

Course record information

Name and level of final award	<ul style="list-style-type: none"> • Master of Science - Biomedical Sciences <p>The award is Bologna FQ-EHEA second cycle degree or diploma compatible</p>
Name and level of intermediate awards	<ul style="list-style-type: none"> • Postgraduate Diploma (Pg Dip) - Biomedical Sciences • Postgraduate Certificate (Pg Cert) - Biomedical Sciences
Awarding body/institution	University of Westminster
Teaching institution	University of Westminster
Status of awarding body/institution	Recognised Body
Location of delivery	Primary: Central London
Language of delivery and assessment	English
QAA subject benchmarking group(s)	N/A
Professional statutory or regulatory body	Institute of Biomedical Science (IBMS)
Westminster course title, mode of attendance and standard length	<ul style="list-style-type: none"> • MSc Biomedical Sciences FT, Full-time, September start - 1 year standard length • MSc Biomedical Sciences PT, Part-time day, September start - 2 years standard length
Valid for cohorts	From 2024/5

Admissions requirements

There are standard minimum entry requirements for all postgraduate courses. Students are advised to check the standard requirements for the most up-to-date information. For most courses a decision will be made on the basis of your application form alone. However, for some courses the selection process may include an interview to demonstrate your strengths in addition to any formal entry requirements. More information can be found here: <https://www.westminster.ac.uk/courses/postgraduate/how-to-apply>.

Aims of the programme

The MSc Biomedical Sciences course has been thoughtfully designed to produce graduates who possess not only comprehensive understanding, in-depth knowledge, and practical skills in Biomedical Sciences but also a strong commitment to contributing meaningfully to the healthcare sector and the broader biosciences industry, while upholding values of equality, diversity, inclusion (EDI) and sustainability. Masters graduates will be knowledgeable and ethical bioscientists who are multi-skilled, confident and globally aware.

The MSc Biomedical Sciences programme is intended to be flexible, allowing students to tailor their course of study according to their unique interests and career aspirations. There are three core modules: (a) Professionalism and Skills in biomedical science module (b) Postgraduate Research Methods module and (c) Postgraduate Project module. These foundational modules are complemented by diverse specialist options from which students can select additional courses that align to the specialised disciplines in Biomedical Sciences.

Employment and further study opportunities

Today's organisations need graduates with both good degrees and skills relevant to the workplace, i.e. employability skills. The University of Westminster is committed to developing employable graduates by ensuring that:

- Career development skills are embedded in all courses
- Opportunities for part-time work, placements and work-related learning activities are widely available to students
- Staff continue to widen and strengthen the University's links with employers in all sectors, involving them in curriculum design and encouraging their participation in other aspects of the University's career education and guidance provision
- Staff are provided with up-to-date data on labour market trends and employers' requirements, which will inform the service delivered to students.

Master in Science graduates will benefit from employment opportunities in diagnostic and pathology laboratories, universities, research institutes, contract research organisations, government and policy stakeholders and commercial enterprises involved in pharmaceutical and diagnostic research, development and commercialisation. Also have the option to pursue further studies, including entering PhD or professional doctorate programs, or enrolling in advanced master's courses such as MBAs. Part-time UK students undertaking the Masters in Biomedical Science degree are typically already engaged in diagnostic laboratory-based employment in a healthcare institution and are pursuing this course as part of ongoing professional development. There is an extensive shortfall in the workforce, both in NHS pathology service delivery and the commercial Biomedical Sciences/Life Science sector. This MSc Biomedical Sciences degree will support the educational needs of students wishing to further pursue a career in Biomedical Sciences.

The MSc Biomedical Sciences is not necessarily however a suitable qualification for individuals seeking registration with the Health and Care Professions Council (HCPC) unless they already hold an Institute of Biomedical Science (IBMS) accredited BSc programme in Biomedical Science. Any such individuals who do not hold an IBMS accredited BSc should contact the IBMS to request a degree assessment of their previous BSc qualification to determine if there are any areas of supplementary education required to meet the HCPC Standards of Education and Training and the QAA subject benchmark statement for Biomedical Science and Biomedical Sciences (2023). Whilst it may be possible to meet some of the required supplementary education identified thus identified through MSc modules, our usual vehicle for such supplementary education is through modules on our IBMS accredited BSc Biomedical Science programme. Such needs are considered on an individual basis following the presentation of an IBMS degree assessment form and a personalised programme of study devised to meet those needs.

What will you be expected to achieve?

Course learning outcomes

Learning outcomes are statements on what successful students have achieved as the result of learning.

These are threshold statements of achievement the learning outcomes broadly fall into four categories:

The overall knowledge and understanding you will gain from your course (KU)

Graduate attributes are characteristics that you will have developed during the duration of your course (GA)

Professional and personal practice learning outcomes are specific skills that you will be expected to have gained on successful completion of the course (PPP)

Key transferable skills that you will be expected to have gained on successful completion of the course. (KTS)

Level 7 course learning outcomes: upon completion of Level 7 you will be able to:

- 001 Demonstrate and systematically apply an advanced knowledge and a deep understanding of core concepts, theories, and principles in the field of biomedical sciences with an emphasis on current advancements. (KU)
- 002 Utilize advanced critical thinking and creative problem-solving skills to analyse complex issues in the biomedical sciences; propose solutions, and make evidence-based decisions. (KU CS)
- 003 Demonstrate an advanced level of competence in a range of advanced laboratory techniques and key digital technologies used in biomedical sciences either in clinical practice or biomedical research. (KTS CS)

- 004 Further advance cognitive, technical and creative skills to design and conduct independent autonomous research, by synthesizing and integrating information from different sources, and collating, analysing and interpreting own data. (KTS CS)
- 005 Exhibit high ethical standards and professionalism in biomedical research, patient care, and laboratory practices, adhering to appropriate professional guidelines. (KU PPP)
- 006 Effectively work, both autonomously and collaboratively with professionals from various disciplines, including healthcare providers, researchers, and administrators, to address complex biomedical challenges. (KU PPP KTS)
- 007 Demonstrate advanced proficiency in written and oral communication skills to convey scientific information relevant to Biomedical Sciences, effectively to both technical and non-technical audiences. (KU PPP KTS)
- 008 Methodically lead and strategically manage biomedical research teams and projects, encompassing sustainable resource allocation, proficient budgeting and strategic planning capabilities. (KU PPP KTS)
- 009 Implement advanced proficiency in the comprehension and application of quality assurance principles, ensuring compliance with relevant accreditation standards and regulatory affairs in laboratory and healthcare environments. (KTS)
- 010 Appraise the global reach of biomedical science and its impact on reducing health inequalities through the advancement of scientific knowledge, and worldwide improvement of healthcare through contributions to personalised and precision medicine. (KU KTS)

How will you learn?

Learning methods

The university places the student at the centre of the learning process, with students expected to take personal responsibility for their learning. They are encouraged to further develop the knowledge and skills acquired at the undergraduate or professional level by actively engaging with the learning resources provided, university staff and peers and the wider bioscience and life science industries.

The Master in Biomedical Sciences course is designed to address the dynamic landscape of healthcare settings, catering to the growing demand for versatile, technologically proficient, self-assured, globally conscious professionals. The course teaching and learning strategy is designed to cultivate bioscientists who not only exhibit proficiency in a wide array of laboratory techniques but also excel in contemporary, highly automated biomedical environments. The underlying philosophy of this course is intrinsically interdisciplinary, striving to offer a comprehensive practical and conceptual knowledge. We also provide ample opportunities for students to acquire and apply skills specific to the biosciences while simultaneously equipping them with competencies applicable in a broader professional context. Furthermore, we ensure that our students engage deeply with the ethical and social dimensions that impact our world, nurturing them to become effective communicators adept at utilising diverse media to reach local and global audiences. This course is structured not only to impart knowledge and skills pertinent to Biomedical Sciences but also to cultivate graduate attributes that enhance employability and workplace effectiveness.

Our teaching and learning methods are closely aligned with the course's overarching aims and learning outcomes. By combining advanced theoretical knowledge, practical laboratory experience, interdisciplinary exploration, ethical awareness, effective communication, and career guidance, we ensure that our students are well-prepared to excel in the ever-evolving field of Biomedical Sciences and make meaningful contributions to society.

The School of Life Sciences is committed to the University of Westminster Equality, Diversity and Inclusion (EDI) policy with a local implementation based on three central elements:

- ***Our commitment*** is to ensure an inclusive, safe and supportive learning, working and social environment which enables scientific research and teaching to flourish and encourages our future scientists to grow and realise their true potential.
- ***Our goal*** is to empower all students and staff to critically reflect on their understanding and positionality, with respect to the wide-ranging global scientific perspectives (past and present); encouraging the open debate of differing points of view.
- ***Our pledge*** is to respect and value our diverse Life Sciences community (within and beyond the University of Westminster) and foster an equitable culture as we move forward in the field.

These three elements inform and direct all our learning, teaching and research activities and have been central to our course design process as can be seen in the learning outcomes at course and module level. All staff and students in the school of Life Sciences are expected to embrace and respect these values and reflect these in their teaching methods.

In alignment with our commitment to equality, diversity, inclusion and sustainability, this program not only imparts subject-specific knowledge and skills but also emphasises the development of critical thinking abilities and ethical approaches to research and practice in Biomedical Sciences. Students are encouraged to critically evaluate a wide range of literature from various geographical locations within the Biomedical Sciences field, engage in diverse practical research in the field of Biomedical Sciences, and cultivate a set of transferable skills that will not only enhance their employment prospects but also contribute to the broader goals of EDI and sustainability within the UK and worldwide. Modules are designed to provide a global awareness of diversity and culture, and incorporate a variety of diseases prevalent in both developing and westernised nations. Discussions regarding matters relating to EDI will be strongly encouraged and students from varied cultural backgrounds will be given opportunities via active participation to discuss their own experiences in a safe environment where students will not feel intimidated. For instance, the effects of race and gender on interpretation of biochemical data in relation to diagnosis, interpretation and treatment are emerging within the biomedical field and such discussions will be embraced and encouraged.

Teaching methods

A variety of teaching methods and approaches are employed throughout the course, encompassing formal lectures, practical laboratory sessions and student-centered learning activities such as tutorials and workshops. Delivery will be a mix of on-site using classrooms and specialised teaching spaces such as state of the art teaching laboratories as well as online delivery via the virtual learning environment (Blackboard). In addition to the core academic teaching staff employed in the School of Life Science, the quality of the teaching will be enhanced by a variety of external speakers who will bring the wider Biomedical Sciences/Life Science industry into the classroom. These combined teaching approaches aim to enhance both students' knowledge of Biomedical Sciences and their critical thinking skills through an application-based and experiential approach. Additionally, the course focusses on developing the key skills necessary for any professional scientist. The teaching methods contribute to:

1. **Foundational Learning:** The course commences by guiding students from different educational, social and cultural backgrounds through core essential theoretical concepts and fostering knowledge and understanding of fundamental skills.
2. **Progressive Knowledge Building:** As students advance, the curriculum becomes progressively more specialised, leading to in-depth knowledge acquisition and understanding of advanced concepts and methodologies within the field of Biomedical Sciences/Life Science.
3. **Hands-On Laboratory Work:** Practical laboratory sessions are an integral part of the course, allowing students to apply their theoretical knowledge to real-world scenarios. These sessions span various laboratory techniques and technologies, preparing students to excel in modern, highly automated biomedical laboratories.
4. **Interdisciplinary Exploration:** Our teaching approach encourages students to explore the interdisciplinary nature of Biomedical Sciences. This includes incorporating elements from related fields such as healthcare management, ethics, and global health, fostering a holistic perspective.
5. **Ethical and Social Context Integration:** Students are encouraged to critically examine the ethical and social dimensions of Biomedical Sciences throughout their studies. This includes discussing the implications of research, treatment, and healthcare on society, emphasising the broader societal responsibilities of professionals in Biomedical Sciences.
6. **Effective Communication Skills:** Communication skills are honed through diverse media, enabling students to convey complex scientific concepts to various audiences, both locally and globally. This includes written reports, oral presentations, and engagement in digital communication platforms.
7. **Career Exploration and Guidance:** Prior to graduation, we actively assist and empower students to identify a specific area of interest within Biomedical Sciences that aligns with their career goals. We provide comprehensive information about the diverse professional opportunities available to them, preparing them for successful careers in their chosen field.

The teaching methods employed are flexible and utilise various media. All lecture and tutorial rooms are equipped with data projectors connected to fixed PCs, with the option for lecturers to connect their own laptops if preferred. These rooms also feature visualisers and whiteboards, facilitating a range of interactive teaching styles. The university has also implemented the Blackboard Virtual Learning Environment (VLE), which functions at both course and module levels, with dedicated Blackboard sites for each course and module accessible from the user's homepage. Module-specific Blackboard sites serve as focal points for interaction between staff and students outside the traditional classroom setting, containing administrative and teaching content for the module, facilitating student participation in learning activities, and enabling interaction with staff and peers through open discussion forums. Blackboard is also utilised for managing online coursework submissions, plagiarism checks, and the return of student marks and qualitative feedback via the grade centre/turnitin, enhancing the flexibility of student access and learning. Students will be shown how different tools including

generative AI can be legitimately used to support their learning and professional activities, but will also be educated on the limitations of such technology.

Assessment methods

Each module within the program has defined aims and teaching, learning, and assessment methods designed to facilitate the achievement of its learning outcomes. Our assessment strategy reflects the philosophy of the course, aiming to develop creative, flexible, and thoughtful scientists of the future.

Assessment is integral to the overall learning process, and we offer a range of authentic assessment methods, allowing masters students to demonstrate their knowledge, critical and communication skills in various ways. This approach provides a variety of activities in which students can excel, supporting and encouraging multiple learning styles. Assessment methods are diverse and include practical work, essays, group work, presentations, case study reports and portfolios. The assessments have been designed for students to develop key transferable skills for effective team-working including group planning, communication, negotiation, project management and an appreciation of how group members can bring different strengths and skills to the dynamics of the group.

The 40 credit Level 7 cap-stone project module is primarily assessed through a written dissertation and a *viva voce* examination. The dissertation of significant length will give students the opportunity to demonstrate an in-depth level of understanding of their chosen topic within Biomedical Sciences/Life Science integrating curricular themes from their subject modules with practical skills in data collection, analysis, interpretation and to evaluate, synthesise and present material in an academic and professional manner.

Clear assessment criteria are stated in module documents, linked to the module Learning Outcomes. Formative feedback is provided throughout modules in tutorials, group discussions, and laboratory practical sessions. It is designed to inform students about areas for improvement and current strengths that need nurturing and development. Students receive formal feedback from all summative assessments, directly related to the assessment criteria for each module. To support their development, students are actively encouraged to engage with feedback. Students have the opportunity to discuss their results and feedback with members of the teaching team or their personal tutor. Some assessments might be partly peer-assessed by groups of fellow students under staff supervision, aiding students in developing critical judgement and self/peer evaluation skills. Some formative assessments might evaluate learning outcomes from more than one teaching module, referred to as 'synoptic assessment.' This allows students to combine elements of learning from different modules and practice using their accumulated knowledge and understanding of biomedical science theory and practice. These are key level 7 attributes which prepare students for employment in the Biomedical Sciences/Life Science sector.

Graduate Attribute	Evident in Course Outcomes
Critical and creative thinker	001, 002, 003, 004, 007
Literate and effective communicator	002, 003, 004, 007, 008, 009
Entrepreneurial	008
Global in outlook and engaged in communities	001, 008
Socially, ethically and environmentally aware	001, 008, 009

Course Structure

This section shows the core and option modules available as part of the course and their credit value. Full-time Postgraduate students study 180 credits per year. Additional free text information on the choices may also be included, for example where students must choose one of two modules.. Course structures can be subject to change each academic year following feedback from a variety of sources.

Modules

Level 7

Module Code	Module Title	Status	PT Year (where applicable)	UK credit	ECTS
7BIOM033W	Postgraduate Research Methods	Core	1	20	10
7BIOM043W	Professionalism and Skills in Biomedical Science	Core	1	20	10
7BIOM032W	Postgraduate Project	Core	2	40	20
7BIOM001W	Advanced Cancer Biology	Option	Various	20	10
7BIOM002W	Advances in Cellular Pathology	Option	Various	20	10
7BIOM006W	Cell Signalling in Health and Disease	Option	Various	20	10
7BIOM007W	Cellular Haematology	Option	Various	20	10
7BIOM012W	Clinical Endocrinology and Metabolism	Option	Various	20	10
7BIOM010W	Clinical Microbiology and Therapeutics	Option	Various	20	10
7HMDS002W	Communicating Science	Option	Various	20	10
7BIOM015W	Diagnostic Clinical Biochemistry	Option	Various	20	10
7BIOM018W	Immunohaematology & Haemostasis	Option	Various	20	10
7BIOM020W	Immunopathology	Option	Various	20	10
7BIOM023W	Infectious Diseases and Public Health	Option	Various	20	10
7BIOM025W	Molecular and Cellular Therapeutics	Option	Various	20	10
7BIOM034W	Precision Medicine	Option	Various	20	10
7BIOT004W	Science, Technology and Commercialisation	Option	Various	20	10
7BIOM037W	Systems Biology	Option	Various	20	10

Please note: Not all option modules will necessarily be offered in any one year. In addition, timetabling and limited spaces may mean you cannot register for your first choice of option modules.

Professional body accreditation or other external references

This MSc course is accredited by the Institute of Biomedical Science (IBMS) indicating that the programme meets the required criteria for a programme which delivers more advanced and specialist topics aligned to the clinical specialisms defined in the QAA subject benchmark statement for Biomedical Science and Biomedical Sciences and that students receive a wide-ranging, research informed scientific education and develop practical skills and experience that employers value. The IBMS is the leading professional body for practising Biomedical Scientists and Biomedical Science(s) students with a student membership scheme open to students who are registered on IBMS accredited courses (but are not already IBMS members) with benefits designed to help them make the most of their studies. IBMS eStudent members have access to a range of resources and offers, supporting their learning and enabling them to keep up to date with Biomedical Science.

Course management

Your course is one of a number of programmes in the School of Life Sciences, part of the College of Liberal Arts and Sciences within the University of Westminster, and is managed by a designated course leader. In addition to the course specific role of the course leader, the Head of School, other senior school staff and the Associate Heads of College, also provide support and management at their respective levels. We also have a school employability director and global engagement coordinators who oversee employability and international study opportunities respectively. The course leader is also collectively supported in the management and running of the course by the course teaching team through their responsibilities for individual modules and contributions to planning. You will meet your course leader, teaching team and members of the school senior management during arrivals week, a programme of events designed to help you with enrolment, registration, and orientation to the university, its processes and the culture of higher education.

The course is monitored each year by the course leader and senior members of the School and College to ensure that it is running effectively and that issues that might affect the student experience have been appropriately addressed. Each course will have Course Representative meetings throughout the year and staff will consider the outcomes from these meetings, evidence of student progression and achievement and the External Examiner's reports to evaluate the effectiveness of the course. All courses are reviewed annually as part of the School, College and University Continuous Improvement Processes, reporting finally to the Academic Council of the University which has overall responsibility for the maintenance of quality and standards in the University.

Academic regulations

The current Handbook of Academic Regulations is available at [westminster.ac.uk/academic-regulations](https://www.westminster.ac.uk/academic-regulations).

Course specific regulations apply to some courses.

Academic Support

Upon arrival, an induction programme will introduce you to the staff responsible for the course, the campus on which you will be studying, the Library and IT facilities, additional support available and to your Campus Registry. You will be provided with the Course Handbook, which provides detailed information about the course. Each course has a course leader or Director of Studies. All students enrolled on a full-time course and part time students registered for more than 60 credits a year have a personal tutor, who provides advice and guidance on academic matters. The University uses a Virtual Learning Environment called Blackboard where students access their course materials, and can communicate and collaborate with staff and other students. Further information on Blackboard can be found at <https://www.westminster.ac.uk/current-students/studies/your-student-journey/when-you-arrive/blackboard>

The Academic Learning Development Centre supports students in developing the skills required for higher education. As well as online resources in Blackboard, students have the opportunity to attend Study Skills workshops and one to one appointments. Further information on the Academic Learning Development Centre can be found at [westminster.ac.uk/academic-learning-development](https://www.westminster.ac.uk/academic-learning-development).

Learning support includes four libraries, each holding a collection of resources related to the subjects taught at that site. Students can search the entire library collection online through the Library Search service to find and reserve printed books, and access electronic resources (databases, e-journals, e-books). Students can choose to study in the libraries, which have areas for silent and group study, desktop computers, laptops for loan, photocopying and printing services. They can also choose from several computer rooms at each campus where desktop computers are available with the general and specialist software that supports the courses taught in their College. Students can also securely connect their own laptops and mobile devices to the University wireless network.

Support Services

The University of Westminster Student and Academic Services department provide advice and guidance on accommodation, financial and legal matters, personal counselling, health and disability issues, careers, specialist advice for international students and the chaplaincy providing multi-faith guidance. Further information on the advice available to students can be found at <https://www.westminster.ac.uk/student-advice>.

The University of Westminster Students' Union also provides a range of facilities to support students during their time at the University. Further information on UWSU can be found at <https://www.westminster.ac.uk/students-union>

How do we ensure the quality of our courses and continuous improvement?

The course was initially approved by a University Validation Panel. University Panels normally include internal peers from the University, academic(s) from another university, a representative from industry and a Student Advisor.

The course is also monitored each year by the College to ensure it is running effectively and that issues which might affect the student experience have been appropriately addressed. Staff will consider evidence about the course, including the evidence of student surveys, student progression and achievement and reports from external examiners, in order to evaluate the effectiveness of the course and make changes where necessary.

A Course revalidation takes place periodically to ensure that the curriculum is up-to-date and that the skills gained on the course continue to be relevant to employers. Students meet with revalidation panels to provide feedback on their experiences. Student feedback from previous years is also part of the evidence used to assess how the course has been running.

How do we act on student feedback?

Student feedback is important to the University and student views are taken seriously. Student feedback is gathered in a variety of ways.

- Through student engagement activities at Course/Module level, students have the opportunity to express their voice in the running of their course. Course representatives are elected to expressly represent the views of their peers. The University and the Students' Union work together to provide a full induction to the role of the course representatives.
- There are also School Representatives appointed jointly by the University and the Students' Union who meet with senior School staff to discuss wider issues affecting student experience across the School. Student representatives are also represented on key College and University committees.;
- All students are invited to complete a questionnaire before the end of each module. The feedback from this will inform the module leader on the effectiveness of the module and highlight areas that could be enhanced.
- Final year Undergraduate students will be asked to complete the National Student Survey which helps to inform the national university league tables.

This programme specification provides a concise summary of the main features of the course and the learning outcomes that a student might reasonably be expected to achieve and demonstrate, if they take full advantage of the learning opportunities that are provided. This specification is supplemented by the Course Handbook, Module proforma and Module Handbooks provided to students. Copyright in this document belongs to the University of Westminster. All rights are reserved. This document is for personal use only and may not be reproduced or used for any other purpose, either in whole or in part, without the prior written consent of the University of Westminster. All copies of this document must incorporate this Copyright Notice – 2022©