

Course Specification

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| Published Date: | 14-Sep-2020 |
| Produced By: | Laura Clode |
| Status: | Validated |

Core Information

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|---|--|-----------|-----------|
| Awarding Body / Institution: | University of Wolverhampton | | |
| School / Institute: | Wolverhampton School of Sciences | | |
| Course Code(s): | BC001P01UV | Full-time | 12 Months |
| | BC001P31UV | Part-time | 2 Years |
| Course Title: | MSc Applied Microbiology and Biotechnology | | |
| Hierarchy of Awards: | Master of Science Applied Microbiology and Biotechnology Postgraduate Diploma Applied Microbiology and Biotechnology Postgraduate Certificate Applied Microbiology and Biotechnology Postgraduate Certificate Applied Microbiology and Biotechnology University Statement of Credit University Statement of Credit | | |
| Language of Study: | English | | |
| Date of DAG approval: | 30/May/2017 | | |
| Last Review: | 2020/1 | | |
| Course Specification valid from: | 2011/2 | | |
| Course Specification valid to: | 2026/7 | | |

Academic Staff

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| Course Leader: | Opeolu Ojo |
| Head of Department: | Georgina Manning |

Course Information

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| Location of Delivery: | University of Wolverhampton |
| Category of Partnership: | 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:

At the University of Wolverhampton, we have a proven track record in the provision of MSc courses. This course, relevant to some of the challenges faced by the world today, is particularly designed to provide you with up-to-date theoretical knowledge of the cutting-edge applications of applied microbiology and biotechnology in areas such as food production, waste transformation, and the production of value-added materials. You will also receive training in fund sourcing for research and enterprise, opportunity recognition and other professional practice skills. You will be taught by a research-active team of academics with expertise in various applications of microbiology and biotechnology. You will have access to excellent research facilities and our relationships with industrial partners will ensure that this course will provide you with the skills required by employers today.

Educational Aims of the Course:

This course is designed to train you to meet the increasing demand for highly skilled scientists in the field of applied microbiology and biotechnology and generally in the global bioscience sector. The course is particularly suitable if you are looking for a career in biotechnology research and/or in industry.

The overarching theme of the course is to provide up-to-date theoretical and practical knowledge of fundamental cellular mechanisms and the genetic manipulation of biological systems as well as training in cutting-edge applications of microbiology and biotechnology in the production of value-added material, integrated bio-refinery and sustainable approaches to food production and waste management.

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

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 |
|--------|----------|-----------|-----------|
| 2020/1 | H | Full Time | £6400.00 |
| 2020/1 | Overseas | Full Time | £13350.00 |
| 2020/1 | H | Part Time | £3200.00 |

PSRB:

None

Course Structure:

January (Full-time)

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

Year 1

| Module | Title | Credits | Period | Type |
|--------|---|---------|--------|------|
| 7AB002 | Masters' Laboratory Techniques | 20 | IN YR | Core |
| 7AB007 | Research Methods | 20 | IN YR | Core |
| 7AB005 | Masters Research Project | 60 | CRYRA | Core |
| 7AB022 | Applied Biotechnology | 20 | IN YR | Core |
| 7AB019 | Professional Practice in Molecular Cell Biology | 20 | IN YR | Core |
| 7AB017 | Applied Food Microbiology | 20 | IN YR | Core |
| 7BC002 | Molecular Genetics and Genomics | 20 | IN YR | Core |

September (Full-time)

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

Year 1

| Module | Title | Credits | Period | Type |
|--------|---|---------|--------|------|
| 7AB019 | Professional Practice in Molecular Cell Biology | 20 | IN YR | Core |
| 7AB017 | Applied Food Microbiology | 20 | IN YR | Core |
| 7BC002 | Molecular Genetics and Genomics | 20 | IN YR | Core |
| 7AB002 | Masters' Laboratory Techniques | 20 | IN YR | Core |
| 7AB007 | Research Methods | 20 | IN YR | Core |
| 7AB005 | Masters Research Project | 60 | CRYRA | Core |
| 7AB022 | Applied Biotechnology | 20 | IN YR | 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

Academic 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)

Learning Outcomes:

PGCert Course Learning Outcome 1 (PGCCLO1)

Demonstrate an understanding of key aspects of applied microbiology and biotechnology, and a critical awareness as to how this can be applied to current and emerging problems.

PGCert Course Learning Outcome 2 (PGCCLO2)

Demonstrate an understanding of techniques applicable to applied microbiology and biotechnology and an ability to continue to advance your knowledge and understanding, and to develop new skills to an advanced level.

PGCert Course Learning Outcome 3 (PGCCLO3)

Demonstrate an ability to deal with complex issues, tackle and solve problems and communicate your conclusions clearly to specialist and non-specialist audiences.

PGCert Course Learning Outcome 4 (PGCCLO4)

Demonstrate a range of transferable professional skills required for a successful career in the applied microbiology and/or biotechnological arena.

PGDip Course Learning Outcome 1 (PGDCLO1)

Demonstrate a systematic and thorough understanding of applied microbiology and biotechnology, and a critical awareness as to how this can be applied to current and emerging problems.

PGDip Course Learning Outcome 2 (PGDCLO2)

Demonstrate knowledge of fundamental and specialised microbial and biotechnological techniques with an appreciation of their applications, advantages and limitations.

PGDip Course Learning Outcome 3 (PGDCLO3)

Demonstrate a range of transferable professional skills required for a successful career in the applied microbiology and/or biotechnological arena.

PGDip Course Learning Outcome 4 (PGDCLO4)

Demonstrate an ability to deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate your conclusions clearly to specialist and non-specialist audiences.

Masters Course Learning Outcome 1 (MACLO1)

Demonstrate a systematic and thorough understanding of applied microbiology and biotechnology, and a critical awareness as to how this can be applied to current and emerging problems.

Masters Course Learning Outcome 2 (MACLO2)

Demonstrate expertise in fundamental and specialised microbial and biotechnological techniques with an appreciation of their applications, advantages and limitations.

Masters Course Learning Outcome 3 (MACLO3)

Demonstrate a range of transferable professional skills required for a successful career in the applied microbiology and/or biotechnological arena.

Masters Course Learning Outcome 4 (MACLO4)

Demonstrate the ability to autonomously plan, conduct and present practical experimental data generated from rigorous scientific investigation in a cooperative and safety aware, laboratory environment and to appropriately use statistical methods for analysis and evaluation.

Overview of Assessment:

| Module | Title | Course Learning Outcomes |
|--------|---|--|
| 7AB002 | Masters' Laboratory Techniques | MACLO2, MACLO3, PGCCLO2, PGCCLO4, PGDCLO2, PGDCLO3, PGDCLO4 |
| 7AB005 | Masters Research Project | MACLO3, MACLO4 |
| 7AB007 | Research Methods | MACLO3, MACLO4, PGCCLO3, PGCCLO4, PGDCLO3, PGDCLO4 |
| 7AB017 | Applied Food Microbiology | MACLO1, MACLO2, MACLO3, PGCCLO1, PGCCLO3, PGDCLO1, PGDCLO2, PGDCLO3 |
| 7AB019 | Professional Practice in Molecular Cell Biology | MACLO1, MACLO3, PGCCLO1, PGCCLO3, PGCCLO4, PGDCLO1, PGDCLO3, PGDCLO4 |
| 7AB022 | Applied Biotechnology | MACLO1, MACLO2, MACLO3, PGCCLO1, PGCCLO2, PGCCLO3, PGDCLO1, PGDCLO2, PGDCLO3 |
| 7BC002 | Molecular Genetics and Genomics | MACLO1, MACLO2, PGCCLO2, PGDCLO1, PGDCLO2 |

Teaching, Learning and Assessment:

You will be taught through a variety of learning activities including, face-to-face lectures, tutorials, laboratory activities, workshops/seminars, guest lectures, site visits and/or industrial placement.

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.

Tutorials will concentrate on particular aspects requiring greater explanation and detail leading from lecture material.

Seminars/workshops may have a student lead and involve student presentation to foster information exchange and discussion with peers and academics.

Practicals 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 will provide opportunities for learning in real industrial or workplace settings

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

You will be assessed via a range of techniques including the writing of a funding application, a research proposal, case studies, project report, oral presentations, poster presentation, critical review and data interpretation as well as dissertation.

Assessment Methods:

At the University of Wolverhampton, a variety of modes of assessment will be used to support and test your learning and progress and to help you develop capabilities that are valued beyond your University studies and

into your working life. Your course may include a variety of assessment activities:

Written examinations (including online examinations, open and closed book examinations and quizzes)
Coursework (for example, essays, reports, portfolios, project proposals and briefs, CVs, poster presentation)
Practical (for example, oral and video presentations, laboratory work, performances, practical skills assessment)

In the final year of your undergraduate degree, and at the end of your postgraduate degree, you are likely to be expected to write an extended piece of work or research, such as a dissertation or a practice-based piece of research.

Student Support:

General University support:

[University Libraries](#) are the key source of academic information for students. Learning Centres provide physical library resources (books and e-books, journals, DVDs etc.) and offer a range of study areas to allow you to study in the environment that suits you best: Social areas, quiet and silent areas. The Harrison Library also provides access to wide range of online information sources, including eBooks, e-Journals and subject databases.

The Harrison Library also provides you with academic skills support via the [Skills for Learning programme](#). Students on campus can attend workshops or ask for one-to-one help on a range of skills such as academic writing and referencing.

The [University Student Support website](#) offers advice on a variety of matters (careers, counselling, student union advice, etc.) Students can also access these services by booking appointment with the SU, careers, counselling services, etc.

Course Specific Support

We have a well-established system of student support available throughout the course.

You will be assigned a personal tutor at the start of the course and you can meet with them regularly (made possible via the SAMS* appointment system). The Course and Module Leaders will also be able to offer guidance and assistance with course and module related problems as required.

Academic skills training runs throughout the course to provide a foundation in literature searching, data collection, statistical analysis and scientific presentation, including writing, referencing and oral presentation. The Research Methods module is designed to prepare you for your Research Project.

*Student Appointment Management System which allows you to book appointments with your tutors at specific times.

Employability in the Curriculum:

This course has a Professional Practice module which is aimed at developing your employability skills and enhancing your business awareness. You will also have the opportunity to develop your oral skills and be trained in making presentations to potential employers. Site visits will provide awareness of real-life work setting and provide you with knowledge of skills and competence required by potential employers.

The MSc 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, including the UK and USA



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