UNIVERSITY OF WOLVERHAMPTON

Course Specification

Published Date:	30-Apr-2026
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Core Information

Awarding Body / Institution:	University of Wolverhampton		
School / Institute:	School of Pharmacy and Life Sciences		
Course Code(s):	BC018P01UM BC018P31UM	Full-time Part-time	12 Years 2 Years
Course Title:	MSc Applied Microbiology and Biotechnology		
Hierarchy of Awards:	Master of Science Applied Microbiology and Biotechnology		
Language of Study:	English		
Date of DAG approval:	14/Sep/2026		
Last Review:			
Course Specification valid from:			
Course Specification valid to:			

Academic Staff

Course Leader:	Opeolu Ojo
Head of Department:	

Course Information

Location of Delivery:	University of Wolverhampton
Category of Partnership:	Standard Provision (Not delivered in partnership)
Teaching Institution:	University of Wolverhampton
Open / Closed Course:	This course is open to all suitably qualified candidates.

Entry Requirements:

Entry requirements are subject to regular review. The entry requirements applicable to a particular academic year will be published on the University website (and externally as appropriate e.g. UCAS

Normally, you should have a good honours degree (2:2 minimum) or equivalent in a bioscience subject, although substantial professional experience can substitute for graduate status. You should also have a good standard of written and spoken English (IELTS 6.0 or equivalent). If you are currently employed, we request a statement of support from your employer.

Distinctive Features of the Course:

Applied Microbiology and Biotechnology are at the forefront of addressing some of today's most pressing global challenges—from human health to sustainable agriculture and industry.

Our MSc in Applied Microbiology and Biotechnology is designed to equip you with cutting-edge theoretical knowledge and hands-on practical skills, preparing you to apply microbiological and biotechnological innovations in industrial and medical contexts. The course bridges scientific theory with real-world application, ensuring your learning is both relevant and impactful.

You will be taught by a research-active academic team and have opportunities to work alongside experts whose work spans bacterial materials for medical and agricultural use, drought-tolerant plants, and the diagnosis and prevention of communicable and non-communicable diseases.

Beyond technical expertise, you will develop highly sought-after professional skills, including research funding acquisition, enterprise and opportunity recognition, and a strong foundation in communication, teamwork, problem-solving, and self-awareness.

With access to excellent research facilities and strong links to industrial partners, this course is designed to help you graduate as a confident, future-ready scientist prepared to make a meaningful impact in a rapidly evolving field.

Educational Aims of the Course:

Intakes:

September

January

Major Source of Funding:

Office for Students (OFS)

Tuition Fees:

Tuition fees are reviewed on an annual basis. The fees applicable to a particular academic year will be published on the University website.

Year	Status	Mode	Amount
2021/2	H	31	£3275.00
2022/3	H	Full Time	£7995.00
2022/3	Overseas	Full Time	£14950
2022/3	H	31	£3998.00
2023/4	H	Full Time	£8395.00
2023/4	Overseas	Full Time	£15950.00
2023/4	H	31	£4198.00
2024/5	H	Full Time	£8815.00
2024/5	Overseas	Full Time	£16450.00
2024/5	H	31	£4408.00
2025/6	H	Full Time	£9088.00
2025/6	Overseas	Full Time	£18054.00
2025/6	H	31	£4544.00
2026/7	H	Full Time	£
2026/7	Overseas	Full Time	£19859.00
2026/7	H	31	£

PSRB:

None

Course Structure:

January (Full-time)

Full time Masters students normally study 180 credits for their award.

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Module	Title	Credits	Period	Type
7AB025	Industrial Biotechnology	30	SEM2	Core
7AB026	Medical Biotechnology	30	SEM2	Core
7AB029	Professional Practice and Research Skills	30	SEM3	Core
7AB027	Molecular Skills in Biotechnology	30	SEM3	Core
7AB028	MSc Research Project	60	CRYRA	Core

September (Full-time)

Full time Masters students normally study 180 credits for their award.

Part time students study alongside full time students. However, they do not study more than 80 credits in each academic calendar year.

Module	Title	Credits	Period	Type
7AB027	Molecular Skills in Biotechnology	30	SEM1	Core
7AB029	Professional Practice and Research Skills	30	SEM1	Core
7AB025	Industrial Biotechnology	30	SEM2	Core
7AB026	Medical Biotechnology	30	SEM2	Core
7AB028	MSc Research Project	60	CRYRA	Core

Please note: Optional modules might not run every year, the course team will decide on an annual basis which options will be running, based on student demand and academic factors, to create the best learning experience.

Learning, Teaching and Assessment

Regulations Exemption:

None.

Reference Points:

UK Quality Code for Higher Education

Qualifications and Credit Frameworks

Subject Benchmark Statements

University Policies and Regulations

Equality Act 2010: guidance - GOV.UK

Overview of Assessment:

As part of the course approval process, the course learning outcomes were mapped to each of the modules forming the diet of the programme of study. This process confirmed that all course learning outcomes can be met through successful completion of the modules. This mapping applies to the final award as well as to all of the intermediate awards.

Learning Outcomes	Modules
PGCERT01 Critical evaluate and apply current theories, concepts and insights informed by, the forefront of your academic discipline, field of study or area of professional practice (Knowing).	
PGCERT02 Demonstrate in-depth knowledge and practical and/or professional skills in your discipline (Knowing).	
PGCERT03 Make informed decisions on complex issues, and communicate your conclusions clearly to different audience (Doing).	
PGCERT04 Demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level (Doing).	
PGCERT05 Critically analyse, identify and utilise various study methods to improve your own performance (Being).	

Learning Outcomes	Modules
PGCERT06 Reflect on your own achievements, identify future goals and plan for a further career or study (Being).	
PGDIP01 Demonstrate critical evaluation of current theories, concepts and insights informed by, the forefront of your academic discipline, field of study or area of professional practice. Show how you have applied this knowledge in original and insightful ways (Knowing).	
PGDIP02 Demonstrate in-depth knowledge and practical and/or professional skills in your discipline (Knowing).	
PGDIP03 Make informed decisions on complex issues, and communicate your conclusions clearly to different audiences employing discipline conventions and expectations (Doing).	
PGDIP04 Demonstrate self-direction and originality in tackling and solving problems, acting independently and autonomously in planning and implementing tasks at a professional or equivalent level (Doing).	
PGDIP05 Critically analyse, identify and utilise various study methods to improve your own performance (Being).	
PGDIP06 Reflect on your own achievements and plan for a future career or further study (Being).	
MA01 KNOWING: Demonstrate a systematic, comprehensive, and critical understanding of applied microbiology and biotechnology, integrating cutting-edge biological concepts to address complex, interdisciplinary, and real-world challenges.	
MA02 KNOWING: Interrogate, evaluate, and synthesise diverse sources of scientific literature and data to critically appraise current and emerging research, including areas at the forefront of knowledge.	
MA03 DOING: Design, plan, and execute investigative and experimental studies independently and collaboratively, demonstrating high level competency in advanced microbiological and biotechnological techniques while evaluating ethics, safety, sustainability, and cost considerations.	
MA04 DOING: Collect, analyse, interpret, and present experimental data using appropriate analytical and statistical methods, and communicate scientific findings effectively to a range of audiences.	
MA05 BEING: Embody the values and identity of a reflective, ethical, and responsible scientist, demonstrating respect for ethical, environmental, and societal dimensions of applied microbiology and biotechnology.	
MA06 BEING: Demonstrate commitment to continuous professional and personal development, embracing sustainability and innovation as core principles of practice.	

Teaching, Learning & Assessment Strategy/(Learning and Teaching):

The course is structured such that you will develop core knowledge and skills before embarking on your in-depth research project.

You will be taught through a variety of learning activities including, face-to-face lectures, practical activities, workshops, seminars and guest lectures. These sessions will be interactive allowing you time to work independently or in small groups. They will also be supported by online resources in the form of short videos or links to relevant online materials.

You will be guided to additional learning outside of the classroom and may be expected to complete some preliminary work prior to coming to the class where you will explore the topics and applications in greater depth.

Lectures will be used to provide, where necessary, introductory scene setting and background information prior to expansion into in-depth evaluation of topic areas, relating to research and industrial developments.

Workshops will concentrate on aspects requiring greater explanation and detail leading from lecture material. Seminars may have a student lead and involve student presentation to foster information exchange and discussion with peers and academics.

Practical classes will help you develop key laboratory and computational skills. Guest lectures will provide opportunities for engagement with professionals working in the field who are able to provide awareness of current industrial knowledge. Site visits and employer engagement will provide opportunities for learning in real industrial or workplace settings

The research project will enhance your independent research skills, problem-solving abilities and competencies to analyse, evaluate and present research data.

Throughout the course you will be using a range of digital tools to synthesise, communicate and analyse information. The use of AI will be part of assignment briefs to ensure students are confident with its ethical use. The use of AI within the field of microbiology and biotechnology will also be explored within the relevant modules.

Assessment Methods/Assessments:

Assessments are designed to support your learning throughout the course. You will be assessed via a range of approaches including the presentation of a business pitch, a written research proposal, case studies, oral presentations, poster presentations, critical reviews and data interpretation as well as the writing of a project report.

For some assessments you will be able to choose the topic so that you can explore your interests in more depth.

Assessments will evaluate how you have developed skills needed for effective practice within the biotechnology industry, including critical-thinking, problem-solving, and evidence-based decision making.

By unpacking the assessments in detail, we will ensure that you have a complete understanding of what is required of you for each assessment, and we will provide opportunity for you to gain formative feedback prior to the submission of each assessment.

Further Information for Student:

As a new student on the course our focus will be to ensure that you have access to the relevant information as you need it. On arrival we will welcome you onto the course and give you a chance to meet with current students.

Your point of contact will be the course leader who will also be your personal tutor. If you are an international student joining us, then you will also be assigned a student success coach who will provide an additional layer of support to help familiarise you with our university systems and studying here in the UK.

You will be given full details of all assignments in advance and time to ask questions about what is required. There will be opportunities throughout each module for formative feedback before you submit the final piece of work to ensure that you are confident with your final submission.

Our course has been designed with the student in mind, and we work with our students to improve all

aspects of the course. Your feedback is important to us and is captured in many ways but mainly via your student representative.

The University provides a wide range of academic and pastoral support to help students succeed in their studies and personal development. This includes access to the Library and Skills for Learning service, student success coaching for international Level 7students, and tailored advice from the Careers and Enterprise teams. Students also benefit from 24/7 wellbeing support through WLV Student Life Connect, pastoral care via the Multi-faith Chaplaincy, and assistance from the Mental Health and Wellbeing team. Those living in university accommodation have additional access to Residential Life support, and all students can engage with the Students' Union for advocacy, societies, and further peer-led services.

Currency:

The course is very much aligned to the research strengths of our academic team. This ensures that you will be exposed to the very latest developments in the field and can work alongside these academics during your research project to contribute to this ongoing research.

You will be able to demonstrate creativity and innovation in how you might address industrial, medical and global challenges whilst critically reviewing existing processes and research.

The University's graduate attributes are mapped to each of the modules and a self-assessment against these attributes will be carried out at the start of the course and reviewed periodically within personal tutorial sessions so that you can reflect on your skills acquisition throughout the course, identifying professional and personal development needs.

In some modules you will be taught alongside students on other courses to allow for a broader exchange of ideas.

Personalisation Opportunities:

Our courses are designed to give you the space for exploratory and independent study. You'll work towards individual assignments and undertake the preparation/follow-up work associated with lectures, seminars, integrative assignments and laboratory classes. We also encourage you to take advantage of a range of related extra-curricular opportunities and skills development programmes that are available within the university.

You will be given the opportunity to explore your own interests further by selecting topics for in-depth study in certain assessments. You will also be able to choose a research project that aligns to the skills and knowledge that you wish to develop.

You will be expected to spend time in guided and independent study to enhance your learning on each module. You will be exploring topics in depth, reviewing what you have learnt whilst completing assignments. This can be completed around your personal commitments. As you progress to the end of your studies, you'll spend more time on independent learning.

As part of the Professional Practice and Research Skills module you will complete a reflective portfolio in which you will evidence the development of skills whilst self-assessing your strengths and weaknesses. You will be encouraged to maintain this portfolio beyond that module so that you can gather and evidence a wider set of skills throughout the course. This will be supported by personal tutorial sessions.

Employability in the Curriculum/Employability and Professional Development:

This course will allow you to consider a variety of careers in microbiology, environmental science, medical science, biotechnology including pharmaceuticals, science teaching and postgraduate research at academic institutions worldwide.

Throughout the course you with the opportunity to reflect on your development of key employability skills while enhancing your business awareness. You will also develop oral presentation skills and be trained in giving presentations to potential employers. Site visits will provide awareness of real-life work setting and provide you with knowledge of skills and competencies required by potential employers and

there is the potential for live projects with industrial partners as part of the research project module.

The course will equip you with critical, analytical and professional skills that are needed for further study at PhD level or for employment into roles such as research scientists, knowledge-transfer consultants, or business development officers in bioscience, food and biotechnology or pharmaceutical companies.

