Diploma in Higher Education	240 credits	You will require at least 120 credits at level 4 or higher and at least 120 credits at level 5 or higher
Certificate in Higher Education	120 credits	You will require at least 120 credits at level 4 or higher

NB: Students who do not achieve a pass mark in the 30 credit ISP (Independent Study Project) may be eligible for a BSc (Hons) Studies in Biology. This award is not accredited by the Royal Society of Biology

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

Human Biology with Work Placement Year: 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 in Human Biology with Work Placement year. Students who do not complete, or fail the placement year, will be transferred to the three-year Human Biology programme.

10. How is the Programme assessed?

The wide variety of assessment methods used within Human Biology at Keele reflects the broad range of knowledge and skills that are developed as you progress through the degree programme. Teaching staff pay particular attention to specifying clear assessment criteria and providing timely, regular and constructive feedback that helps to clarify things you did not understand and helps you to improve your performance. The following list is representative of the variety of assessment methods used within Human Biology:

- **Unseen examinations** in different formats test students' knowledge and understanding of human biology. Examinations may consist of essay, short answer and/or multiple choice questions

- **Essays**, including those based on case study material, also test the quality and application of subject knowledge. In addition they allow students to demonstrate their ability to carry out basic bibliographic research and to communicate their ideas effectively in writing in an appropriate scholarly style using the Harvard system of referencing

- **Class tests** taken either conventionally or online via the Keele Learning Environment (KLE) assess students' subject knowledge and their ability to apply it in a more structured and focused way

- **Group activities** might include working on a collaborate project such as compiling a book chapter

- **Dissertations** are critical reviews of other scholars' work and test students' ability to identify and summarise the key points of a text and to evaluate the quality of arguments and the evidence used to support them. In the case of work based on empirical research, reviews also assess students' knowledge of research methodologies and their ability to make critical judgements about the appropriateness of different strategies for collecting and analysing data

- **Experimental projects** test students' knowledge of research methodologies and their ability to carry them out. They also enable students to demonstrate their ability to formulate research questions, design experiments, carry them out and analyse the results

- **Non-Experimental projects** test students' knowledge of research methodologies and their ability to carry them out. They are presented with some data which they analyse and report upon, in the context of current knowledge in that specific area

- **Laboratory reports** are formal summaries of work carried out in the laboratory, presenting analysed data and conclusions. They test a range of practical laboratory skills and the ability to collect analyse and present data

- **Oral presentations** assess students' subject knowledge and understanding. They also test their ability to work effectively as members of a team, to communicate what they know orally and visually, and to reflect on these processes as part of their own personal development

Marks are awarded for summative assessments designed to assess your achievement of learning outcomes. You will also be assessed formatively to enable you to monitor your own progress and to assist staff in identifying and addressing any specific learning needs. Feedback, including guidance on how you can improve the quality of your work, is also provided on all summative assessments within three working weeks of submission, unless there are compelling circumstances that make this impossible, and more informally in the course of tutorial and seminar discussions.

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	Year 1 (Level 4)	Year 2 (Level 5)	Year 3 (Level 6)
Scheduled learning and teaching activities	32%	28%	16%
Guided independent Study	68%	72%	84%
Placements	0%	0%	0%

12. Accreditation

The Major Route and the Biochemistry and Human Biology Combined Route are accredited by the Royal Society of Biology (RSB).

The RSB declare that "Degree accreditation follows an independent and rigorous assessment of degree programmes which contain a solid academic foundation in biological knowledge and key skills, and prepare graduates to address the needs of employers."

The accreditation criteria require evidence that graduates from accredited programmes meet defined sets of learning outcomes, including subject knowledge, technical ability and transferable skills. Degree accreditation by the Royal Society of Biology aims to: foster the development of key learning outcomes and recognise the excellence that exists in giving graduates the skills, knowledge and experience to develop as bioscientists, including their contribution to global needs"

Taking an accredited degree therefore means that employers will be assured that a graduate has the skills that they would expect of a professional biologist.

13. 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/

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

14. What are the typical admission requirements for the programme?

Subject	A-level	Subjects not included	International Baccalaureate	BTEC	Access to Higher Education Diploma	GCSE requirements
Human Biology (Dual Honours)	ABB-BBB A level Biology, Chemistry, Geology, Human Biology, Maths, Physics at grade B or above. A Pass in Science Practical will be required if applicant is taking A level Biology, Chemistry or Physics (England) ** ** Science practical only	General Studies and Critical Thinking	32 - 34 points to include Higher Level Biology, Chemistry, Physics or Geography at 6 or above	DDM You must have taken sufficient Science units, please contact us for advice	Obtain Access to Higher Education Diploma with 30 Level 3 credits at Distinction. You must also have taken sufficient Science credits, please contact us for advice.	Maths @ C (or 4) English Lang @ C (or 4)

	required from applicants taking reformed A level Biology, Chemistry or Physics in England.					

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.

Please note: All non-native English speaking students are required to undertake a diagnostic English language assessment on arrival at Keele, to determine whether English language support may help them succeed with their studies. An English language module may be compulsory for some students during their first year at Keele.

Accreditation of Prior Learning (APL) 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:
http://www.keele.ac.uk/qa/accreditationofpriorlearning/

15. How are students supported on the programme?

Support for student learning on the Programme is provided in the following ways:

- Module tutors are responsible for providing support for learning on the modules. They also give individual feedback on in-course assessments and more general feedback on examinations.
- Tutors and demonstrators provide help and advice to students in laboratory sessions.
- Every student is allocated to a personal tutor who is responsible for reviewing and advising on students' academic progress in Human Biology and on their other Principal Programme.
- Personal tutors also act as a first point of contact for students on non-academic issues which may affect their learning and can refer students on to a range of specialist health, welfare and financial services co-ordinated by the University's Centre for Learning and Student Support.

All members of teaching staff on the Human Biology Principal Programme are available to see students during office hours, if available, and by appointment.

16. Learning Resources

Human Biology is taught in modern teaching rooms across the University, almost all of which are equipped with computers, internet access and electronic whiteboards or projection equipment. Rooms may be arranged either in traditional lecture format or more informally to allow students to work together in small groups.

Practical sessions are held in dedicated and up-to-date teaching laboratories within the School of Life Sciences.

The learning resources available to students on the Programme include:

- The extensive collection of books and journals relevant to undergraduate study held in the University Library. Much of this material is also accessible online to Keele students from anywhere in the world with a University username and password.
- A smaller collection of textbooks held in the Undergraduate Resource Room in the School of Life Sciences. The Resource Room is open at regular times during teaching periods and the resources are specifically related to the needs of students on Principal Programmes in the School of Life Sciences.
- The Keele Learning Environment (KLE) which provides easy access to a wide range of learning resources including lecture notes, electronic materials available in a repository maintained by the University

Library and other resources – video, audio and text-based – accessible from external providers via the internet.

17. Other learning opportunities

Study abroad (semester)

Students on the Human Biology programme have the potential opportunity to spend a semester abroad in their second year studying at one of Keele's international partner universities.

Exactly which countries are available depends on the student's choice of degree subjects. An indicative list of countries is on the website (http://www.keele.ac.uk/studyabroad/partneruniversities/); however this does not guarantee the availability of study in a specific country as this is subject to the University's application process for studying abroad.

No additional tuition fees are payable for a single semester studying abroad but students do 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 to 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

Whilst students are studying abroad any Student Finance eligibility will continue, where applicable students may be eligible for specific travel or disability grants. Students studying in Erasmus+ destinations may be eligible for grants as part of this programme. Students studying outside of this programme may be eligible for 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.

Study Abroad (International Year)

A summary of the International Year, which is a potential option for students after completion of year 2 (Level 5), is provided at Annex A.

Industrial placement

Students registered for Dual Honours or Major Route in Biology may undertake an industrial placement between years 2 and 3. This forms part of the Applied Life Sciences Placement module at Level 6.

Students wishing to carry out an industrial placement in the UK will be responsible for organising their own placement, with the support of the module tutors. This allows students to choose when and where to carry out their industrial placement, taking into consideration the potential living and travel expenses incurred and the effect on other opportunities available to earn money. Students are encouraged to consider the potential costs incurred in carrying out the industrial placements at the time of setting these up. Some placements attract a stipend or salary, which should be discussed with the potential employer before accepting the placement. Further guidance and support on these considerations is available from the module tutors.

Some Industrial placements are available at our partner research institutes throughout continental Europe. These placements attract a stipend from the European Union under the ERASMUS, but you should consider whether the amount offered will cover the costs of accommodation, travel and subsistence before accepting the placement. The ERASMUS tutor in the School of Life Sciences will give any guidance and support required.

Other opportunities

During their time at Keele, Human Biology students also have the opportunity to hear from, and talk to, a range of guest speakers and presenters including researchers from around the world. Some of these activities are

timetabled as part of taught modules, others are organised separately but are widely advertised and undergraduate students are always welcome to attend.

18. Additional costs

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 additional costs for this undergraduate programme.

19. Quality management and enhancement

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

- The Learning and Teaching Committee of the School of Life Sciences is responsible for reviewing and monitoring quality management and enhancement procedures and activities across the School.
- Individual modules and the Human Biology 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 and as part of the University's Curriculum Annual Review and Development (CARD) process.
- The programmes are run in accordance with the University's Quality Assurance procedures and are subject to periodic reviews under the Internal Quality Audit (IQA) process.

Student evaluation of, and feedback on, the quality of learning on every Human Biology 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 the Curriculum Annual Review and Development (CARD) process.
- Findings related to the Human Biology Programmes 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 Human Biology Programme is considered and acted on at regular meetings of the Programmes Staff/Student Liaison 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 Human Biology Programmes described in this document have 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: Biosciences (2015) http://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/sbs-biosciences-15.pdf?sfvrsn=4eef781_24

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

21. Document Version History

Version history	Date	Notes
Date first created	October 2016	Updated August 2017 with Subject specific ILO S3
Revision history	V2.0: August 2017	Revisions due to RSB accreditation requirements. Includes: addition of alternative degree titles for students who a) completed the work placement and b) compensated the ISP modules at Level 6; addition of DH Biology and Biochemistry a an accredited pathway; minor changes to the experimental project module at Level 6 (now with research skills assessment). [major – reissued]
	V2.1: April 2019	Removal of Developmental Biology (optional module) at Level 6 and addition of 'Applied Regenerative Medicine' and 'Communication Skills for Biologists' [minor]
Date approved	16/10/2017	

Annex A for Dual Honours Programmes

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.

International Year Programme

Students registered for Dual Honours Biology may either be admitted for or apply to transfer during their period of study at Level 5 to the Dual Honours programme in both their principal subjects, providing that they meet the progression criteria outlined in this document. Students accepted onto the International Year programme will have an extra year of study at an international partner institution after they have completed Year 2 (Level 5) at Keele.

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 Dual Honours programme without the International Year 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 Dual Honours Biology with International Year'.

International Year Programme Aims

In addition to the programme aims specified in the main body of this document, the international year programme of study aims to provide students with:

1. Personal development as a student and a researcher with an appreciation of the international dimension of their subject
2. Experience of a different culture, academically, professionally and socially

Entry Requirements for the International Year

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 60% across all modules at Level 5 is normally required)
- 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 personal tutor, 1st and 2nd year tutors and programme director)

Student Support

Students will be supported whilst on the International Year via the following methods:

- Phone or Skype conversations with Study Abroad tutors, in line with recommended Personal Tutoring meeting points.
- Support from the University's Global Education Team

Learning Outcomes

In addition to the learning outcomes specified in the main text of the Programme Specification, students who complete a Keele undergraduate programme with International Year will be able to:

a. Describe, discuss and reflect upon the cultural and international differences and similarities of different learning environments

b. Discuss the benefits and challenges of global citizenship and internationalisation
c. Explain how their perspective on their academic discipline has been influenced by locating it within an international setting.

In addition, students who complete 'Dual Honours Biology with International Year' will be able to:

i) Use independent research skills to identify relevant information resources on a range of subjects related, or complementary, to Biology.

ii) 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 Dual 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.

Course Regulations

Students registered for the Dual Honours Biology with International Year' are subject to the course 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 areas.

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 Biology module with significant overlap to Level 6 modules to be studied 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

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 studying in Erasmus+ destinations 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.