

Programme Specification: Undergraduate

For students starting in Academic Year 2017/2018

1. Course Summary

Names of programme(s) and award title(s)	BSc (Hons) Biomedical Science BSc (Hons) Biomedical Science with International Year (see Annex A for details) BSc (Hons) Applied Biomedical Science BSc (Hons) Studies in Biomedical Sciences
Award type	Single Honours
Mode of study	Full time
Framework of Higher Education Qualification (FHEQ) level of final award	Level 6
Duration	3 years (if taken without a placement or with a 14-week Applied Biomedical Science placement) 4 years if taken with a 46-week Life Sciences placement or Applied Biomedical Science placement, or the International Year option
Location of study	Keele University – main campus
Accreditation (if applicable)	The Biomedical Science course, with or without the International Year, is accredited by the Royal Society of Biology and the Institute of Biomedical Science (IBMS). The Applied Biomedical Science (ABMS) course is also approved by the Health & Care Professions Council (HCPC). For further details see section 12
Regulator	Office for Students (OfS)
Tuition Fees	<p>UK/EU students: Fee for 2017/18 is £9,250*</p> <p>International students: Fee for 2017/18 is £15,250**</p> <p>The fee for the placement year is calculated at 20% of the standard year fee</p> <p>The fee for the international year abroad is calculated at 15% of the standard year fee</p>

* 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/>

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 Single Honours programme?

The Single Honours programme described in this document allows you to focus more or less exclusively on Biomedical Science. In keeping with Keele's commitment to breadth in the curriculum, the programme also gives you the opportunity to take some modules outside Biomedical Science, in other disciplines and in modern foreign languages as part of a 360-credit Honours degree. Thus it enables you to gain, and be able to demonstrate, a distinctive range of graduate attributes.

3. Overview of the Programme

Biomedical Science (BMS) is taken as a Single Honours course for all years of study. Although not the typical Keele dual honours format, Biomedical Science still addresses Keele's ethos of breadth of education by being a multidisciplinary degree, being a blend of those sciences that contribute to medical research and understanding of disease. Biomedical Science students need to be able to integrate concepts from many branches of biology in order to understand the diagnosis and treatment of human diseases. These areas of biology include human physiology, biochemistry, pathology, immunology, neuroscience and molecular and cell biology. In order to fulfil these requirements and thereby provide a multidisciplinary learning environment experienced by all students at Keele, the course is delivered by staff from many disciplines within the School of Life Sciences, in collaboration with the School of Pharmacy, the School of Medicine and the University Hospitals of North Midlands NHS Trust. The programme includes the opportunity to graduate with an Applied Biomedical Science (ABMS) degree, which incorporates a clinical placement leading to the opportunity to complete the Health and Care Professions Council (HCPC) Standards of Proficiency for Biomedical Scientists. The Biomedical Science course is Institute of Biomedical Science (IBMS)-accredited and the ABMS course is both HCPC-approved and IBMS-accredited. Both courses are accredited by the Royal Society of Biology. Successful ABMS students are eligible to apply for registration with the HCPC and also receive the IBMS Certificate of Competence, making them eligible for Licentiate membership of the IBMS.

Throughout this document, the term 'Biomedical Science' is used to refer to both BMS and ABMS routes, unless specifically indicated otherwise.

The Programme provides a broad and varied coverage of modern biochemistry and cell biology with emphasis on the biochemical and molecular aspects of health and disease. Staff provide a friendly and supportive environment.

Training is also provided in the employability skills that will help you to reach your potential in your chosen career. Distinctive features of this programme are:

- The course is accredited by the Institute of Biomedical Science (IBMS) and the Royal Society of Biology
- The course draws on the resources and expertise of external practitioners from the Royal Stoke University Hospital's Pathology Department and takes an integrated approach to studying the disease process from a biomedical practitioner's perspective
- Students may undertake a Life Sciences placement year between their second and third years at Keele
- Students may undertake an international year between their second and third years at Keele (see Annex A for criteria and details). This option is accredited by the Royal Society of Biology and the Institute of Biomedical Science.

- Students may study abroad at a partner university for one semester in year 2. N.B. this option is NOT accredited by the Royal Society of Biology or the Institute of Biomedical Science and will result in an award of Studies in Biomedical Sciences.
- Students may, at the end of their first year, apply for transfer to Applied Biomedical Science, a Health and Care Professions Council (HCPC)-approved route incorporating integrated training and hospital laboratory placements (subject to placement availability and a competitive selection process). Successful Applied Biomedical Science graduates will have met the HCPC Standards of Proficiency for Biomedical Scientists and will have the qualifications necessary for eligibility to register with the HCPC.

4. Aims of the Programme

The broad aims of the programme are to:

- provide you with core knowledge, understanding and skills relevant to Biomedical Science
- provide an appropriate qualification for a career as a Biomedical Scientist
- produce skilled and motivated graduates who are suitably prepared for further study or for employment within or outside their field
- cultivate interest in the biosciences, particularly at the cellular and molecular level, within a caring and intellectually stimulating environment
- promote the development of a range of key 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
- Practical skills
- Intellectual skills
- Key or transferable skills (including employability skills)

Subject knowledge and understanding

Successful students will be able to:

- U1 at Level 4, demonstrate knowledge and understanding of biological science core topics, underpinning biomedical science, including anatomy, molecular biology and molecular genetics; biochemistry including macromolecular structure and function, enzymes and catalysis, metabolism and its control, cell biology, cell signalling, membranes and transport; human physiology and pathology
- U2 at Level 4, demonstrate knowledge and understanding of key subjects in biomedical science including: cellular pathology including histology and cytology, clinical biochemistry, immunology and microbiology, haematology and blood transfusion science
- U3 at Level 5, demonstrate knowledge and understanding of core topics listed in U1 and U2 and also including biotechnology, information technology and structural and cellular immunology
- U4 at Level 6, demonstrate knowledge and understanding of selected areas of the core curriculum listed in U1-U3 and including biology of disease and acquisition, analysis and communication of information

- U5 be able to integrate knowledge of the core science and specialist subject areas through study of the biology of disease
- U6 demonstrate knowledge and understanding of the methods by which biomedical data are obtained, including analytical and preparative laboratory techniques
- U7 be able to demonstrate the ability to mine, manipulate and interpret data from small molecule and macromolecular databases
- U8 demonstrate a critical understanding of the scientific method, formulation and testing of hypotheses and understanding that scientific knowledge is complex, contested and subject to continuous advance
- U9 use appropriately the terminology and nomenclature of the discipline
- U10 be aware of current developments in Biomedical Science including areas of ethical or public concern
- U11 develop an appreciation of the interdisciplinary nature of science and of the validity of different points of view

Practical skills

Successful students will be able to:

- P1 use a range of laboratory techniques for the acquisition and analysis of information relevant to the subject
- P2 design, conduct, analyse, report and evaluate biomedical experiments
- P3 work safely and responsibly in the laboratory with awareness of standard procedures, COSHH and good laboratory practice (GLP)
- P4 apply biomedical understanding to familiar and unfamiliar problems
- P5 apply scientific method, planning and analytical skills to carry out a research project
- P6 recognise philosophical and ethical issues relevant to the subject
- P7 Applied Biomedical Science students will be able to demonstrate competence in all the Health Professions Council Standards of Proficiency for Biomedical Scientists

Intellectual skills

Successful students will be able to:

- I1 assess the merits of contrasting theories and explanations and develop reasoned arguments
- I2 identify, analyse and solve problems, whether familiar or unfamiliar, individually and/or co-operatively
- I3 make reasoned decisions
- I4 evaluate evidence and make critical judgements
- I5 abstract and synthesise information and make critical interpretations of data and text
- I6 take responsibility for their own learning and reflect upon that learning
- I7 construct grammatically correct documents in an appropriate academic style, using and referencing relevant ideas and evidence

18 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 acquire, analyse, synthesise, summarise and present information and ideas from a wide range of sources: textual, numerical, verbal and graphical
- E3 prepare, process and present data using appropriate qualitative and quantitative techniques: statistical programmes, spreadsheets and programmes for presenting data visually
- E4 use the Internet and other electronic resources, effectively and critically, as a means of communication and a source of information
- E5 communicate effectively by written, spoken and graphical means using appropriate techniques and scientific language
- E6 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
- E7 develop skills necessary for self-managed and lifelong learning, including working independently, organisational, enterprise and knowledge transfer skills
- E8 motivate themselves and sustain that motivation over an extended period of time
- E9 cite and reference work in an appropriate manner, ensuring academic integrity and the avoidance of plagiarism, whether intentional or not

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 and practical classes will be taught by practising Biomedical Scientists from local Pathology Departments
- **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. Interactive lectures may involve the use of voting systems or involve students in answering quick quizzes
- **Practicals** in laboratories are particularly important and involve gaining skills in modern biochemical and medical laboratory techniques 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. In particular, Problem Based Learning (PBL) is the student-centred learning style, using clinical scenarios, for at least two modules and is incorporated into other modules across the three years of study. Some tutorials and seminars consist largely of student presentations
- **Independent study** based on directed reading from textbooks, 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
- In the **dissertation** module, Biology of Disease, taken in their final year, the opportunity to undertake a piece of independent study, with generic support provided through tutorials
- The opportunity to undertake a piece of **independent experimental research** supervised and supported by a member of staff and usually within a research group
- Students on the Applied Biomedical Science route will have the opportunity to undertake a **clinical placement** between Levels 5 & 6 and to attempt completion of the HCPC Standards of Proficiency for Biomedical Science, through the ABMS Placement Portfolio

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 cellular processes and the complexity of biochemical processes
- **Seminars, tutorials and online discussions** provide opportunities for students to ask questions about, and suggest answers to, biomedical questions 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 to generate, analyse and interpret experimental data and to use a range of techniques relevant to the study of modern biochemistry and medical laboratory sciences
- 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 Pharmacy, School of Medicine and the University Hospitals of North Midlands NHS Trust also contribute to the Programme. Most staff are active in research. A number of members of the School of Life Sciences hold teaching qualifications and are Fellows or Associates of the Higher Education Academy. A number of members of staff are HCPC-registered Biomedical Scientists. Additionally, we draw on expertise of Pathology practitioners from local hospitals, particularly Royal Stoke University Hospital, to deliver certain Pathology-specific elements of the programme.

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 May.

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.

An outline of the structure of the Programme is provided in the tables below. All students study a common first year. Students who are selected onto the ABMS route take a slightly different academic programme of study, in addition to their clinical placement. Every module has a pass mark of 40%, which may be derived from several pieces of assessment. Additionally, some modules may include one or more pieces of assessment that have a minimum 'qualifying' mark i.e. the minimum mark (e.g. 25%) must be reached in that piece of assessment in order for the module to be passed, irrespective of having a pass mark for the module. BMS (but not ABMS) students may replace one of the optional core modules at level 5 with a module from outside Biomedical Science, which is known as an "elective module". A list of Level 5 elective choices for BMS is available at <http://www.keele.ac.uk/electives/modules/modules12-12/>. The elective modules may include:

- Modules designed to help students for whom it is not their first language to improve their use of English for academic purposes.
- Modern foreign languages modules at different levels in French, German, Spanish, Italian, Russian and Japanese.
- Freestanding modules in subjects of general interest including ethics, contemporary religions and the politics, society and culture of some of Britain's European neighbours.
- Freestanding modules related to student volunteering.
- Many compulsory core and optional core modules are shared with students on other courses, such as Biochemistry, Biology, Human Biology or Neuroscience.

Biomedical Sciences route

Year 1 (Level 4)

Compulsory Core modules	Credits	Optional Core / Programme Approved Elective modules	Credits
Nature's Tools: proteins & enzymes	15	None	
Metabolism: major metabolic pathways	15		
Introduction to Human Physiology	15		
Cells & Organelles	15		

Information and Inheritance	15		
Human Physiology and Pathology	15		
Introduction to Medical Laboratory Sciences	15		
Case Studies in Medicine	15		

Year 2 (Level 5)

Compulsory Core modules	Credits	Optional Core / Programme Approved Elective modules <i>NB: students choose 2 modules from the optional and/or elective choices</i>	Credits
Molecular, Cellular & Structural Immunology	15	Human Genetics	15
Gene & Protein Engineering	15	Microbes, Viruses & Parasites	15
Research and Analytical Skills	15	Cell Signalling	15
Metabolism in Health & Disease	15	Professional Relationships	15
Clinical Applications of Biomedical Science II	30	Study Abroad modules	60
		Elective modules	15

NB: Students opting to study abroad for one semester (as opposed to the International Year option) may undertake Study Abroad in only one of the semesters of Level 5. The required modules must be selected from the relevant semester of study abroad. If a student elects to undertake the semester-long Study Abroad option, the degree award will be 'Studies in Biomedical Sciences'; the degree will NOT be accredited by the IBMS and therefore will not fulfil the required academic qualification for eligibility for HCPC registration as a Biomedical Scientist. The year-long International Year option is Royal Society of Biology- and IBMS-accredited.

Year 3 (Level 6)

Compulsory Core modules	Credits	Optional Core / Programme Approved Elective modules <i>NB: students choose 4 modules from the optional and/or elective choices</i>	Credits
Biology of Disease	15	Structural Biology & Macromolecular Function	15
Bioinformatics & Science Communication	15	Brain Disease	15
<i>30 credits of Independent study modules must also be selected:</i> Life Sciences Double Experimental Project (with research skills assessment) OR Double Applied Life Sciences Placement*	30	Advances in Medicine	15
		Human Parasitology	15
		Case Studies in Biomedical Science	15
	30	Clinical Pathology	15
		Applied Regenerative Medicine	15
		Biomedical Engineering	15
		Cancer Biology	15

* The Double Applied Life Sciences Placement module may replace Life Sciences Double Experimental Project (with research skills assessment) if the nature of the placement is deemed suitable and the work carried out meets the criteria of the research project module.

Applied Biomedical Science students must achieve a pass grade for the Double Applied Biomedical Science Placement module. If this module is failed, the student will revert to the Biomedical Science route or Studies in Biomedical Sciences award, if all of the requirements of the Biomedical Science award are not met (i.e. if a mark of less than 40% is achieved: see Course Regulation 11.9). In this case, the mark for the Double Applied Biomedical Science Placement module will be substituted *in lieu* of the Life Sciences Double Experimental Project (with research skills assessment) module.

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

Alternative Levels 5 and 6, leading to award of Applied Biomedical Science (ABMS)

Year 2 (Level 5)

Compulsory Core modules	Credits	Optional Core / Programme Approved Elective modules <i>NB: students choose 1 module from the optional and/or elective choices</i>	Credits
Molecular, Cellular & Structural Immunology	15	Human Genetics	15
Gene & Protein Engineering	15	Microbes, Viruses & Parasites	15
Research and Analytical Skills	15	Cell Signalling	15
Metabolism in Health & Disease	15		
Professional Relationships	15		
Clinical Applications of Biomedical Science II	30		

Year 3 (Level 6)

Compulsory Core modules	Credits	Optional Core / Programme Approved Elective modules <i>NB: students choose 3 modules from the optional and/or elective choices</i>	Credits
Biology of Disease	15	Structural Biology & Macromolecular Function	15
Bioinformatics & Science Communication	15	Brain Disease	15
Case Studies in Biomedical Science	15	Advances in Medicine	15
Double Applied Biomedical Science Placement*	30	Human Parasitology	15
		Clinical Pathology	15
		Biomedical Engineering	15
		Applied Regenerative Medicine	15
		Cancer Biology	15

* Applied Biomedical Science students must achieve a pass grade for the Double Applied Biomedical Science Placement module. If this module is failed, the student will revert to the Biomedical Science route or Studies in Biomedical Sciences award, if all of the requirements of the Biomedical Science award are not met (i.e. if a mark of less than 40% is achieved: see Regulation 11.9). In this case, the mark for the Double Applied Biomedical Science Placement module will be substituted *in lieu* of the Life Sciences Double Experimental Project (with research skills assessment) module.

Learning Outcomes

The table below sets out what students learn in the programme, the modules in which that learning takes place, and the main ways in which students are assessed on their learning. At Levels 4 and 5 these learning outcomes are achieved mainly in the compulsory core modules, which all students are required to take. Some of these outcomes are also achieved in the optional core modules, together with other outcomes not stated here. At Level 6 the stated outcomes are achieved by taking the dissertation/project and/or ABMS placement modules and any of the taught modules offered in each semester.

Subject Knowledge and Understanding		
Learning Outcome	Module in which this is delivered	Principal forms of assessment (of the Level Outcome) used
<i>Successful students will be able to:</i>		
U1 at Level 4, demonstrate knowledge and understanding of biological science core topics, underpinning biomedical science, including anatomy, molecular biology and molecular genetics; biochemistry including macromolecular structure and function, enzymes and catalysis, metabolism and its control, cell biology, cell signalling, membranes and transport; human physiology and pathology	All modules, particularly Nature's Tools, Metabolism, Cells & Organelles, Information & Inheritance, Introduction to Human Physiology and Human Physiology and Pathology	All assessments, including essays, laboratory reports, case reports, class tests, exams
U2 at Level 4, demonstrate knowledge and understanding of key subjects in biomedical science including cellular pathology including histology and cytology, clinical biochemistry, immunology and microbiology, haematology and blood transfusion science	Introduction to Medical Laboratory Science and Case Studies in Medicine	All assessments, including essays, case reports, MCQs, unseen exams and laboratory reports
U3 at Level 5, demonstrate knowledge and understanding of core topics listed in U1 and U2 and also including biotechnology, information technology and structural and cellular immunology	All modules, particularly Medical Laboratory Sciences 1 & 2, Research & Analytical Skills and Molecular, Cellular & Structural Immunology	All assessments including essays, unseen exams, data analysis, laboratory reports
U4 at Level 6, demonstrate knowledge and understanding of selected areas of the core curriculum listed in U1-U3 and including biology of disease and acquisition, analysis and communication of information	All modules, particularly Biology of Disease and Acquisition, Analysis and Communication of Information	All assessments including extended essay, poster and reports
U5 be able to integrate knowledge of the core science and specialist subject areas through study of the biology of disease	All modules, particularly modules at Level 6	Essays, reports, examinations, project reports, dissertations, portfolio,
U6 demonstrate knowledge and understanding of the methods by which biomedical data are obtained, including analytical and preparative laboratory techniques	All modules, particularly those at Level 6	Essays, reports, examinations, project reports, dissertations, portfolio
U7 be able to demonstrate the ability to mine, manipulate and interpret data from small molecule	Acquisition, Analysis and Communication of Information	Bioinformatics report

and macromolecular databases		
U8 demonstrate knowledge and understanding of the scientific method, formulation and testing of hypotheses and understanding that scientific knowledge is complex, contested and subject to continuous advance	All modules, particularly those at Level 6 and project/placement modules	Essays, reports, examinations, project reports, dissertations
U9 use appropriately the terminology and nomenclature of the discipline	All modules	All assessments
U10 be aware of current developments in Biomedical Science including areas of ethical or public concern	All modules, particularly those at Level 6	Essays, reports, examinations, project reports, portfolio, reflective writing
U11 develop an appreciation of the interdisciplinary nature of science and of the validity of different points of view	All modules, particularly those at Level 6	Literature reviews, project reports

Practical Skills		
Learning Outcome	Module in which this is delivered	Principal forms of assessment (of the Level Outcome) used
<i>Successful students will be able to:</i>		
P1 use a range of laboratory techniques for the acquisition and analysis of information relevant to the subject	All modules with practical sessions, particularly project/placement modules	Laboratory reports, laboratory performance, data analysis exercises, project reports, portfolio
P2 design, conduct, analyse, report and evaluate biomedical experiments	All modules with practical sessions and project/placement modules	Laboratory reports, laboratory performance, data analysis exercises, project reports
P3 work safely and responsibly in the laboratory with awareness of standard procedures, COSHH and good laboratory practice (GLP)	All modules with practical sessions and project/placement modules	Laboratory reports, laboratory performance, essays, project reports, portfolio
P4 apply biomedical understanding to familiar and unfamiliar problems	All modules	Laboratory reports, case reports, laboratory performance, data analysis exercises, project reports, dissertations, portfolio
P5 apply scientific method, planning and analytical skills to carry out a research project	Project/placement modules	Project reports
P6 recognise philosophical and ethical issues relevant to the subject	All modules, particularly Case Studies in Medicine, Professional Relationships, Case Studies in Biomedical Science	Essays, case reports, examinations, project reports, dissertations, reflective writing, poster presentation, portfolio
P7 Applied Biomedical Science	Double ABMS Placement	ABMS Placement Portfolio

students will be able to demonstrate competence in all the Health and Care Professions Council Standards of Proficiency for Biomedical Scientists		
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Intellectual Skills		
Learning Outcome <i>Successful students will be able to:</i>	Module in which this is delivered	Principal forms of assessment (of the Level Outcome) used
I1 assess the merits of contrasting theories and explanations and develop reasoned arguments	All modules, particularly those at Level 6	Essays, reports, examinations, project reports, dissertations
I2 identify, analyse and solve problems, whether familiar or unfamiliar, individually and/or co-operatively	All modules with practical sessions, project/placement modules, Biology of Disease, Case Studies in Medicine, Case Studies in Biomedical Science, Professional Relationships	Laboratory reports, project reports, dissertations, case reports, essays, poster presentation
I3 make reasoned decisions	All modules, particularly those at Level 6	Essays, project reports, dissertations, portfolio
I4 evaluate evidence and make critical judgements	Research and Analytical Skills, project/placement modules, Dissertation and Level 6 taught modules, Double ABMS Placement	Essays, data analysis exercises, project reports, dissertations, portfolio
I5 abstract and synthesise information and make critical interpretations of data and text	Research and Analytical Skills, project/placement modules, Dissertation and Level 6 taught modules, Double ABMS Placement	Essays, data analysis exercises, project reports, dissertations, portfolio
I6 take responsibility for their own learning and reflect upon that learning	Project/placement modules, Dissertation, Professional Relationships, Double ABMS Placement	Essays, project reports, dissertations, reflective writing, portfolio, laboratory performance, Personal Development Planning
I7 Construct grammatically correct documents in an appropriate academic style, using and referencing relevant ideas and evidence	All modules where there are written assessments	All assessments
I8 Understand the importance of academic and research integrity	All modules especially those with associated laboratory work	All written work especially lab reports and project reports

Key or Transferable Skills (graduate attributes)		
Learning Outcome <i>Successful students will be able to:</i>	Module in which this is delivered	Principal forms of assessment (of the Level Outcome) used
E1. develop and sustain effective approaches to learning	All modules	All assessments, particularly critical

and study, including time management, flexibility, creativity and intellectual integrity		reflection
E2. acquire, analyse, synthesise, summarise and present information and ideas from a wide range of sources: textual, numerical, verbal and graphical	All modules, particularly Case Studies in Medicine, Case Studies in Biomedical Science, project/placement modules Biology of Disease, Double ABMS Placement	Essays, case reports, dissertations, portfolio, lab reports, oral and poster presentations
E3. Prepare, process and present data using appropriate qualitative and quantitative techniques: statistical programmes, spreadsheets and programmes for presenting data visually	All modules with practical sessions, particularly Research and Analytical Skills, project/placement modules, Double ABMS Placement	Project reports, data analysis exercises, laboratory reports, portfolio
E4. use the internet and other electronic sources, effectively and critically, as a means of communication and a source of information	Many modules, particularly Research and Analytical Skills, project/placement modules, Double ABMS Placement	Presentations, data analysis exercises, project reports, portfolio
E5. communicate effectively by written, spoken and graphical means using appropriate techniques	All modules	Essays, reports, presentations, project reports, dissertations, reflective writing, portfolio
E6. 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	Most modules will have some element of group work, particularly Case Studies in Medicine, Case Studies in Biomedical Science, Professional Relationships	Group poster presentation, group report, tutorial engagement, laboratory work, portfolio
E7. develop skills necessary for self-managed and lifelong learning, including working independently, organisational, enterprise and knowledge transfer skills	All modules, particularly Professional Relationships, Biology of Disease, Research and Analytical Skills, Case Studies in Medicine, Case Studies in Biomedical Science, Double ABMS Placement	Essays, dissertations, project reports, reflective writing, portfolio, critical reflection
E8. motivate themselves and sustain that motivation over an extended period of time	All modules, particularly Biology of Disease, project/placement modules, Double ABMS Placement	Laboratory performance, dissertation, experimental project, portfolio
E9. Cite and reference work in an appropriate manner, ensuring academic integrity and the avoidance of plagiarism whether intentional or not	All modules	All assessments where outside sources are used

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 in Biomedical Science in order to graduate with a named single
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		honours degree in Biomedical Science. Students that complete the Biomedical Science, Applied Biomedical Science or Studies in Biomedical Sciences Programme will normally obtain an Honours Degree (subject to passing the research project (or equivalent placement module) in the case of BMS and ABMS).
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

Biomedical Science 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 Biomedical Science with International Year. Students who do not complete, or fail the international year, will be transferred to the three-year Biomedical Science programme.

10. How is the Programme assessed?

The wide variety of assessment methods used within Biomedical Science 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 Biomedical Science:

- **Unseen examinations** in different formats test students' knowledge and understanding of biomedical science. 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
- **Computer exercises** might include contributing to wikis or blogs or using bioinformatics tools
- **Group activities** might include working on a collaborative 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
- **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 and poster presentations and reports** 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
- **Portfolios** consist of a number of different pieces of work, such as witness statements, annotated laboratory protocols or data, examples of in-course assessment, that together provide evidence to support the achievement of the intended learning outcomes. Generally, they require some evidence of critical reflection on the development of the students' own learning
- **Critical reflection** is an increasingly important skill, used more and more in the workplace, particularly the health care professions, to underpin Continuing Professional Development (CPD). It strengthens individuals' abilities to learn from experience by requiring them to think carefully and write about what and how they have learnt in a given experience, and how it would inform their future practice

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	29%	25%	24%
Guided independent Study	71%	75%	76%
Placements	0%	0%	0%

12. Accreditation

The programme includes the opportunity to graduate with an Applied Biomedical Science (ABMS) degree, which incorporates a clinical placement leading to the completion of the Health and Care Professions Council (HCPC) Standards of Proficiency for Biomedical Scientists.

The Biomedical Science course is accredited by the Royal Society of Biology and the Institute of Biomedical Science (IBMS). The ABMS course is also approved by the Health & Care Professions Council (HCPC). Successful ABMS students are eligible to apply for registration with the HCPC and also receive the IBMS Certificate of Competence, making them eligible for Licentiate membership of the IBMS.

Please note the following:

- **Module Attainment:** Students should note that to be awarded IBMS and 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). For an HCPC-approved ABMS award, students must pass all assessment elements of the Double Applied Biomedical Science Placement module including the portfolio.

- **Regulations:** Your programme has professional accreditation and there are specific regulations, which you have to agree to abide by, as detailed in Annex B.
- **Study abroad (one semester only):** Because studying abroad has implications for IBMS accreditation of the Biomedical Science degree (students taking Study Abroad are not eligible for an IBMS-accredited degree) students wishing to Study Abroad must discuss this in advance with the School of Life Sciences 'Study Abroad tutor' and the Biomedical Science Programme Director.

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/>

The Biomedical Science programme and the Applied Biomedical Science programme are subject to regulations that are required for their accreditation by the Institute of Biomedical Science (IBMS); the Applied Biomedical Science is also subject to regulations required by the Health and Care Professions Council (HCPC). These are detailed in Annex B.

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
Biomedical Science (Single Honours)	<p>ABB</p> <p>2 Science A levels (Applied Science, Biology, Chemistry, Environmental Science, Geography, Geology, Human Biology, Maths, Psychology, Sports Science or Statistics).</p> <p>AS Chemistry and A-level practical component preferred but not required</p>	General Studies and Critical Thinking	34 points to include Higher Level Chemistry and another Higher Level Science subject 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 and 15 Level 3 credits @ Merit. You must also have taken sufficient Science credits, please contact us for advice.	Maths @ C (or 4) English Lang @ C (or 4)

NB: additional criteria apply to transfer onto the Applied Biomedical Science route, see Annex B for details

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 and during fieldwork.
- Every student is allocated to a personal tutor who is responsible for reviewing and advising on students' academic progress in Biomedical Science.
- Personal tutors also act as a first point of contact for students on non-academic issues that 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 Student Support and Development Services.

All members of teaching staff on the Biomedical Science programme are available to see students during office hours, if available, and by appointment.

16. Learning Resources

Biomedical Science 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 teaching laboratories within the School of Life Sciences. These were completely refitted in 2006 at a cost of £3.3 million and have places for a total of 210 students. A new extension to the Huxley Building, with an investment of £11 million, will provide additional teaching laboratory space and is expected to be in use from the start of the 2017/18 academic year.

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 biological publications and materials 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 programmes in the School of Life Sciences. There are also networked PCs available for student use and printing facilities.
- 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 in the School of Life Sciences 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.

Individuals taking Biomedical Science should note, however, that those taking the Study Abroad option may have a limited choice of suitable overseas institutions and will graduate with an award of "Studies in Biomedical

Sciences”, which is not accredited by the IBMS nor the Royal Society of Biology. The Study Abroad option is not available to students on the Applied Biomedical Science route.

Because studying abroad has implications for IBMS accreditation of the Biomedical Science degree (students taking Study Abroad are not eligible for an IBMS-accredited degree) students wishing to Study Abroad must discuss this in advance with the School of Life Sciences ‘Study Abroad tutor’ and the Biomedical Science Programme Director.

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.

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. The Biomedical Science with International Year is accredited by the Royal Society of Biology and the Institute of Biomedical Science.

Other opportunities

In addition to the Life Sciences placement option (4 year programme) and the ABMS placement, there may be a number of opportunities open to students in the School of Life Sciences to apply for a small number of summer placements abroad (for example, Malaysia).

Other learning opportunities for Biomedical Science students vary from year to year but include 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

Applied Biomedical Science students will incur costs to cover a full course of Hepatitis B vaccination and a Disclosure and Barring Services (DBS) enhanced check (2016 prices approximately £120 and £44, respectively).

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 additional costs for this undergraduate programme.

19. Quality management and enhancement

The quality and standards of learning in Biomedical Science 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 Biomedical Science 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.
- The BMS and ABMS programmes are subject to professional body scrutiny and re-accreditation every five years. In addition to IBMS-accreditation, the HCPC annually monitors the ABMS programme.

Student evaluation of, and feedback on, the quality of learning on every Biomedical Science 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 Biomedical Science 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 Biomedical Science 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 Biomedical Science 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: Biomedical Sciences (2015) http://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/sbs-biomedical-sciences-15.pdf?sfvrsn=3deef781_16
- c. Health and Care Professions Council Standards of Education & Training, 2014
- d. Health and Care Professions Council Standards of Proficiency – Biomedical Scientists, 2014
- e. Health and Care Professions Council Standards of Conduct, Performance & Ethics, 2016
- f. [Accreditation Guidance Documentation of the Institute of Biomedical Science](#)
- g. 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	
	V2.0: May 2017	RSB & IBMS accreditation of the International Year confirmed [minor – no reissue]
Revision history	V3.0 August 2017	Biochemistry & Therapy of Disease (optional module) no longer available for this cohort [minor – no reissue]
	V4.0 April 2018	Changes to core modules: 2x15 credit Medical Laboratory Science modules combined to a 30-credit Clinical Applications of Biomedical Science II module and a module name change; also changes to optional modules [major – reissued]
	V4.1 May 2019	Removed Developmental Biology as an optional module at Level 6 and replaced it with a new optional module <i>Applied Regenerative Medicine</i>
Date approved	16/10/2017	

ANNEX A
BSc (Hons) Biomedical Science with International Year

International Year Programme

Students registered for Single Honours Biomedical Science may either be admitted for or apply to transfer during their period of study at Level 5 to the Single Honours 'Biomedical Science with International Year'. Students accepted onto this programme will have an extra year of study (the International Year) 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 BSc (Hons) Biomedical Science 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 'BSc (Hons) Biomedical Science 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 tutor, 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 'BSc (Hons) Biomedical Science 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 Biomedical Science.
- ii) Demonstrate the use of critical thinking skills, augmented by creativity and curiosity, in discussing the application of their International Year studies to Biomedical Science.

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 'BSc (Hons) Biomedical Science 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 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 Biomedical Science 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.

ANNEX B

A number of the course regulations are required by the accrediting/approving bodies, the Institute of Biomedical Science and the Health and Care Professions Council.

Regulations applying to Biomedical Science

- Reg 6 Admission with advanced standing for direct entry into Level 5 is considered on an individual basis for students who have successfully completed studies equivalent to Level 4 of an IBMS-accredited Biomedical Science programme.
- Reg 9.2 Students will normally only be permitted to spend a semester abroad at Level 5 if they have achieved a mean module mark of at least 55% in their Level 4 modules.
- Reg 9.3 If the semester-long Study Abroad option is taken, the degree award will be '*Studies in Biomedical Sciences*', the degree will NOT be accredited by the IBMS and therefore will not fulfil the required academic qualification for HCPC registration as a Biomedical Scientist.
- Reg 9.4 Successful completion of the International Year option results in the degree award of *Biomedical Science with International Year*. Criteria for undertaking this additional year of study are given in Annex A. This option is accredited by the Royal Society of Biology-accredited and IBMS.
- Reg 11.9 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 Biomedical Science degree. For students who do not fulfil the conditions of this regulation, the degree award will be '*Studies in Biomedical Sciences*', the degree will NOT be accredited by the IBMS and therefore will not fulfil the required academic qualification for eligibility for HCPC registration as a Biomedical Scientist. The degree award of '*Studies in Biomedical Sciences*' is not accredited by the Royal Society of Biology.

Regulations applying to Biomedical Science and Applied Biomedical Science

- Reg 7 Students seeking Level 4 module exemptions must demonstrate that they have met the learning outcomes for the modules to be exempted. Exemptions will be considered in line with University guidance: <http://www.keele.ac.uk/qa/accreditationofpriorlearning/>

Students on the Applied Biomedical Science programme cannot be exempted from any module that assesses any of the HCPC's standards of proficiency.

- Reg 9.5 The Applied Life Sciences placement is open to Biomedical Science students who have successfully progressed from Level 5 to Level 6 and who have not opted to take Applied Biomedical Science. Students applying for placements at National Health Service institutions may be asked to disclose any criminal convictions, police cautions, charges or court cases, whether previous, including those considered 'spent', pending or which may arise during the course of the placement period. Failure to disclose any such information could result in dismissal from their placement and/or disciplinary action. Applied Biomedical Science students who do not fulfil the conditions of this regulation satisfactorily, with respect to their Applied Biomedical Science placement, will revert to the Biomedical Science route.

Applied Biomedical Science-specific regulations

The Applied Biomedical Science programme is subject to further criteria required by the Health and Care Professions of Council (HCPC):

- Reg 2 Students on the Applied Biomedical Science programme are subject to the University Regulation on Fitness to Practise ([University Regulation 18](#)).

Reg 5.2 Selection criteria apply to transfer onto the Applied Biomedical Science programme from Level 4 Biomedical Science:

Successful candidates are required to:

- demonstrate a good command of reading, writing and spoken English, evidenced by their Level 4 coursework;
- progress to Level 5;
- demonstrate their aptitude for the role of Biomedical Scientist, through interviewers applying the NHS person specification for a trainee Biomedical Scientist post;
- undergo an enhanced Disclosure and Barring Service (DBS) disclosure process prior to acceptance onto the course, including any spent and unspent criminal convictions and cautions. The University follows the DBS Code of Practice (see <https://www.gov.uk/government/publications/dbs-code-of-practice>) and can provide a copy of this Code on request. Please note that having a criminal record is not necessarily a bar to obtaining a place on this course. Disclosure is mandatory but each case will be considered individually. As a guide, conviction of a criminal offence or acceptance of a police caution for any of the following types of behaviour is likely to result in serious consideration of rejection of an application for transfer onto the ABMS course:
 - Violence
 - Abuse
 - Sexual misconduct
 - Supplying drugs illegally
 - Child pornography
 - Offences involving dishonesty
 - Offences for which you received a prison sentence

This is not a full list. Applicants should also note that the NHS is exempt from certain aspects of the rehabilitation of offenders act. This means that for many appointments (including Biomedical Scientists) applicants must disclose all criminal convictions or accepted police cautions even if the offence is considered to be spent. Disclosure of a criminal record will not automatically prevent employment, each case will be considered individually;

- demonstrate that they have completed a course of Hepatitis B vaccination prior to undertaking their placement;
- demonstrate that they have no medical/health issues that may affect their fitness to practise. This will be assessed by the University's Occupational Health department either before (if medical issues have been identified) or at the start of the programme. A health screening questionnaire must be completed by students holding a place on prior to the start of their Level 5 studies.

Reg 9.6 Applied Biomedical Science students must attend full-time at their allocated hospital(s) during the full period of their vacation placement periods, abide by their conditions of contract and partake fully in the provided training programme. Students who do not fulfil the conditions of this regulation satisfactorily will revert to the Biomedical Science route.

Reg 9.7 Applied Biomedical Science students must achieve a pass grade for the Double Applied Biomedical Science Placement module. If this module is failed, the student will revert to the Biomedical Science route (or Studies in Biomedical Sciences award, if all of the requirements of the Biomedical Science award are not met (i.e. if a mark of less than 40% is achieved: see Regulation 11.9 (see BMS-specific regulations above)). In this case, the mark for the Double Applied Biomedical Science Placement module will be substituted *in lieu* of the Life Sciences Double Experimental Project (with research skills assessment) module.

- Reg 9.8 Students who are awarded an Applied Biomedical Science degree will have met the HCPC's Standards of Proficiency for Biomedical Scientists and will be eligible to apply for HCPC registration (subject to the conditions given in 9.11).
- Reg 9.9 Applied Biomedical Science students must complete a course of vaccination against hepatitis B before starting their placement. Students may be required to pay the cost of this (approximately £120 in 2016).
- Reg 9.10 Applied Biomedical Science applicants must undergo an enhanced DBS disclosure before being accepted on the ABMS route. Students may be required to pay the cost of this (£44 in 2016).
- Reg 9.11 Students should note that an aegrotat award cannot provide eligibility for admission to the HCPC register. In addition, applicants for registration are required to provide further information to the HCPC, including a health reference from a medical practitioner (who must not be a relative) and a character reference from 'someone of professional standing in the community'. Registration is required to work as a qualified Biomedical Scientist in the NHS.
- Reg 9.12 Applied Biomedical Science graduates will also receive the IBMS Certificate of Competence and are eligible for Licentiate Membership of the IBMS.