

# Programme Specification: Post Graduate Taught

## For students starting in Academic Year 2024/25

### 1. Course Summary

<b>Names of programme and award title(s)</b>	MSc Biomedical Science (Blood Science) MSc Biomedical Science (Medical Microbiology)
<b>Award type</b>	Taught Masters
<b>Mode of study</b>	Full-time Part-time
<b>Framework of Higher Education Qualification (FHEQ) level of final award</b>	Level 7
<b>Normal length of the programme</b>	1 year full-time or 2 years part-time
<b>Maximum period of registration</b>	The normal length as specified above plus 3 years
<b>Location of study</b>	Keele Campus
<b>Accreditation (if applicable)</b>	This programme is accredited by the Institute of Biomedical Science (IBMS) as the professional body of Biomedical Scientists. As such it partially fulfils the criteria set by the IBMS for the attainment of the title 'Chartered Scientist'.
<b>Regulator</b>	Office for Students (OfS)
<b>Tuition Fees</b>	<p><b>UK students:</b></p> <p>Full-time fee for 2024/25 is £11,000</p> <p>Part-time fee for 2024/25 is £6,000 per year*</p> <p><b>International students:</b></p> <p>Full-time fee for 2024/25 is £20,700</p>

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

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

### 2. Overview 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.

### **3. Aims of the programme**

The broad aims of the programme are to:

- develop students' knowledge and understanding of different theoretical perspectives, methodological approaches, research interests and practical applications within Biomedical Science.
- 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.
- develop a critical awareness of Biomedical ethics and to fully integrate these issues into project management including grant proposal and business planning.
- support student autonomy and innovation by providing opportunities for students to demonstrate originality in developing or applying their own ideas.
- direct students to integrate a complex knowledge base in the scrutiny and accomplishment of professional problem solving scenarios and project development.
- enable student acquirement of advanced laboratory practical competencies and high level analytical skills.
- 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.
- 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.

### **4. What you will learn**

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

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

#### **Subject knowledge and understanding**

Successful students will be able to:

- Critically evaluate current professional practice within Clinical Biochemistry, Immunology, Haematology and Transfusion Science or Medical Microbiology.
- Critically reflect on the ways that conceptual theory and methodological design can impact patients, healthcare workers and research interests.
- Evaluate complex scientific data.
- Demonstrate a systemic understanding of project management including consideration of biomedical ethics, grant proposal and business planning.
- Develop a critical awareness of current issues and important insights in clinical and diagnostic Biomedical Science.

#### **Subject specific skills**

Successful students will be able to:

- Integrate complex knowledge in order to solve problems and assess potential implications for patients and healthcare professionals.
- Use scientific research principles to develop novel research questions and/or hypotheses.
- Identify a current problem in a personal area of interest and use research literature to construct an evidence-based review of that problem.
- Apply a comprehensive understanding of the analytical approach to new scientific problems.
- Report the results of an empirical study applying appropriate skills of presentation, data analysis,

- interpretation and discussion.
- Acquire independent laboratory competencies.
  - 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.
  - Critically appraise scientific publications and test methodologies.

## Key or transferable skills (including employability skills)

Successful students will be able to:

- Work in small groups to share best practice, provide mutual support and promote an environment of active learning.
- Demonstrate innovation and originality in the understanding and application of new knowledge.
- 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 documents and information technology.
- Act autonomously in implementing and managing academic activities.

## The Keele Graduate Attributes

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

## 5. 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 digital materials, workshops, seminars, small group activities, case-based learning, laboratory practicals, journal clubs, student-driven talks and extended research projects. Digital materials have been designed for online consumption, giving you more flexibility to decide how, when and where to study. This can include the provision of short videos, directed reading, key learning outcomes and Forms that allow you to ask questions anonymously.

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 semester 3 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, project management, business planning, leadership and innovation.

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 the 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.
- To develop a structured and considered approach to business planning, essential in taking forward your own ideas.

- Establish communities of practice to learn cooperatively, recognising the opportunities presented by such forums of active learning, discussion and debate and develop the ability to establish and sustain such forums for yourself through small group activities, group discussion and case-based learning.
- Develop communication skills using case studies 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.

Semester 2 will also focus on two main areas:

1) Research: analytical reasoning, critique of primary literature, 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 the 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.
- Develop a structured approach for the critical analysis of underpinning theory and practical applications through specialist guest lectures, group activities and journal clubs.
- 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 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.

Please note, the order in which you study these semesters will depend upon whether you join the programme in September or January.

Students joining us in September on a full-time programme will study semesters 1, 2 and 3 in sequence.

Students joining us in January on a full-time programme will start the programme in semester 2, then study semester 3, finishing with semester 1.

## 6. Teaching Staff

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.

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.

## 7. What is the structure of the programme?

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

Year	Compulsory	Optional	
		Min	Max
Level 7	120	60	60

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## Module Lists

### Level 7

Please note, the order in which you study these semesters will depend upon whether you join the programme in September or January.

- Students joining in September on a full-time programme will study semesters 1, 2 and 3 in sequence.
- Students joining in January on a full-time programme will start the programme in semester 2, then study semester 3, finishing with semester 1.

Compulsory modules	Module Code	Credits	Period
Scientific Leadership and Innovation	LSC-40123	30	Semester 1
Advanced Research Skills	LSC-40127	30	Semester 2
Biomedical Science Research Project	LSC-40059	60	Semester 3

Optional modules	Module Code	Credits	Period
Medical Microbiology	LSC-40049	30	Semester 1
Clinical Biochemistry and Immunology	LSC-40051	30	Semester 1
Haematology and Transfusion Science	LSC-40053	30	Semester 2
Infectious Disease	LSC-40055	30	Semester 2

### Level 7 Module Rules

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 the following modules in their first year of study:

- Scientific Leadership and Innovation; Haematology & Transfusion Science **OR** Infectious Diseases

and the following modules in their second year of study:

- Clinical Biochemistry & Immunology **OR** Medical Microbiology; Advanced Research Skills

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.

Certain students may qualify for exemption from the Advanced Research Skills module if they have completed the IBMS Specialist Portfolio in an appropriate discipline as detailed in the section below titled 'What are the typical admission requirements for the Programme?'

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## Learning Outcomes

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

### Level 7

<b>Subject Knowledge and Understanding</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
Critically evaluate current professional practice within Clinical Biochemistry, Immunology, Haematology and Transfusion Science or Medical Microbiology.	Medical Microbiology - LSC-40049 Infectious Disease - LSC-40055 Haematology and Transfusion Science - LSC-40053 Clinical Biochemistry and Immunology - LSC-40051 Clinical Biochemistry and Immunology OR Medical Microbiology plus and Haematology and Transfusion Science OR Infectious Disease
Critically reflect on the ways that conceptual theory and methodological design can impact patients, healthcare workers and research interests	Infectious Disease - LSC-40055 Clinical Biochemistry and Immunology - LSC-40051 Scientific Leadership and Innovation - LSC-40123 Medical Microbiology - LSC-40049 Haematology and Transfusion Science - LSC-40053 Clinical Biochemistry and Immunology OR Medical Microbiology plus and Haematology and Transfusion Science OR Infectious Disease
Evaluate complex scientific data	Advanced Research Skills - LSC-40127 Biomedical Science Research Project - LSC-40059
Demonstrate a systematic understanding of project management including consideration of biomedical ethics, grant proposal and business planning	Biomedical Science Research Project - LSC-40059 Scientific Leadership and Innovation - LSC-40123
Develop a critical awareness of current issues and important insights in clinical and diagnostic Blood Science OR Medical Microbiology	Scientific Leadership and Innovation - LSC-40123 Advanced Research Skills - LSC-40127 Infectious Disease - LSC-40055 Haematology and Transfusion Science - LSC-40053 Clinical Biochemistry and Immunology - LSC-40051 Medical Microbiology - LSC-40049 Clinical Biochemistry and Immunology OR Medical Microbiology plus and Haematology and Transfusion Science OR Infectious Disease

<b>Subject Specific Skills</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
Integrate complex knowledge in order to solve problems and assess potential implications for patients and healthcare professionals	Scientific Leadership and Innovation - LSC-40123
Use scientific research principles to develop novel research questions and/or hypotheses	Scientific Leadership and Innovation - LSC-40123 Biomedical Science Research Project - LSC-40059
Identify a current problem in a personal area of interest and use research literature to construct an evidence-based review of that problem	Scientific Leadership and Innovation - LSC-40123 Biomedical Science Research Project - LSC-40059
Apply a comprehensive understanding of the analytical approach to new scientific problems	Biomedical Science Research Project - LSC-40059 Scientific Leadership and Innovation - LSC-40123
Report the results of an empirical study applying appropriate skills of presentation, data analysis, interpretation and discussion	Advanced Research Skills - LSC-40127 Biomedical Science Research Project - LSC-40059
Acquire independent laboratory competencies	Advanced Research Skills - LSC-40127 Biomedical Science Research Project - LSC-40059
Use scientific research principles to select appropriate techniques of experimental design and analysis to solve research questions or hypotheses	Advanced Research Skills - LSC-40127 Biomedical Science Research Project - LSC-40059
Competently plan, organise and execute independent experimental research/work	Advanced Research Skills - LSC-40127 Biomedical Science Research Project - LSC-40059
Critically appraise scientific publications and test methodologies	Advanced Research Skills - LSC-40127 Biomedical Science Research Project - LSC-40059

<b>Key or Transferable Skills (graduate attributes)</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
Work in small groups to share best practice, provide mutual support and promote an environment of active learning	Infectious Disease - LSC-40055 Advanced Research Skills - LSC-40127 Haematology and Transfusion Science - LSC-40053 Clinical Biochemistry and Immunology - LSC-40051 Medical Microbiology - LSC-40049 Scientific Leadership and Innovation - LSC-40123 Clinical Biochemistry and Immunology OR Medical Microbiology plus and Haematology and Transfusion Science OR Infectious Disease
Demonstrate innovation and originality in the understanding and application of new knowledge	Scientific Leadership and Innovation - LSC-40123 Biomedical Science Research Project - LSC-40059 Advanced Research Skills - LSC-40127
Demonstrate self-direction and dedication to independent learning	Medical Microbiology - LSC-40049 Scientific Leadership and Innovation - LSC-40123 Haematology and Transfusion Science - LSC-40053 Infectious Disease - LSC-40055 Advanced Research Skills - LSC-40127 Clinical Biochemistry and Immunology - LSC-40051 Clinical Biochemistry and Immunology OR Medical Microbiology plus and Haematology and Transfusion Science OR Infectious Disease
Demonstrate effective time management and work to deadlines	Scientific Leadership and Innovation - LSC-40123 Infectious Disease - LSC-40055 Advanced Research Skills - LSC-40127 Medical Microbiology - LSC-40049 Haematology and Transfusion Science - LSC-40053 Clinical Biochemistry and Immunology - LSC-40051 Clinical Biochemistry and Immunology OR Medical Microbiology plus and Haematology and Transfusion Science OR Infectious Disease
Communicate personal findings and conclusions to specialist and non-specialist listeners using a variety of methods such as verbal presentations, written documents and information technology	Biomedical Science Research Project - LSC-40059 Advanced Research Skills - LSC-40127 Scientific Leadership and Innovation - LSC-40123
Act autonomously in implementing and managing academic activities	Biomedical Science Research Project - LSC-40059 Advanced Research Skills - LSC-40127 Infectious Disease - LSC-40055 Haematology and Transfusion Science - LSC-40053 Clinical Biochemistry and Immunology - LSC-40051 Medical Microbiology - LSC-40049 Scientific Leadership and Innovation - LSC-40123 Clinical Biochemistry and Immunology OR Medical Microbiology plus and Haematology and Transfusion Science OR Infectious Disease

## 8. Final and intermediate awards



<b>MSc Biomedical Science (Blood Science)</b> <b>MSc Biomedical Science (Medical Microbiology)</b>	180 credits	You will require at least 150 credits at Level 7
<b>Postgraduate Diploma in Biomedical Sciences</b>	120 credits	You will require at least 90 credits at Level 7
<b>Postgraduate Certificate in Biomedical Sciences</b>	60 credits	You will require at least 40 credits at Level 7

## 9. How is the Programme Assessed?

This programme has a rich and varied assessment strategy to ensure the development of key employability and academic skills. This will provide you with the opportunity to demonstrate both professional and academic attainment. Assessment design is largely driven by several key principles which include: the 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, *LSC-40123 Scientific Leadership and Innovation* requires 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 the acquisition of key skills but also to share best practices 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 ideas for future development as evidenced by the creation of a novel **grant proposal** or **business plan**. This not only demonstrates your learning but promotes innovation and originality within your field.

In *LSC-40127 Advanced Research Skills*, **lab reports** and **reflections** 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.

**Literature reviews and critiques** 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 several 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.

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.

## 10. Accreditation

This programme is accredited 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 the 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 to the role of Senior Biomedical Scientist.

## 11. University Regulations

The University Regulations form the framework for learning, teaching and assessment and other aspects of the student experience. Further information about the University Regulations can be found at:

<http://www.keele.ac.uk/student-agreement/>

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

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

See the relevant course page on the website for the admission requirements relevant to this programme:

<https://www.keele.ac.uk/study/>

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 the successful completion of this programme.

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

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.

Recognition of Prior Learning (RPL) is considered on a case-by-case basis and those interested should contact the Programme Director. The University's guidelines on this can be found here:

<https://www.keele.ac.uk/qa/programmesandmodules/recognitionofpriorlearning/>

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 Recognition of Prior Experiential Learning (RPEL) if they have attained the IBMS Specialist Diploma. Where this is approved, the candidate will be awarded 30 Level 7 credits and will be exempt from *LSC-40127 Advanced Research Skills*. This module will be excluded from the calculation of the final award classification.

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

The Programme Director will host a series of induction sessions towards the beginning of the programme to provide general guidance and advice on 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 Academic Mentor from the academic teaching team for pastoral and academic guidance. Academic Mentors 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, Teams or telephone. Academic Mentors will introduce and promote the School's Personal Development Planning system to further promote and develop the 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.

## 14. 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.

## **15. 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.

## **16. Additional Costs**

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

## **17. Quality management and enhancement**

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

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

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

- The results of student evaluations of all modules are reported to module leaders and reviewed by the Programme Committee as part of annual programme review.
- Findings related to the programme from the annual Postgraduate Taught Experience Survey (PTES), 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 on the programme is considered and acted on at regular meetings of the Student Staff Voice Committee.

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

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

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

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

## 18. The principles of programme design

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

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

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

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

**c.** *MSc Degree Re-accreditation Guidance for Cohorts from Sept 2024.*

*HCPC Standards of Education and Training*, Health and Care Professions Council 2017.

*HCPC Standards for Continuing Professional Development*, Health and Care Professions Council 2017.

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 following current and proposed career strategies for Healthcare Scientists and revised with reference to, and in accordance with, the guidance set out in the documents above.

## Version History

### This document

**Date Approved:** 10 June 2024

### Previous documents

Version No	Year	Owner	Date Approved	Summary of and rationale for changes
1	2023/24	REBECCA HARRISON	18 April 2023	
1	2022/23	REBECCA HARRISON	23 August 2022	