

Quality Assurance

Programme Specification



Masters, Postgraduate Diploma, Postgraduate Certificate in Biomedical Science

This programme specification applies to students starting the programme from September 2019 onwards.

Information for students: the programme specification is the definitive document summarising the structure and content of your degree programme. It is reviewed and updated every year as part of Keele's Curriculum Annual Review and Development process. The document aims to clarify to potential and current students what you can expect from the study of the subject over the course of your programme.

Names of programme(s) and award title(s)	MSc Biomedical Science (Blood Science) MSc Biomedical Science (Medical Microbiology) Postgraduate Diploma Biomedical Sciences Postgraduate Certificate Biomedical Sciences
Mode of study	Full time and part time routes available
Framework of Higher Education Qualification (FHEQ) level of final award	Level 7
Duration:	Full time - 1 year Part time - 2 years

Details of professional, statutory and regulatory body (PSRB) (If appropriate):

This programme will seek accreditation by the Institute of Biomedical Science (IBMS) as the professional body of Biomedical Scientists. As such it will partially fulfil the criteria set by the IBMS for attainment of the title 'Chartered Scientist'.

IBMS accreditation also means that this programme will be recognised by NHS employers and forms part of the criteria required for Specialist Biomedical Scientists to be promoted into the role of Senior Biomedical Scientist.

More information regarding the role of PSRBs can be found at:

<http://www.keele.ac.uk/qa/professionalstatutoryregulatorybodies/>

External Examiner(s): Further information can be found at:

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

1. What is the philosophy of the Programme?

The overarching educational aim of this programme is to take a detailed exploration of core disciplines within a typical Pathology Laboratory through two distinct pathways; Medical Microbiology or Blood Science (Clinical Biochemistry, Medical Immunology and Haematology are often merged into a larger Blood Science department). As such, you will be exploring the kind of laboratory tests and analysis that take place in these key areas. You will learn

how to critically evaluate and assess each of the techniques and understand how they relate to the diagnosis and monitoring of disease states. You will also investigate the clinical and research implications of Biomedical Science.

Alongside this core academic basis, the programme also aims to develop key professional skills and nurture new attitudes to the approach, integration and application of new knowledge and problem solving. Particular emphasis will be placed on developing critical thinking, innovation, reflective writing, autonomous learning and communication skills to really help prepare you for a lifetime of continued professional development.

The emphasis of this programme is to look at health and disease from a patient or population-oriented, case-study driven perspective. The multidisciplinary approach encourages students to think outside of the box and to join up all of the different pieces of information to get a more holistic level of understanding.

Intended learning outcomes of the programme reflect what successful students should know, understand or to be able to do by the end of the programme. Programme specific learning outcomes are presented in section 3, but to summarise, the course aims are as follows:

- To develop students' knowledge and understanding of different theoretical perspectives, methodological approaches, research interests and practical applications within Biomedical Science.
- To explore and explicitly critique the clinical, diagnostic and research implications within the fields of Medical Microbiology or Clinical Biochemistry, Medical Immunology and Haematology respectively, and to place this in the context of a clinical laboratory, fully considering the potential implications for patients, health workers and research alike.
- To develop a critical awareness of Biomedical ethics and to fully integrate these issues into project management including grant proposal and business planning.
- To support student autonomy and innovation by providing opportunities for students to demonstrate originality in developing or applying their own ideas.
- To direct students to integrate a complex knowledge base in the scrutiny and accomplishment of professional problem solving scenarios and project development.
- To enable student acquirement of advanced laboratory practical competencies and high level analytical skills.
- To promote and sustain communities of practice that allow students to share best practice, encourage a multi-disciplinary approach to problem solving and to develop extensive communication skills, particularly their ability to convey complex, underpinning knowledge alongside their personal conclusions and rationale to specialist and non-specialist listeners.
- To provide students with a wide range of learning activities and a diverse assessment strategy in order to fully develop their employability and academic skills, ensuring both professional and academic attainment.

Keele Graduate Attributes

Engagement with this programme will enable you to further 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. Whilst you will undoubtedly have already developed these skills and abilities to varying degrees, such existing capabilities can always be deepened and enriched. Our educational programme and learning environment is designed to help you to develop further as a well-rounded postgraduate who is capable of making a positive and valued contribution in a complex and rapidly changing world, whichever spheres of life you engage in during and after your studies at Keele.

Please refer to the programme webpages for a statement of how you can achieve the Keele Graduate Attributes through full engagement in the programme and other educational opportunities at Keele. Further information about the Keele Graduate Attributes can be found here: <http://www.keele.ac.uk/journey/>

2. How is the Programme taught?

The programme is delivered through a series of taught modules that comprise a range of learning and teaching activities designed to promote skill development and attitudes for life. This includes: lectures, workshops, seminars, small group activities, case-based learning, laboratory practicals, journal clubs, student-driven talks and extended research projects.

In semesters 1 and 2, modules are structured so that all taught sessions are normally delivered across two days of the working week. It is expected that full-time students will engage in independent study for a further 3 days a week. This consolidation of teaching will allow greater flexibility in terms of how and when you want to study.

Part-time students are expected to attend one day a week for two academic years whilst they complete the taught aspects of the programme. This should reduce the potential impact in terms of workforce planning for employers and allow you greater flexibility to meet both University and work-based needs.

In the final stage of your programme you will complete an independent student project. The contact arrangements for this will vary from project-to-project, but, ordinarily will require full-time attendance throughout semester 3 for full-time students. Part-time students are expected to complete this project within the workplace under academic supervision and guidance.

Semester 1 will focus on two main areas:

- 1) Research: biomedical ethics, grant proposal, analytical reasoning and critique of primary literature.
- 2) Patient pathways: clinical and diagnostic implications for patients and health workers, with the major emphasis being on either Medical Microbiology or Clinical Biochemistry and Immunology (dependent upon chosen pathway). As such, the taught sessions are an opportunity to:

- Develop a structured approach to the design and management of projects including personal research, innovation, consideration of biomedical ethics and grant proposal, through a series of lectures and small group activities and discussions.
- Establish communities of practice to learn cooperatively, recognising the opportunities presented by such forums of active learning, discussion and debate and to develop the ability to establish and sustain such forums for yourself through small group activities, group discussion and case-based learning.
- Develop a structured approach for the critical analysis of underpinning theory and practical applications through specialist guest lectures, group activities and journal-clubs.
- Develop communication skills through case-based learning and student-led talks.
- Discuss current topics in Biomedical Science with health workers currently practising in the field.
- Integrate complex knowledge and understanding to fully investigate patient-driven case studies through case-based learning.

Semester 2 will also focus on two main areas:

- 1) Research: business planning, methodological approaches and laboratory competencies.
- 2) Patient pathways: clinical and diagnostic implications for patients and health workers, with the major emphasis being on the treatment and control of infectious diseases or Haematology and Transfusion Science (dependent upon chosen pathway). As such, the taught sessions are an opportunity to consolidate and develop the learning opportunities and skills presented in semester one as well as:

- To consider the application of new or existing knowledge to novel and current problems within Biomedical Science or within new innovative contexts through seminars, workshops and group activities.
- To develop a structured and considered approach to business planning, essential in taking forward your own ideas.
- Share best practice and develop communication and group collaboration skills through a series of student-led talks.

- Acquire advanced laboratory competencies and analytical skills through a number of laboratory practicals and workshop sessions.

Semester 3 is when you will complete your extended research project. This is the capstone experience of the programme and allows you to consolidate and apply your practical and/or analytical skills to solve current problems working alongside experts either within the University or with local NHS employers. This provides excellent training within the specialist professional area and allows a range of employability skills to be developed.

Further support is provided through a variety of self-study materials including traditional text based and electronic resources. The Keele Learning Environment (KLE) will provide a virtual resource to support learning and teaching activities, enhance student development and provide a forum for the exchange of ideas and discussion of issues that may arise during programme delivery.

The programme is taught by a number of expert academics with active research interests in the field of Biomedical Science and Health Care and Professions Council registrants that are professional practitioners working within the clinical and diagnostic setting of Biomedical Science. All current Keele tutors are either Fellows of the Higher Education Academy or working towards that qualification.

3. What is the Structure of the Programme?

The module structure for the programme is provided in the table below:

	Day 1*	Day 2*
Semester 1	<p>Module 1 (15 credits) Biomedical Ethics & Grant Proposal</p> <p>Module 2** (15 credits) Research Methodologies</p>	<p>Module 3 (30 credits) Clinical Biochemistry & Immunology</p> <p>OR Medical Microbiology</p>
Semester 2	<p>Module 4 (30 credits) Haematology & Transfusion Science</p> <p>OR Infectious Diseases</p>	<p>Module 5 (15 credits) Project Management & Business Planning</p> <p>Module 6** (15 credits) Advanced Laboratory Techniques</p>

Semester 3

<p>Module 7</p> <p>(60 credits)</p> <p>Biomedical Science Research Project</p>
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Table 1: Modular structure of the programme

Students following the blood science route will take the following modules; Clinical Biochemistry and Immunology (semester 1), Haematology and Transfusion Science (semester 2).

Students following the medical microbiology route will take the following modules; Medical Microbiology (semester 1), Infectious Diseases (semester 2).

*Part-time students will complete all modules delivered on day 1 in their first year of study, and day 2 modules in their second year of study.

**Certain students may qualify for exemption from these modules if they have successfully completed the IBMS Specialist Portfolio in an appropriate discipline as detailed in section 5.

Full-time students will study modules 1-7 in consecutive order. Part-time students will study modules 1, 2, and 4 in year one and modules 3, 5 and 6 in year 2. Part-time students will be expected to begin the preparation and data collection elements of their dissertation during semester 3 of their first year, and complete the final analysis and write-up during semester 3 of their second year.

Note, part-time students working as practicing Biomedical Scientists within any of the constitutive disciplines may enrol onto this programme via one of two alternative routes:

1. Candidates who have successfully attained the IBMS Specialist Diploma in an appropriate discipline may enrol onto the programme with accredited prior experiential learning (APEL).
2. Candidates may elect to complete their specialist portfolio in a relevant Blood Science discipline in partnership with the University and under supervision of their employers as part of a Post Graduate Award which confers PGA status. This PGA route entails completion of a 30 M-Level credit module entitled 'IBMS Specialist Portfolio' prior to enrolment onto the MSc.

Learning Outcome	Module in which this is delivered	Principal forms of assessment (of the Learning Outcome) used
<ul style="list-style-type: none"> ● Critically evaluate current professional practice within Clinical Biochemistry, Immunology, Haematology and Transfusion Science or Medical Microbiology. 	<ul style="list-style-type: none"> ○ Biomedical Ethics & Grant Proposal ○ Project Management & Business Planning ○ Advanced Laboratory Techniques ○ Research Methodologies ○ Clinical Biochemistry and Immunology OR Medical Microbiology plus and Haematology and Transfusion Science OR Infectious Disease 	<ul style="list-style-type: none"> ➤ Completion of a grant proposal ➤ Completion of a business plan ➤ Laboratory reports ➤ Reflective portfolio ➤ Essay ➤ Case report ➤ Examination

<ul style="list-style-type: none"> ● Critically reflect on the ways that conceptual theory and methodological design can impact patients, healthcare workers and research interests. 	<ul style="list-style-type: none"> ○ Advanced Laboratory Techniques ○ Research Methodologies ○ Clinical Biochemistry and Immunology OR Medical Microbiology plus and Haematology and Transfusion Science OR Infectious Disease 	<ul style="list-style-type: none"> ➤ Laboratory reports ➤ Reflective portfolio ➤ Essay ➤ Case report ➤ Examination
<ul style="list-style-type: none"> ● Evaluate complex scientific data. 	<ul style="list-style-type: none"> ○ Advanced Laboratory Techniques ○ Research Methodologies ○ Clinical Biochemistry and Immunology OR Medical Microbiology plus and Haematology and Transfusion Science OR Infectious Disease ○ Biomedical Science Research Project 	<ul style="list-style-type: none"> ➤ Laboratory reports ➤ Reflective portfolio ➤ Oral presentations ➤ Written critique ➤ Essay ➤ Case report ➤ Examination ➤ Dissertation ➤ Conference presentation

<ul style="list-style-type: none"> ● Integrate complex knowledge in order to solve problems and assess potential implications for patients and healthcare professionals. ● Work in small groups to share best practice, provide mutual support and promote an environment of active learning. 	<ul style="list-style-type: none"> ○ Biomedical Ethics & Grant Proposal ○ Project Management & Business Planning ○ Clinical Biochemistry and Immunology OR Medical Microbiology plus and Haematology and Transfusion Science OR Infectious Disease 	<ul style="list-style-type: none"> ➤ Completion of a grant proposal ➤ Completion of a business plan ➤ Oral presentations ➤ Case report ➤ Essay ➤ Examination
<ul style="list-style-type: none"> ● Demonstrate innovation and originality in the understanding and application of new knowledge. 	<ul style="list-style-type: none"> ○ Biomedical Ethics & Grant Proposal ○ Project Management & Business Planning ○ Research Methodologies ○ Biomedical Science Research Project 	<ul style="list-style-type: none"> ➤ Completion of a grant proposal ➤ Completion of a business plan ➤ Reflective portfolio ➤ Dissertation
<ul style="list-style-type: none"> ● Demonstrate a systemic understanding of project management including consideration of biomedical ethics, grant proposal and business planning. ● Use scientific research principles to develop novel research questions and/or hypotheses. 	<ul style="list-style-type: none"> ○ Biomedical Ethics & Grant Proposal ○ Project Management & Business Planning ○ Biomedical Science Research Project 	<ul style="list-style-type: none"> ➤ Completion of a grant proposal ➤ Completion of a business plan ➤ Oral presentations ➤ Dissertation ➤ Personal engagement
<ul style="list-style-type: none"> ● Identify a current problem in a personal area of interest and 	<ul style="list-style-type: none"> ○ Research Methodologies ○ Biomedical Science Research 	<ul style="list-style-type: none"> ➤ Literature review ➤ Reflective portfolio

<p>use research literature to construct an evidence-based review of that problem.</p> <ul style="list-style-type: none"> ● Apply a comprehensive understanding of the analytical approach to new scientific problems. 	<p>Project</p>	<ul style="list-style-type: none"> ➤ Dissertation ➤ Conference presentation
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<ul style="list-style-type: none"> ● Report the results of an empirical study applying appropriate skills of presentation, data analysis, interpretation and discussion. ● Acquire independent laboratory competencies. 	<ul style="list-style-type: none"> ○ Advanced Laboratory Techniques ○ Biomedical Science Research Project 	<ul style="list-style-type: none"> ➤ Laboratory reports ➤ Dissertation ➤ Personal engagement ➤ Conference presentation
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<ul style="list-style-type: none"> ● Use scientific research principles to select appropriate techniques of experimental design and analysis to solve research questions or hypotheses. ● Competently plan, organise and execute independent experimental work. 	<ul style="list-style-type: none"> ○ Biomedical Science Research Project 	<ul style="list-style-type: none"> ➤ Dissertation ➤ Personal engagement
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<ul style="list-style-type: none"> ● Develop a critical awareness of current issues and important insights in clinical and diagnostic Blood Science ● Critically appraise scientific publications and test methodologies ● Demonstrate self-direction and dedication to independent learning ● Demonstrate effective time management and work to deadlines ● Communicate personal findings and conclusions to specialist and non-specialist listeners using a variety of methods such as verbal presentations, written 	<ul style="list-style-type: none"> ○ Biomedical Ethics & Grant Proposal ○ Project Management & Business Planning ○ Advanced Laboratory Techniques ○ Research Methodologies ○ Clinical Biochemistry and Immunology OR Medical Microbiology plus and Haematology and Transfusion Science OR Infectious Disease ○ Biomedical Science Research Project 	<ul style="list-style-type: none"> ➤ Dissertation ➤ Completion of a grant proposal ➤ Completion of a business plan ➤ Literature review ➤ Laboratory reports ➤ Reflective portfolio ➤ Oral Presentations ➤ Essay ➤ Case report ➤ Examination ➤ Dissertation ➤ Personal engagement ➤ Conference presentation
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documents and information technology		
<ul style="list-style-type: none"> Act autonomously in implementing and managing academic activities 		

Exit Routes and Number of Credits Required

The university regulations on taught postgraduate courses can be found at:

<http://www.keele.ac.uk/regulations/regulationc7/>

In order to obtain the **Masters qualification**, you are required to obtain all 180 M-level credits appropriate to your named route (see table 1).

There are exit points available conferring eligibility for the award of **Postgraduate Certificate** (PgCert) in Biomedical Sciences and **Postgraduate Diploma** (PgDip) in Biomedical Sciences. In order to attain these qualifications, you must accrue either 60 or 120 M-Level credits respectively through successful completion of any combination of the modules outlined above.

4. How is the Programme assessed?

This programme has a rich and varied assessment strategy to ensure development of key employability and academic skills. This will provide you the opportunity to demonstrate both professional and academic attainment. Assessment design is largely driven by a number of key principles which include: promotion of independent learning, student autonomy, responsibility for personal learning, acknowledgement of the internationalisation perspective within Biomedical Science and development of innovation and originality within your chosen area of interest.

For example, modules 1 and 5, *Biomedical Ethics & Grant Proposal* and *Project Management & Business Planning*, each require you to perform an independent literature review in an area of your choosing. To do this you will need to critically appraise current literature and integrate your new knowledge into a structured argument and **literature review**. You will then be asked to present your findings to the group via **oral presentations** to not only demonstrate acquisition of key skills but also to share best practice and promote an environment of student-centred learning. Finally, you will be able to integrate what you have learnt about your chosen area of study with the taught underlying principles of biomedical ethics, funding opportunities and project management to formulate your own ideas for future development as evidenced by the creation of a novel **grant proposal** and **business plan**. This not only demonstrates your learning but promotes innovation and originality within your field.

Lab reports and **reflective portfolios** will provide you with an opportunity to evidence your understanding of a range of specialist topics, and to present your interpretation and critical evaluations of these areas. Laboratory reports allow you to focus on the critical appraisal of scientific design and test methodologies, whereas reflective portfolios promote an integrated approach to theoretical knowledge, understanding and practical implications of your work alongside personal thoughts and experiences. Reflective writing is a key tool employed by a range of professionals to evidence continued professional development.

Essays provide a platform to evidence your understanding of pre-set problems within key specialist areas.

Examinations consolidate your learning and evidence your ability to tackle problems in a time constrained, independent manner.

The **dissertation**, including an assessed element of **personal engagement**, represents the culmination of the programme, providing an opportunity for you to put together a number of key learning outcomes from across the programme and to begin to take true responsibility for the formulation, management, execution and final interpretation and presentation of a new piece of scientific research or clinical audit. You will have the opportunity to communicate the main findings of your research to your peers and tutors at a **conference presentation**.

A full assessment brief is available via the Keele Learning Environment (KLE). All summative forms of assessment are fully supported by a variety of formative assessment activities and academic guidance.

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

The typical admission requirement is a 2:2 or higher in BSc Biomedical Science. This is in line with the 50% pass mark required for successful completion of this programme.

Consideration will be given to applicants who hold a related bachelor degree. Such consideration will be made on a case-by-case basis and may require a minimum of 2:1 or higher depending on degree of relevance.

Applicants who achieve an overall pass mark of 50% or higher on Keele's one-year full-time Graduate Diploma in Biomedical Science will also be offered a place.

Consideration will be given to candidates who do not meet these criteria but can evidence appropriate, alternative professional qualifications and/or experience. For more details regarding Accreditation of Prior Learning, please visit: <http://www.keele.ac.uk/qa/accreditationofpriorlearning/>

Applicants who have not had their secondary or tertiary education through the medium of English are expected to have attained the equivalent of an IELTS score of at least 6.5 with a minimum of 6.0 in all subtests.

Applicants who are currently registered with the Health and Care Professions Council and who are currently working as practitioner Biomedical Scientists, are eligible to apply for Accredited Prior Experiential Learning (APEL) if they have attained the IBMS Specialist Diploma. Where this is approved, the candidate will be awarded 30-M level credits and will be exempt from the following two modules: *Advanced Laboratory Techniques* and *Research Methodologies*. These modules will be excluded from the calculation of the final award classification.

Applicants who have completed the 30-credit *IBMS Specialist Portfolio* module are eligible to apply for Accredited Prior Certified Learning (APCL). This module carries 30 M-Level credits and replaces the following two modules: *Advanced Laboratory Techniques* and *Research Methodologies*. The final award classification will include the mark you received for this module in the final award calculation.

6. How are students supported on the programme?

The Programme Director will hold an *Introduction* session towards the beginning of the programme to provide general guidance and advice to programme delivery and lines of accountability and student support. The Programme Director will also be available either directly or indirectly via email or KLE discussion boards for advice on specific problems that you may encounter at any point throughout the programme.

Module leaders are available either directly or indirectly via email for module-specific problems. One-to-one meetings can be arranged as necessary for student consultation. It is the responsibility of module leaders to ensure that appropriate feedback is provided to all students regarding both formative and summative assessment. They will ensure that such feedback is of a high quality and delivered in a timely fashion.

Each student will be appointed a named personal tutor from the academic teaching team for pastoral and academic guidance. Personal tutors may ask to meet you as a group during programme induction and will be available for additional one-to-one consultations as and when you require. They can be contacted by email or telephone. Personal tutors will introduce and promote the School's Personal Development Planning system to further promote and develop acquisition of key skills and attributes.

All students will also have access to a senior tutor who is independent of the teaching team should you wish to discuss any pastoral or academic problems in confidence outside of the direct teaching team.

Individual project supervisors can provide additional academic guidance on research-related issues.

All students are entitled and encouraged to make use of all central university services, including the Keele Postgraduate Association and a range of central services including health, welfare and financial support available from [Student Services](#).

Each year, the student cohort is asked to nominate up to two individuals to represent them on the Student: Staff Voice Committee. Each Student Voice Representative is also invited to both the programme teaching team meetings and the School Learning and Teaching Committee.

7. Learning Resources

This programme 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 you to work together in small groups.

Practical sessions are held in dedicated teaching laboratories within the School of Life Sciences. The School recently underwent a significant expansion, including laboratory provision at a cost in excess of £10 million.

Individual module handbooks will provide a recommended reading list that comprises both traditional text-based resources and a range of electronic, multimedia resources as appropriate. Discussion boards available on KLE may also be used to enhance student support during the period of engagement and provide a forum for the exchange of ideas and discussion of issues that arise.

The programme is supported by a number of guest speakers working within industry or healthcare to provide a more clinical and diagnostic context to the learning and teaching environment. This typically includes Senior Biomedical Scientists, Clinical Scientists, Medical Consultants and world-leading researchers. Students are encouraged to make full use of the opportunities these activities present by asking questions, staying to talk to the professionals after teaching sessions or contacting them later through email to answer any questions students may have on their particular area of expertise or general career advice.

Keele University Library

The Library has many resources for this subject, both on campus and online. Further information about the library can be found at: <http://www.keele.ac.uk/library>

To access online library services off campus, students can use their normal Keele username and password.

Computer facilities

For information about IT Services please consult the following web-site:

<http://www.keele.ac.uk/it>

IT Services is located in the library building. The IT Services Department is responsible for the computing infrastructure in the university and for the support of all staff and students undertaking academic computing tasks. There are a large number of open access PCs available for students as well as printing facilities.

8. Other learning opportunities

Within the School of Life Sciences there are a wide range of seminar opportunities that attract a number of expert researchers both locally (e.g., Keele University, hospitals or research groups) and internationally from around the world. All Biomedical Science students are encouraged to take full advantage of the opportunities these seminars provide and are more than welcome to attend as many of these sessions as you feel to be appropriate. Such seminars are widely advertised around Life Sciences and may be published via the KLE noticeboard.

9. Quality management and enhancement

The Programme Board consists of all academic staff teaching on the MSc Biomedical Science programme and Student Voice Representatives. It is responsible for the day-to-day management of the programme. The Programme Director chairs this body, convenes quarterly meetings and reports to the Head of School. The programme is also supported by a Steering Committee, or Employer Liaison Group, that meets twice a year and consists of representatives of the Programme Board and local stakeholders such as healthcare practitioners, to ensure that the programme material remains current and continues to produce postgraduates fit-for-purpose.

To ensure that the MSc in Biomedical Science maintains the highest possible standards and ensures effective management and continuous enhancement of the quality of learning and teaching, the programme employs the following procedures:

- Student evaluation of teaching: students have the opportunity to evaluate each module and the programme as a whole. Data from such evaluations is reported at regular teaching team meetings and to the School Learning and Teaching Committee.
- Staff Student Voice Committee: this is an integral part of the monitoring and review procedures and provides a valuable source of management data for the teaching team.
- Learning and Teaching Committee: The MSc Biomedical Science Programme Board is an integral part of the School of Life Sciences' Learning and Teaching Committee. This committee meets on a regular basis and is responsible for the continual reviewing and monitoring of quality management and enhancement procedures and activities across the School.
- Peer observation of teaching: staff responsible for delivering the programme undertake annual peer observation of teaching and learning used to identify areas of strength and areas of development.
- Annual Programme Review: individual modules and the MSc Biomedical Science programme as a whole are reviewed and enhanced every year as part of the University's Curriculum Annual Review process. A range of data is used to inform the annual programme review, it comprises student evaluations, external examiner's report and internal programme review and monitoring data.
- The programme will seek accreditation and re-accreditation (as appropriate) from the Institute of Biomedical Science as the professional body for biomedical scientists. Such accreditation is a process of peer review and recognition by the profession of the achievement of quality standards for delivering Masters level programmes.

10. The principles of programme design

The MSc in Biomedical Science evolved from Keele's MSc Biomedical Blood Science programme to provide an additional microbiology pathway. The original MSc Biomedical Blood Science programme was the result of collaboration between Keele University and both Biomedical Scientist and Clinical Scientist practitioners based at the Royal Stoke University Hospital. This collaborative, adaptive approach remains in the expanded provision. It has been designed in accordance with current and proposed career strategies for Healthcare Scientists and revised with reference to, and in accordance with, the guidance set out in the following documents:

- *UK Quality Code for Higher Education*, the Quality Assurance Agency 2018.
- *Learning and Teaching Strategic Map*, Keele University 2015-20.
- *Criteria and Requirements for the Accreditation and Re-accreditation of MSc Degrees in Biomedical Science*, Institute of Biomedical Science 2016.
- *HCPC Standards of Education and Training*, Health and Care Professions Council 2017.
- *HCPC Standards for Continuing Professional Development*, Health and Care Professions Council 2011.

11. Programme Version History

Version History	Date	CHANGES / NOTES
Date first created	February 2019	
Revision history		
Date approved by SLTC	February 2019	
Date approved by FLTC	March 2019	