

## 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 Pharmacology
<b>Award type</b>	Taught Masters
<b>Mode of study</b>	Full-time
<b>Framework of Higher Education Qualification (FHEQ) level of final award</b>	Level 7
<b>Normal length of the programme</b>	1 year
<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>	n/a
<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><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 Keele MSc Pharmacology programme provides you with study, to an advanced level, into the theoretical and practical aspects of molecular and cellular pharmacology, and modern drug discovery. Building from core concepts in biochemistry, cell biology, physiology and drug design, you will explore approaches to drug development and the molecular mechanisms of drug action of relevance to the treatment of a range of conditions. Advances in drug discovery and future medicines development will consider cutting-edge methodologies applied to drug development and delivery, an understanding of ligand-target interactions, and their impact on human physiology. The integration of computational *in silico* approaches with traditional *in vitro* and *in vivo* models of drug action will explore how theoretical and practical knowledge combine to support basic science in drug development and the translation of new medicines through the drug development pipeline to clinical practice, and associated regulatory and ethical frameworks.

Alongside the core learning programme of the course, you will also develop enhanced skills in the critical analysis and evaluation of primary literature in pharmacology and drug design, as well as higher-level communications skills, critical thinking, innovation and problem solving. The course will also develop advanced skills in the practical study of pharmacology including quantitative analysis of ligand-receptor binding and use of *in vitro* models to study drug action. This will also be supported through the development of enhanced skills in the use of computational tools to support rational drug design and their wider application in basic and clinical pharmacology research and drug discovery. Development of enhanced practical and analytical skills will culminate in the completion of an individual research project, further developing independent research skills for a career in pharmacology and drug discovery.

#### 3. Aims of the programme

The broad aims of the programme are to enable you to:

- develop knowledge and understanding of advanced theoretical perspectives, methodological approaches and current research topics in drug discovery and pharmacology;
- explore and critique advances in pharmacology and the translation of new and future medicines from pre-clinical models to clinical application;
- develop critical awareness of ethical and regulatory frameworks applied to research and development in pharmacology and integrate these into project management, including grant proposal and business planning;
- develop greater autonomy and innovation through the demonstration of originality in developing and applying new ideas or concepts;
- integrate complex knowledge and theories and apply computational, practical and analytical skills in the design and conduct of a research project;
- promote and sustain communities of practice that share best practice, encourage a multi-disciplinary approach to problem solving and to develop extensive communication skills, particularly an ability to convey complex, underpinning knowledge alongside personal conclusions and rationale to specialist and non-specialist listeners;
- engage with a wide range of learning activities and a diverse assessment in order to develop employability and academic skills to an advanced level, 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
- Subject Intellectual skills
- Key or transferable skills (including employability skills)

### Subject knowledge and understanding

Successful students will be able to:

- the fundamental principles of pharmacology and drug discovery, including the chemistry which underpins drug design in context to their physicochemical properties and ligand-target interactions;
- core biochemical, physiological, molecular biology and cell signalling principles to an advanced level, and how such knowledge is integral to an understanding of the chemistry and mode of action of pharmacological agents;
- the critical role of structure-function relationships and how knowledge of the three-dimensional structure of biological macromolecules informs rational drug design;
- existing, novel and emerging pharmacological approaches to the treatment of select diseases, which may include disorders of the central nervous system, cancer and the immune system;
- the molecular mechanisms of toxicology, poisoning and their treatment, including in context to drug metabolism/pharmacokinetics and potential drug interactions;
- advanced computational tools and (macro-)molecular databases, and their application in modern drug discovery;
- experimental methods for the investigation of relevant areas of pharmacology, including *in silico*, *in vitro* and *in vivo* models applied in drug development and the quantitative analysis of drug-receptor interactions, to an advanced level;
- current advances in pharmacology and modern drug discovery, including areas of ethical or public concern, and the regulatory frameworks which apply to the translation of new medicines into clinical practice and their monitoring;
- the role of personalised medicine and stratification of patient groups in context to treatment of disease, with consideration of diverse patient demographics.

### Subject specific skills

Successful students will be able to:

- critically evaluate scientific literature and complex methodologies with a full and critical analysis, while addressing such questions as content, context, aims, objectives, quality of information, and its interpretation and application, including in relation to research dissemination, the acquisition of research funding and project management;
- attain competence in a range of laboratory techniques to an advanced level, employing a variety of methods (including computational studies related to bioinformatics and the use of small molecule and macromolecular databases) in investigating, acquiring, recording and analysing information relevant to pharmacology and drug-ligand interactions;
- work safely and responsibly in the laboratory with awareness of standard procedures such as risk assessment, COSHH, relevant health and safety regulations;
- integrate complex knowledge and theories in order to solve problems;
- apply scientific method, planning and advanced analytical skills in the execution of a research project;

### Subject Intellectual skills

Successful students will be able to:

- critically assess the merits of contrasting theories, paradigms, concepts or principles and develop reasoned arguments;
- make critical interpretations, evaluations and judgements of data;
- obtain, analyse and summarise several lines of subject-specific evidence to formulate and test hypotheses, with critical interpretation of quantitative and qualitative research findings;

- apply appropriate academic practice to ensure adherence to principles of academic and research integrity.

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

Successful students will be able to:

- demonstrate innovation and originality in the understanding and application of new knowledge;
- demonstrate self-direction and dedication to independent learning as a self-critical learner, developing greater autonomy in managing and undertaking research tasks;
- prepare, process, interpret and present data, using appropriate qualitative and quantitative techniques, statistical programmes, spreadsheets and programs for presenting data visually;
- communicate effectively through written reports, critical reviews, oral and poster presentations;
- 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.

### 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?

Diversity, flexibility and inclusivity is at the heart of our Education Strategy. Your Student Voice helps us to shape what we do and we include students, local employers and professional bodies in our decision-making process.

The delivery of our programme will include the following types of activities:

**Digital learning resources.** Traditional 'lectures' are often delivered online using short videos, directed reading, key learning outcomes and Forms that you can use to ask questions anonymously. This approach will give you far more flexibility to study where, when and how you choose.

**Campus-based tutorials and workshops.** Often designed to support digital resources. Tutorials and workshops help promote social learning, develop a sense of community and give you an opportunity to deepen your understanding of core issues, ask questions, reflect on your own learning, and discuss content with other students and your tutors. Other workshops will also support data analysis and report writing, including IT literacy, as well as supporting you in developing skills in computational and bioinformatic analysis, including in context to drug-target binding.

**Laboratory practicals.** A comprehensive laboratory programme covering a diverse range of modern biochemical, molecular and pharmacological techniques designed to train you in the skills needed for a career in pharmacology. The programme will also develop skills in experimental design through enquiry-based learning and will ensure you develop both independent and team-based skills.

**Case-based learning (CBL) tutorials.** Students are expected to play a full part and, often, to lead these discussions. In particular, case-based learning (CBL) is a student-centred style, based on case studies that help you contextualise content taught across the course. These sessions will also develop skills such as leadership, communication and evidence-based problem solving.

**Live, online tutorials, workshops and drop-in sessions.** Often used to host plenary sessions. These plenary sessions are optional, added value and may cover topics common to all students such as career planning and general Q&A sessions to support the student voice etc.

**Independent study.** Based on directed reading from text books, research papers and research reviews to support your learning of the core material and deepen your understanding of the subject.

**Extended research project.** This will further develop your research skills in the critical evaluation of scientific literature and an extended research project will give you the opportunity to design and conduct an in-depth research project in an area of Pharmacology, including formulating a complete research strategy and develop skills in a range of advanced laboratory and/or computational methodologies.

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

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 Academic Mentors or module lecturers on a one-to-one basis.

## 6. Teaching Staff

University life is not just about the content of your degree. It is also an opportunity to network, to speak to people working in fields that excite you. Here in Life Sciences, you will meet a diverse range of staff that you can see by using the following link: (<https://www.keele.ac.uk/lifesci/people/>).

We also invite speakers from the School of Pharmacy and Bioengineering, School of Medicine, School of Chemical and Physical Sciences, and the NHS to enrich your learning. Our staff include world-leading researchers, clinical practitioners and experts in learning and teaching. As part of their training, all staff complete post-graduate courses on learning and teaching. Some take this to Masters level and beyond, choosing to specialise in pedagogic research to ensure that our programmes are taught to the very highest standards. Members of the School of Life Sciences hold recognised or accredited teaching qualifications and the majority are Fellows or Associates of the Higher Education Academy (HEA), whilst a number are Senior Fellows of the HEA. Several Life Sciences' staff members have been awarded Keele's prestigious Excellence in Teaching and Learning awards and several were awarded a KeeleSU Education Award for personal tutoring.

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 academic year runs from September to September and is divided into three 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 (semester one), and from mid-January to the end of April (semester two), with the research project being completed in semester three (May-July). 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.

Year	Compulsory	Optional	
		Min	Max
Level 7	180	0	0

## Module Lists

### Level 7

Compulsory modules	Module Code	Credits	Period
Physiological responses to health and disease	LSC-40091	15	Semester 1
Principles of Pharmacology and Drug Design	LSC-40097	15	Semester 1
Scientific Leadership and Innovation	LSC-40123	30	Semester 1
Advanced Drug Design	LSC-40093	15	Semester 2
Future Medicines	LSC-40095	15	Semester 2
Research Methods in Pharmacology	LSC-40101	30	Semester 2
Pharmacology Research Project	LSC-40089	60	Semester 3

## 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>
The fundamental principles of pharmacology and drug discovery, including the chemistry which underpins drug design in context to their physicochemical properties and ligand-target interactions.	Pharmacology Research Project - LSC-40089 Advanced Drug Design - LSC-40093 Research Methods in Pharmacology - LSC-40101 Principles of Pharmacology and Drug Design - LSC-40097
Core biochemical, physiological, molecular biology and cell signalling principles to an advanced level, and how such knowledge is integral to an understanding of the chemistry and mode of action of pharmacological agents.	Advanced Drug Design - LSC-40093 Research Methods in Pharmacology - LSC-40101 Principles of Pharmacology and Drug Design - LSC-40097 Pharmacology Research Project - LSC-40089 Physiological responses to health and disease - LSC-40091
The critical role of structure-function relationships and how knowledge of the three-dimensional structure of biological macromolecules informs rational drug design.	Advanced Drug Design - LSC-40093 Research Methods in Pharmacology - LSC-40101 Pharmacology Research Project - LSC-40089 Principles of Pharmacology and Drug Design - LSC-40097
Existing, novel and emerging pharmacological approaches to the treatment of select diseases, which may include disorders of the central nervous system, cancer and immune system.	All modules
The molecular mechanisms of toxicology, poisoning and their treatment, including in context to drug metabolism/pharmacokinetics and potential drug interactions.	Advanced Drug Design - LSC-40093 Research Methods in Pharmacology - LSC-40101 Principles of Pharmacology and Drug Design - LSC-40097 Physiological responses to health and disease - LSC-40091 Pharmacology Research Project - LSC-40089
Advanced computational tools and macromolecular databases, and their application in modern drug discovery.	Research Methods in Pharmacology - LSC-40101 Advanced Drug Design - LSC-40093 Principles of Pharmacology and Drug Design - LSC-40097 Pharmacology Research Project - LSC-40089
Experimental methods for the investigation of relevant areas of pharmacology, including in silico, in vitro and in vivo models applied in drug development and the quantitative analysis of drug-receptor interactions, to an advanced level.	Principles of Pharmacology and Drug Design - LSC-40097 Pharmacology Research Project - LSC-40089 Advanced Drug Design - LSC-40093 Research Methods in Pharmacology - LSC-40101
Current advances in pharmacology and modern drug discovery, including areas of ethical or public concern, and The regulatory frameworks which apply to the translation of new medicines into clinical practice and their monitoring.	Pharmacology Research Project - LSC-40089 Future Medicines - LSC-40095
The role of personalised medicine and stratification of patient groups in context to treatment of disease, with consideration of diverse patient demographics.	Principles of Pharmacology and Drug Design - LSC-40097 Future Medicines - LSC-40095

<b>Subject Specific Skills</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
Critically evaluate scientific literature and complex methodologies with a full and critical analysis, while addressing such questions as content, context, aims, objectives, quality of information, and its interpretation and application, including in relation to research dissemination, the acquisition of research funding and project management;	All modules, particularly: Pharmacology Research Project- LSC-40089 Scientific Leadership and Innovation- LSC-40123
Attain competence in a range of laboratory techniques to an advanced level, employing a variety of methods (including computational studies related to bioinformatics and the use of small molecule and macromolecular databases) in investigating, acquiring, recording and analysing information relevant to pharmacology and drug-ligand interactions.	Pharmacology Research Project - LSC-40089 Research Methods in Pharmacology - LSC-40101
Work safely and responsibly in the laboratory with awareness of standard procedures such as risk assessment, COSHH, relevant health and safety regulations.	Pharmacology Research Project - LSC-40089 Research Methods in Pharmacology - LSC-40101
Integrate complex knowledge and theories in order to solve problems.	All modules
Apply scientific method, planning and advanced analytical skills in the execution of a research project.	Future Medicines - LSC-40095 Pharmacology Research Project - LSC-40089

<b>Intellectual skills</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
Critically assess the merits of contrasting theories, paradigms, concepts or principles and develop reasoned arguments.	All modules
Make critical interpretations, evaluations and judgements of data.	Research Methods in Pharmacology - LSC-40101 Pharmacology Research Project - LSC-40089
Obtain, analyse and summarise several lines of subject-specific evidence to formulate and test hypotheses, with critical interpretation of quantitative and qualitative research findings.	Pharmacology Research Project - LSC-40089 Research Methods in Pharmacology - LSC-40101
Understand the importance of academic and research integrity.	Pharmacology Research Project - LSC-40089

Key or Transferable Skills (graduate attributes)	
Learning Outcome	Module in which this is delivered
Demonstrate innovation and originality in the understanding and application of new knowledge.	All modules
Demonstrate self-direction and dedication to independent learning as a self-critical learner, developing greater autonomy in managing and undertaking research tasks.	All modules
Prepare, process, interpret and present data, using appropriate qualitative and quantitative techniques, statistical programmes, spreadsheets and programs for presenting data visually.	Pharmacology Research Project - LSC-40089 Research Methods in Pharmacology - LSC-40101 Future Medicines - LSC-40095
Communicate effectively through written reports, critical reviews, oral and poster presentations.	All modules
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.	Principles of Pharmacology and Drug Design - LSC-40097 Research Methods in Pharmacology - LSC-40101 Physiological responses to health and disease - LSC-40091 Pharmacology Research Project - LSC-40089

## 8. Final and intermediate awards

<b>Master's Degree</b>	180 credits	You will require at least 150 credits at Level 7
<b>Postgraduate Diploma</b>	120 credits	You will require at least 90 credits at Level 7
<b>Postgraduate Certificate</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 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, and development of innovation and originality through a range of authentic and applied assessment types.

For example the Biomedical Ethics & Grant Proposal and Project Management & Business Planning modules, each require you to perform an independent literature review in an area of your choosing related to pharmacology and drug development. 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 an **oral presentation** 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 underlying ethical principles, regulatory frameworks, 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.

**Solving problems in a time-limited fashion** reflect how, in the work environment, we may be required to solve problems in a relatively short amount of time. Online tests will assess your core knowledge and understanding of critical concepts in the discipline. End-of-semester, online, open-book examinations and essays will help you to further evidence your understanding of pre-set problems within specialist topics areas and consolidate your learning, evidencing your ability to tackle problems in a time constrained, and independent manner.

**Laboratory reports** allow you to focus on the critical appraisal of scientific study design, application of relevant methodologies, the quantitative analysis and interpretation of data and its evaluation in context to wider literature. The semester three **extended research project**, 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 take true responsibility for the formulation, management, execution, and final interpretation and presentation of a new piece of scientific research in an area of pharmacology. You will also communicate the main findings of your research to your peers and tutors at a **conference presentation** and **research poster**. Further communication skills, including communicating to different audiences will be developed in a number of ways including delivery of a **group seminar** in area of pharmacology and **journal clubs**.

A full assessment brief is available via the Keele Learning Environment (KLE), specifying clear assessment criteria. 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 does not have accreditation from an external body.

## 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/>

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/ga/programmesandmodules/recognitionofpriorlearning/>

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

The School of Life Sciences operates an open door policy. This means that you can contact any of our staff via email to request a meeting or discuss any problem that you may be experiencing.

In addition to the open door policy, you can also contact the following people across Life Sciences for help and support:

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

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

## 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. IT suites will be used for running workshops and tutorials to support development of key skills in data analysis, as well as advanced computational tools utilising bioinformatics and other (macro-) molecular databases for structural studies in ligand-target binding.

Practical sessions are held in dedicated teaching laboratories within the School of Life Sciences, which over recent years have been completely refitted, providing modern and well-equipped facilities supporting delivery of a diverse practical programme. The extended research project will be held in one of our state-of-the-art research laboratories working with a lead academic supervisor.

Further learning resources available to you on the Programme also include:

- An extensive collection of books and journals held in the University Library on campus, or the health library situated at the University Hospital of North Staffordshire.
- Access to a comprehensive range of ebooks, journals and published papers all available online
- The Keele Learning Environment (KLE) which provides easy access to a wide range of learning resources including lecture materials and other guidance/supporting resources, and Microsoft Teams for further content development and to facilitate live and interactive discussions.

## 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 Pharmacology 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 they 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. QAA Subject Benchmark Statement: Biomedical Sciences- includes Pharmacology (2019):

[https://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/subject-benchmark-statement-biomedical-sciences.pdf?sfvrsn=2bf2c881\\_12](https://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/subject-benchmark-statement-biomedical-sciences.pdf?sfvrsn=2bf2c881_12):

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

d. QAA Characteristics Statement- Master's Degree (2020): <https://www.qaa.ac.uk/en/quality-code/characteristics-statements/characteristics-statement-masters-degrees>

- e. Royal Society of Biology Degree Accreditation Handbook (2019)- subject specific requirements- Pharmacology and Master's accreditation:

[https://www.rsb.org.uk/images/accreditation\\_home/RSB\\_Overall\\_Handbook\\_Sept\\_2019\\_September\\_2020\\_Implementation.pdf](https://www.rsb.org.uk/images/accreditation_home/RSB_Overall_Handbook_Sept_2019_September_2020_Implementation.pdf)

## 19. Annex - Programme-specific regulations

### Programme Regulations: MSc Pharmacology

<b>Final Award and Award Titles</b>	MSc Pharmacology
<b>Intermediate Award(s)</b>	Postgraduate Diploma in Pharmacology Postgraduate Certificate in Pharmacology
<b>Last modified</b>	n/a
<b>Programme Specification</b>	<a href="https://www.keele.ac.uk/qa/programmespecifications">https://www.keele.ac.uk/qa/programmespecifications</a>

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

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

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

## A) EXEMPTIONS

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

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

- **No exemptions apply.**

## B) VARIATIONS

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

**Variation 1: No variations apply**

### Additional Requirements

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

#### Additional requirement 1: Laboratory, lecture and tutorial classes

1.1 Wearing a laboratory coat is compulsory in all classes held in laboratories. Students will not be allowed to attend the laboratory class without a laboratory coat.

1.2 Students must wear appropriate clothing in the laboratories, including sensible footwear. Closed shoes and low heels should be worn. This is to avoid tripping and to protect the feet in the case of spillages. Long hair must be tied back. Students who are inappropriately dressed may, at the discretion of the member of staff in charge, be excluded from the class and recorded as being absent without good cause.

1.3 Students who arrive late to laboratory classes may, at the discretion of the member of staff in charge, be excluded from the class and recorded as being absent without good cause.

1.4 Students who display serious misconduct in any class may, at the discretion of the member of staff in charge, be excluded from the class and recorded as being absent without good cause. Serious misconduct involves wilful damage to property, injury or threat to persons, or persistent disruption of teaching.

1.5 The unauthorised use of mobile phones or headphones is not permitted in any class.

1.6 Students are not permitted to record, video or photograph taught sessions or meetings with staff, except with the permission in advance of the staff concerned. Permission will be given where this is part of an approved disability adjustment. Any permission to record, video or photograph is for personal use only and all recordings, videos or photographs remain the property of the presenter and Keele University.

1.7 Students are required to read and follow the procedures in the School of Life Sciences Safety Handbook, which is available from the Life Science Noticeboard on the KLE.

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

## Version History

## **This document**

**Date Approved:** 17 June 2024

## **Previous documents**

<b>Version No</b>	<b>Year</b>	<b>Owner</b>	<b>Date Approved</b>	<b>Summary of and rationale for changes</b>
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